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SITE SAFETY AND HEALTH PLAN

FORMER COMMUNICATIONS SITE DRUM AND DEBRIS INVESTIGATION

**FORT WAINWRIGHT,
ALASKA**

**DRAFT
MAY 2008**

JACOBS ENGINEERING GROUP INC.



Alaska District

**SITE SAFETY AND HEALTH
PLAN**

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SITE DRUM AND DEBRIS
INVESTIGATION**

**FORT WAINWRIGHT,
ALASKA**

**DRAFT
MAY 2008**

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**Environmental Remediation Services
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Attachment 2	FCS Safety and Health Agreement Sign-off Sheet
Attachment 3	Applicable Health, Safety, and Environmental Procedures and Material Safety Data Sheets
Attachment 4	FCS Activity Hazard Analysis
Attachment 5	FCS-Specific Hazard Communication Program and Respiratory Protection Program
Attachment 6	Applicable Forms

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ACRONYMS AND ABBREVIATIONS

ACGIH	American Conference of Government Industrial Hygienists
AHA	Activity Hazard Analysis
BZ	breathing zone
CFR	Code of Federal Regulations
COC	contaminant of concern
DCP	Dichloropropane
DRO	diesel-range organics
FCS	Former Communications Site
GRO	gasoline-range organics
HSE	Health, Safety, and Environment
HSEP	Health, Safety, and Environment Procedure
HSM	Health and Safety Manager
Jacobs	Jacobs Engineering Group Inc.
mg/m ³	milligrams per cubic meter
MSDS	Material Safety Data Sheet
NIOSH	National Institute of Occupational Safety and Health
OFR	Office of the Federal Register
OSHA	Occupational Safety and Health Administration
PADS	Physical Agent Data Sheet
PEL	permissible exposure limit
PID	photoionization detector
POL	petroleum, oil, and lubricants
PPE	personal protective equipment
ppm	parts per million
SCBA	self-contained breathing apparatus
SOR	Safety Observation Report
SPA	Safe Plan of Action
SSHO	Site Safety and Health Officer
SSHP	Site Safety and Health Plan
STEL	short-term exposure limit

ACRONYMS AND ABBREVIATIONS

(continued)

TCE	Trichloroethylene
TLV	threshold limit value
TWA	time-weighted average
USACE	U.S. Army Corps of Engineers
USAED	U.S. Army Engineer District, Alaska
°F	Fahrenheit

1.0 INTRODUCTION AND PURPOSE

This Site Safety and Health Plan (SSHP) is a requirement of the U.S. Army Engineer District, Alaska (USAED), under the Environmental Remediation Services contract. USAED has accepted this SSHP as the basis for safety and health procedures adhered to at Former Communications Site (FCS), Alaska, for 2008 fiscal year activities without review. This SSHP complies with applicable sections of the Code of Federal Regulations (CFR), Title 29, Sections 1910.1200 and 1926.65; Office of the Federal Register (OFR) *Hazardous Waste Operations and Emergency Response* (OFR 1999); and U.S. Army Corps of Engineers (USACE) *Safety and Health Requirements Manual* EM 385-1-1 (USACE 2003).

This SSHP discusses issues and procedures to be followed during all phases of work including mobilization, fieldwork, and demobilization activities scheduled for fiscal year 2008. Prior to performing any fieldwork, all personnel shall be briefed on the contents of this SSHP and given the opportunity to read and discuss the contents of the SSHP with supervisors and managers. After reading and discussing the SSHP each person shall sign the FCS Safety and Health Agreement Sign-off Sheet (Attachment 2) indicating they agree to follow the safety procedures and policies presented in this SSHP. A copy of this plan and referenced documents shall be made available to all personnel at the job site. Figure 1-1 depicts the location of key work areas within the FCS site.

Safety and health are basic Jacobs Engineering Group Inc. (Jacobs) values and shall be adhered to at all Jacobs job sites. The Site Safety and Health Officer (SSHO) and the Safety and Health Manager will maintain copies of this SSHP, and copies will be made available at each site with each work crew, as approved by the SSHO. Modifications due to changing field conditions will require approval of the individuals identified in Attachment 1. Each supervisor, lead person, laborer, operator, and visitor will be held accountable and responsible for working safely and following procedures and guidance set forth in this SSHP.

For the 2008 FCS Remedial Investigation (RI), all project personnel will follow Jacobs Health, Safety, and Environment Procedures (HSEP) in addition to this SSHP. The specific Jacobs HSEPs that apply to this project include:

- Safe Plan of Action (SPA), Jacobs HSEP Reference 2.16
- Safety Observation Report (SOR), Jacobs HSEP Reference 2.17
- Accident and Incidents, Jacobs HSEP Reference 5.1
- Vehicle Accidents, Jacobs HSEP Reference 5.2
- Hazardous Materials Sites and Hazardous Waste Activities, Jacobs HSEP Reference 7.3
- Excavating Equipment Use And Operator Qualifications, Jacobs HSEP Reference 8.3
- Excavations, Jacobs HSEP Reference 8.4
- Hazard Control Procedures, Jacobs HSEP Reference 11.0
- Decontamination, Jacobs HSEP Reference 11.9
- PPE, Jacobs HSEP Reference 13.0
- Emergency and contingency planning, Jacobs HSEP Reference 14.0
- Maintenance and storage areas, Jacobs HSEP Reference 16.0

Figure 1-1 Site Plan

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2.0 PROJECT ORGANIZATION AND RESPONSIBILITIES

This section identifies the project organization and the personnel responsible for the management and implementation of this SSHP.

Safety is an essential part of every task and is the responsibility of all project personnel. All project personnel shall comply with this SSHP and all other safety rules and requirements that may apply to this project and work in general. The following assignments have been established to assist with the maintaining a safe project site.

2.1 SITE MANAGER/SITE SAFETY AND HEALTH OFFICER REQUIREMENTS

The Site Manager/SSHO shall:

- Understand Jacobs and USACE Health, Safety, and Environment (HSE) policies and procedures, and this SSHP. Site management may, if the need arises, apply more stringent HSEPs or work practices.
- Effectively communicate and implement HSE policies and procedures and this SSHP.
- Provide the resources necessary to maintain a safe and healthful work environment and ensure implementation of HSE policies and procedures.
- Assign and clearly describe the responsibilities necessary to achieve a safe and healthful work environment.
- Verify subordinates and subcontractors are executing these responsibilities properly.
- Enforce the use of HSEPs and issue disciplinary actions and/or contractual actions when required.
- Ensure that HSE deficiencies identified in audits and inspections are promptly corrected.
- Assure the specific HSEPs used at the site are adequate for the specific task.
- Take immediate action to prevent or lessen the result of any unsafe act or imminent danger observed.
- Review and approve personal protective equipment (PPE), safety equipment, and first aid supplies on a regular basis.
- Ensure all site employees and subcontractor personnel are briefed and understand the importance and use of the Jacobs HSEPs.
- Ensure prompt and adequate treatment for injured project personnel.
- Ensure adequate investigation and analysis of accidents (non-injury and injury).

- Provide HSE information for the education of management, supervision, and employees concerning:
 - Accident analysis (cause, trends, results, and corrective action)
 - Analysis of inspection results and needed corrective actions
 - Safe work procedures
 - HSE training requirements
- Communicate and promote HSE excellence recognition programs.
- Ensure that Jacobs Health Safety and Environmental Procedures are:
 - Prepared properly,
 - Submitted properly
 - Followed properly, and
 - Maintained in a proper manner,
- Ensure that other required HSE records, such as inspection reports, training records, Activity Hazard Analysis (AHAs) and/or Safe Plan of Action (SPA) are completed properly, followed, and maintained properly.
- Ensure Safety Observation Report (SOR) are used and discussed on a routine basis.
- Complete and maintain injury logs and accident investigation reports, etc.
- Provide HSE evaluations of project personnel to management as necessary.

2.2 EMPLOYEE RESPONSIBILITIES

Employee acceptance of the HSE policies and procedures is the ultimate key to success of the HSE program. Each Jacobs and subcontractor employee shall:

- Comply with procedures established for his/her safety and health, and for preservation of the environment.
- Assist management and supervisors in the positive development of co-worker attitudes toward HSE and workplace morale.
- Suggest improvements in methods or procedures that prevent incidents and protect the environment.
- Stop, or bring attention to management, any unsafe acts or conditions and any potentially harmful environmental practice.
- Immediately correct imminent danger situations (e.g., exposure to falls from elevations, electrocution hazards, exposure to unprotected excavations, etc.).

- Notify a supervisor when there is insufficient understandings of:
 - Task(s) to be performed
 - HSEPs
 - Assigned safety equipment
- Promptly report to supervisor incidents or accidents involving personnel or property, no matter how minor.
- Learn the approved HSE safe practices for each work task and follow them.
- Ask for assistance from the supervisor or the HSE department when unsure of a work task or its safe practice.
- Participate in and maintain an active interest in the HSE program.
- Be attentive to safety discussions led by the supervisor and request explanations of points not understood.
- Never bypass the function of a safety device.
- Immediately flag safety device malfunctions to warn others of the hazard and promptly report the malfunction to your supervisor.
- Promptly report any potential work-related injury or illness to your supervisor, no matter how minor the injury.
- Never attempt to perform a job alone when good judgment indicates assistance is needed.
- Inspect, use, and maintain the PPE provided for you.
- Do not participate in clowning, scuffling, practical joking, or horseplay of any kind on the job. (Running is prohibited.)
- Be cautious when walking or moving around the work area to avoid slips, trips, or falls. Be especially cautious when weather conditions create a potentially slippery walking surface, such as wet or ice & snow covered tarps and steps.
- Plan your work and try to anticipate any potential hazards so they can be avoided.
- Observe safe practices off the job as well as on the job.

2.3 SUBCONTRACTOR RESPONSIBILITIES

Subcontractors shall implement and follow this plan and will perform the following specific duties:

- Follow the requirements set forth in this SSHP.
- Attend “Supervising for Safety” training at Jacobs prior to site mobilization.
- Attend site-specific orientation.

- Agree to abide by this SSHP by signing the sign-off sheet (Attachment 2) before working onsite. This sign-off sheet will be retained by the SSHO.
- Provide SSHO Material Safety Data Sheet (MSDS) and Physical Agent Data Sheets (PADS) copies for hazardous chemicals and physical exposures onsite.
- Provide SSHO copies of required training certifications and medical authorizations to work on site, including those required by 29 CFR 1926.65.
- Develop AHAs/SPAs that address specific hazards associated with tasks to be performed for each phase of work (e.g., underground utilities, approved roads), including developing and providing specific work procedures to Jacobs for review of potential hazards.
- Ensure workers are trained in safe and proper use of all tools they may use.
- Appoint an onsite Competent Safety Representative for each job site.
- Provide all necessary PPE to employees and ensure its proper use.
- Maintain all necessary records and submit required reports.
- Conduct daily safety briefings.
- Obtain all work permits as required.
- Conduct safety inspections on a daily basis, report discrepancies using the SOR form (Attachment 6) and promptly correct unsafe conditions.
- Conduct daily inspections of equipment. Defective or unsafe equipment must be red-tagged and immediately taken out of service or repaired.
- Provide inspection documentation and corrective actions to the SSHO on a weekly basis.
- Provide other subcontract information and subcontractor safety performance requirements, as required.

The Site Manager will inform the subcontractor foreman or supervisor of any safety and health violations. The Site Manager/SSHO can cease subcontractor work under eminently dangerous conditions and resume work when the unsafe condition is corrected. Repeated violations could cause termination of the subcontract.

2.4 VISITOR RESPONSIBILITIES

All visitors must check-in and obtain clearance from the SSHO and sign the Visitor Check-in Log (Attachment 6) before leaving the site office area. All visitors to the site will be escorted unless given special permission by the Site Manager or the SSHO.

All visitors will be made aware of the current work areas, and the location(s) and marking devices used to mark the outer boundaries of the exclusion or control zone(s). In most cases, visitor access will be limited to areas within the support zone. Visitors will receive a job-specific safety briefing and will be escorted at all times in controlled areas.

All visitors that request outside access within the site are required to wear the proper PPE and have the appropriate training to don and doff the PPE. Jacobs will maintain a small number of reflective safety vests and hard hats specifically designated for visitors. Safety boots and safety glasses may be waived providing the visitor only observes site activities.

Department of Public Works personnel and their contractors that require continued access to specific areas within the site to perform inspections, tests, maintenance, or other official activities will receive an initial safety briefing from the SSHO and sign the SSHP. On each subsequent visit they will sign the visitor log and be briefed on the location(s) of the current work site(s) and exclusion zone(s) boundary of each site. Unless unusual circumstances or conditions arise they will be allowed un-escorted access to perform their official activity(s).

Visitors requesting escorted access to the site to perform official government inspections, tests, maintenance, or other official activities will receive an initial safety briefing from the SSHO and sign the visitor's log. They will be required to don PPE, unless they do not require outside access, and will be escorted to the area(s) they request by the SSHO.

Visitors (non-DPW personnel) requesting unescorted entry onto the site, in addition to the requirements above, will be required to provide the SSHO copies of required training certifications and medical authorizations, as required by 29 CFR 1926.65.

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3.0 PROJECT INFORMATION

This section briefly discusses the sites and the planned activities. An overall site layout for FCS is presented on Figure 1-1.

3.1 FORMER COMMUNICATIONS SITE

Fort Wainwright is located adjacent to the southern boundary of the city of Fairbanks, Alaska. The FCS site is located in the cantonment area between Alder and Neely Roads.

The work planned for the 2008 field season consists of:

- Mobilization and site setup
- Munitions and Explosives of Concern (MEC) for remedial investigation and avoidance
- Drum removal and soil excavation
- Soil sampling
- Backfilling and site restoration
- Surveying
- Demobilization

3.2 FORMER COMMUNICATIONS SITE UNIQUE HAZARD ELEMENTS

3.2.1 Contaminants of Potential Concern

A review of the data from previous sampling and investigations has identified diesel-range organics (DRO), gasoline-range organics (GRO), trichloroethylene (TCE), 1,2-dichloropropane (1,2-DCP), pentachlorophenol, and polychlorinated biphenyls (PCB) as the contaminants of potential concern (COPCs) (Table 3-1).

3.2.2 Utility Lines

Underground and overhead utilities are anticipated in the planned areas of excavation for 2008. Glycol, electricity (underground and overhead), communications, and sewer utilities are anticipated in the area. Jacobs HSEP procedures 7.3.3 Utility Clearance and HSEP 19.4 Energized and Potentially Energized Equipment will be followed in order to avoid striking

utilities. As built drawings of Taku Gardens have been made available to Jacobs and will be consulted as part of the utility clearance procedure. Additionally, Jacobs will hire a professional underground utilities locating firm to verify the location(s) of the underground utilities.

3.2.3 Drums with Unknown Contents

All intact unopened drums with unknown contents will be covered with plastic, secured in place and the Site Manager or SUXOS shall be notified, who will contact the Jacobs project manager. Personnel shall secure the immediate area and stand down in an upwind location until directed otherwise by the Site Manager or SUXOS.

All drums with their contents exposed or accessible but unknown shall be secured in-place and the Site Manager notified. If safe to do so, the drum shall be left in place until the test is complete and the contents classified as hazardous or non-hazardous. The test shall be conducted by a three-person sampling team. Each member of this team will be trained for sample testing to be preformed. The two samplers shall be dressed in full level B PPE, with mask in-place. The third member will be dressed in level B with mask at the ready, positioned upwind from the drum(s) as far away as is practicable to observe the sampling and if necessary assist the sampling team in egress. The Site Manager or SUXOS shall supervise the testing.

The two members of the field crew in level B will then sample each drum by performing the following actions:

- Gain access to the material using non-sparking tools.
- Take readings of the drum atmosphere using a four-gas meter and photoionization detector (PID). If the results indicate that the atmosphere is not combustible, sampling may continue.
- Collect a sample of the drum contents and perform hazard categorization testing according to Attachment A-2 of the Field Sampling Plan (Appendix A of the Work Plan). If the results indicate that the drum contents are not hazardous, further drum sampling and management may continue at a lower level of protection.

**Table 3-1
Contaminants of Potential Concern**

Chemical /Compound Name	Routes of Entry/Exposure Routes	Symptoms/Effects of Over Exposure	First Aid	Target Organs
<p>DRO Major chemicals that have permissible exposure limits (PEL) or threshold limit values (TLV) associated with the ingredients of DRO are:</p> <p>Anthracene</p> <ul style="list-style-type: none"> ▪ Occupational Safety and Health Administration (OSHA) PEL: 0.2 milligrams per cubic meter (mg/m³) (time-weighted average [TWA]) for coal-tar pitch volatiles; American Conference of Government Industrial Hygienists (ACGIH) TLV: 0.2 mg/m³ (TWA) <p>Naphthalene</p> <ul style="list-style-type: none"> ▪ PEL: 10 parts per million (ppm); 15 short-term exposure limit (STEL) ACGIH TLV: 10 ppm; 15 (STEL) <p>Diesel fuel as total hydrocarbons</p> <ul style="list-style-type: none"> ▪ ACGIH TLV 100 mg/m³ 	<p>Inhalation, skin absorption, Ingestion, skin and/or eye contact</p>	<p>Irregular heartbeat</p> <p>Light-headedness, vertigo, drowsiness, narcosis, headache, dizziness, unconsciousness, and even death in extreme cases. Elevated carboxyhemoglobin level in cardiovascular system.</p> <p>Pain and irritation to eyes with slight corneal injury possible irritation and dermatitis. Burning of throat and mouth if ingested.</p> <p>Cancer hazard contains methylene chloride, which is listed as an animal lung carcinogen.</p>	<p>Eyes: Irrigate immediately</p> <p>Skin: Soap flush immediately</p> <p>Breathing: Respiratory support</p> <p>Swallow: Medical attention immediately</p>	<p>Eyes Skin Respiratory System</p>
<p>GRO Major chemicals associated with the ingredients of GROs are:</p> <ul style="list-style-type: none"> ▪ Benzene—OSHA PEL: 1 ppm; ACGIH TLV: 0.5 ppm; carcinogen ▪ Ethylbenzene—OSHA PEL: 100 ppm; ACGIH TLV: 100 ppm/125 STEL ▪ Toluene—OSHA PEL: 200 ppm; ACGIH TLV: 50 ppm ▪ Xylene—OSHA PEL: 100 ppm; ACGIH TLV: 100 ppm/150 STEL 	<p>Inhalation, skin absorption, Ingestion, skin and/or eye contact</p>	<p>Irritation to eyes, skin, and mucous membrane; dermatitis; headache, lassitude (weakness, exhaustion), blurred vision, dizziness, slurred speech, confusion, convulsions; chemical pneumonitis (aspiration liquid); possible liver and kidney damage (potential occupational carcinogen).</p>	<p>Eyes: Irrigate immediately</p> <p>Skin: Soap flush immediately</p> <p>Breathing: Respiratory support</p> <p>Swallow: Medical attention immediately</p>	<p>Eyes, skin, Central Nervous System (CNS), liver kidneys (in animals liver and kidney cancer)</p>

Table 3-1
Contaminants of Potential Concern
(continued)

Chemical /Compound Name	Routes of Entry/Exposure Routes	Symptoms/Effects of Over Exposure	First Aid	Target Organs
Trichloroethylene (TCE) OSHA PEL - TWA 100 ppm (ceiling 200 ppm) - 300 ppm (5-min max peak over any two hours)	Inhalation, skin absorption, Ingestion, skin and/or eye contact	Irritation to eyes and skin, headache, lassitude (weakness, exhaustion), dizziness, convulsions, dermatitis, vomiting, cardiac arrhythmias, paresthesia (tingling or pricking of ones skin), Liver Injury (carcinogen)	Eyes: Irrigate immediately Skin: Soap flush immediately Breathing: Respiratory support Swallow: Medical attention immediately	Eyes, skin, respiratory System, heart CNS, liver, kidneys (in animals liver and kidney cancer)
1-2 Dichloropropane OSHA PEL - TWA 75 ppm	Inhalation, skin absorption, Ingestion, skin and/or eye contact	Irritation to eyes, skin and respiratory system, dizziness, drowsiness liver and kidney damage CNS depressant in animals	Eyes: Irrigate immediately Skin: Soap flush immediately Breathing: Respiratory support Swallow: Medical attention immediately	Eyes, skin, respiratory System, CNS, liver, kidneys (in animals liver and mammary gland tumors)
Pentachlorophenol NIOSH REL TWA 0.5 mg/m3 OSHA PEL TWA 0.5 mg/m3	Inhalation, skin absorption, Ingestion, skin and/or eye contact	Irritated eyes, nose and throat, sneezing coughing, weakness, anorexia, weight loss, sweating, headache, dizziness, nausea, vomiting, dyspnea (breathing difficulties), chest pain, high fever and dermatitis.	Eyes: Irrigate immediately Skin: Soap flush immediately Breathing: Respiratory support Swallow: Medical attention immediately	Eyes skin, respiratory systems, cardiovascular system and central nervous system
Poly Chlorinated Biphenyl's OSHA PEL TWA 0.5 mg/m3 NIOSH REL TWA 0.001 mg/m3	Inhalation, skin absorption, Ingestion, skin and/or eye contact	All PCBs should be considered hazardous. They can cause eye irritation, gastrointestinal disturbances, and discoloration of nails, skin, etc. Vapors can cause severe eye inflammation and swelling of adjoining tissues. Exposure can cause liver	Eyes: Irrigate immediately Skin: Soap flush immediately Breathing: Respiratory support	Eyes, skin, liver reproductive system, (In animals tumors of the pituitary Gland

**Table 3-1
Contaminants of Potential Concern
(continued)**

Chemical /Compound Name	Routes of Entry/Exposure Routes	Symptoms/Effects of Over Exposure	First Aid	Target Organs
		damage, and overexposure can have delayed adverse health effects. May produce cancer. Can cause chloracne (an acne like eruption of blackheads)	Swallow: Medical attention immediately	and liver leukemia)
Xylene	Inhalation, skin absorption, Ingestion, skin and/or eye contact	Irritated eyes, skin, nose and throat, excitement drowsiness uncoordinated, staggering gait, Corneal vacuolization, anorexia, vomiting, abdominal pain, dermatitis.	Eyes: Irrigate immediately Skin: Soap flush immediately Breathing: Respiratory support Swallow: Medical attention immediately	Eyes skin, respiratory systems, central nervous system GI tract blood, liver kidneys.

Note: For definitions, see the Acronyms and Abbreviations section.

3.2.4 Munitions and Explosives of Concern

All work will be conducted in accordance with the Munitions and Explosives of Concern Support Work Plan (USAED 2008). In general, all work will be conducted after the subsurface has been cleared by the unexploded ordnance support team (see the MEC Support Work Plan for details).

4.0 ACTIVITY HAZARD ANALYSIS

AHAs are required for all tasks. AHAs will define the activities being performed and identify the sequences of work, the specific hazards anticipated, site conditions, equipment, materials, and the control measures to be implemented to eliminate or reduce each hazard to an acceptable level of risk.

AHAs have been developed for this project (Attachment 4) in accordance with the USACE *Safety and Health Requirements Manual* (USACE 2003). These AHAs may not depict actual site conditions. As personnel mobilize to the site and encounter actual site conditions, a SPA will be developed using the site crew to identify actual site conditions and hazards for the activity to verify that protective measures are in place to mitigate incidents.

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5.0 HEALTH AND SAFETY ENVIRONMENTAL PROCEDURES/ STANDARD OPERATING PROCEDURES

This SSHP is intended as a personnel resource. This document brings together site- and task-specific corporate procedures (including Jacobs' Corporate Safe Operating Procedures and USAED and CFR requirements) to create a concise and relevant document designed for usability by all members of the FCS field team. In the case of conflict between corporate procedures and USACED and requirements, the most stringent requirements shall apply.

Field personnel shall participate in a medical surveillance program. Field workers must provide to the SSHO documentation (e.g., a physician's letter) of their participation in the medical program and evidence that they are current. Workers with medical limitations, as well as employers of subcontract employees, are responsible for notifying the Site Manager/SSHO of said limitations so work tasks will be appropriately assigned.

Each Jacobs employee is responsible for completing a monthly Hazardous Material Exposure and Field Activity Report form and for notifying management if an incident or exposure occurs.

Subcontractors shall provide the SSHO documentation of their employee participation in a medical surveillance program, evidence they are current, and any medical restrictions before their employees are sent to a field project. Documentation will be retained onsite.

In addition to the medical surveillance prescribed for hazardous-waste workers, the SSHP will identify any site-specific medical monitoring required.

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6.0 RESPIRATORY PROTECTION PROGRAM

All employees will be provided protection from occupational exposure where potential hazards exist for dusts, fumes, mists, radionuclides, toxic gases, vapors, or oxygen deficiency. Where feasible, exposure to contaminants at concentrations presenting potential health hazards will be eliminated by engineering controls. When effective engineering controls are not feasible, use of Respiratory Protective Equipment (RPE) will be required to achieve this goal. The Respiratory Protection Plan is presented in Attachment 5.

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7.0 AIR MONITORING PLAN

Under supervision of the SSHO, air monitoring will be conducted at each site where petroleum, oil, and lubricants (POL) or other contaminants are present. The air monitoring results will be documented in field logbooks. Monitoring of personnel's breathing zone as well as area monitoring will be conducted to verify the field team is using appropriate types and levels of RPE and are properly protected. The type and extent of monitoring conducted will depend upon site-specific conditions and potential contaminants encountered at the site. The information contained in this section is provided as background reference for the participants in this project. Under the guidance of the SSHO, air monitoring will be implemented following the guidelines in this section. Section 9.0 of this plan provides general PPE recommendations. The SSHO, with the assistance of trained field personnel, will identify conditions that may require additional PPE.

Field crews will use the PID equipped with a 10.6-electron-volt lamp as the primary method of monitoring. This method is not considered complete but is the most readily available indicator of organic vapors in the atmosphere. Prior to PID use, background levels must be established in a fresh-air environment, away from any POL-contaminated sites. The PID reads in units of ppm, and the readings should be sustained for 1 minute to determine exposure. Monitoring will be conducted using a PID at all sites where POL is a COPC. Workers will don appropriate level of protection as identified in Table 7-1.

All instruments used onsite will be calibrated in accordance with the manufacturer's instruction manual. The results of all calibrations will be recorded in the field logbooks.

**Table 7-1
Air Monitoring Requirements and Action Levels**

Instrument	Tasks	Action Levels		Frequency¹	Calibration²
PID: Minimum 10.6 electron volts, calibrated with Isobutylene	All Tasks	0-10 ppm BZ >10-25 ppm BZ >25 to 50 ppm BZ >50 ppm BZ Note: Detections above background levels.	Level D Level C Level B Stop work; reevaluate	Monitor the breathing zone at the beginning of operations and whenever site conditions change. Levels C and B require continuous monitoring. Check waste characterization analytical results for COPCs and compare to OSHA/NIOSH PELs to select appropriate respiratory protection.	Daily - pre- and post-use
Direct reading instrument: Colorimetric Tubes: benzene	All Tasks	<5 ppm BZ 5 – 10 ppm BZ >10 to 25 ppm BZ >25 ppm BZ	Level D, 5 minutes Level C Level B Stop work; reevaluate	Monitor initially at all POL sites to eliminate or establish the presence of benzene if site characterization does not support the absence of benzene. Also passive dosimeters will be used if benzene is detected.	Conduct a leak check on pump prior to use
Combustible Gas Meter ³	As Required	≥10% lower explosive level	Stop work; reevaluate (explosion hazard)	Continuous monitoring of a confined space. Screening during excavation or before performing hot work.	Daily - pre- and post-use
Oxygen Meter	Confined Space Entry	<19.5% >23.5%	Provide alternate air source (Level B) Explosion hazard, stop work, reevaluate	Screening before entering confined space.	Daily - pre- and post-use

Notes:

¹Air monitoring shall be documented using field logs or monitoring forms.

²Calibrations shall be documented in the field logs or calibration logs.

³Oxygen must be > 15 percent for lower explosive limits reading to be accurate.

> = greater than

< = less than

For definitions, see the Acronyms and Abbreviations section.

8.0 HAZARD COMMUNICATION PROGRAM

The Hazard Communication Program has been established to inform workers and subcontractors of potential site-specific chemical hazards and to comply with the requirements of 29 CFR 1910, and USACE *Safety and Health Requirements Manual* EM 385-1-1 (USACE 2003).

The SSHO will present Hazard Communication training in accordance with the FCS-Specific Hazard Communication Program (Attachment 5). Hazard communication training will be provided before starting initial fieldwork. This training will be documented using the Hazard Communication and Right-to-Know Standards form contained in the FCS-Specific Hazard Communication Program.

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9.0 PERSONAL PROTECTIVE EQUIPMENT

All workers at the FCS field site are required to appropriately protect themselves from chemical and physical hazards. In general, all field personnel shall wear the following PPE:

- Clothing suitable for weather and working conditions, long or short sleeve shirts and long (not baggy) pants
- Hand protection appropriate for the hazard
- Safety glasses with side shields (in hazardous work areas)
- Hard hat
- Leather or suitable protective safety-toed work boots, ANSI Z41
- High-visibility vest, ANSI Type 2
- Ear plugs/Ear Muffs (where noise levels dictate)

Additional PPE may be required depending upon the site conditions, as described below.

9.1 HEARING PROTECTION

Adequate hearing protection is required in all areas that may expose workers to high levels of noise. This includes work areas around heavy equipment. Loud noises are considered to be any noise over 85 decibels. From an arm's length away, if you have to raise your voice to be heard, you may need hearing protection. Hearing protection includes one or a combination of the following:

- Engineering controls (where feasible)
- Ear plugs
- Ear muffs

9.2 EYE PROTECTION

Eye protection is required in all hazardous work areas. Eye protection that may be used includes:

- Safety glasses with side shields (minimal eye protection)
- Goggles (splash, dust, and foreign object protection)

- Face shields with safety glasses and side shields for splash and foreign object protection

9.3 PROTECTIVE CLOTHING

Clothing sufficient to protect workers from contact with substances such as petroleum or heat and cold is required. The following clothing is recommended:

- Rain gear
- Hard hat liner
- Gloves:
 - Nitrile, latex, and cotton gloves
 - Double nitrile gloves for personnel handling samples

9.4 LEVELS OF PERSONAL PROTECTIVE EQUIPMENT

The following section describes the four different levels of PPE.

9.4.1 Level A (not anticipated on this project)

The following constitute Level A equipment and may be used as appropriate:

- Positive-pressure, full face-piece self-contained breathing apparatus (SCBA) or positive-pressure, supplied-air respirator with escape SCBA, approved by National Institute on Occupational Safety and Health (NIOSH)
- Totally encapsulating chemical-protective suit
- Coveralls (optional, as applicable)
- Long underwear (optional, as applicable)
- Gloves, outer, chemical-resistant
- Gloves, inner, chemical-resistant
- Boots, chemical-resistant, steel toe and shank
- Hard hat (under suit) (optional, as applicable)
- Disposable protective suit, gloves and boots (depending on suit construction, may be worn over totally encapsulating suit)

9.4.2 Level B (rarely required on this project)

The highest level of respiratory protection is necessary, but a lesser level of skin protection is needed. The following constitute Level B equipment and may be used as appropriate:

- Positive-pressure, full face-piece SCBA or positive-pressure, supplied-air respirator with escape SCBA (NIOSH-approved)
- Hooded chemical-resistant clothing (overalls and long-sleeved jacket, coveralls, one or two-piece chemical-splash suit, disposable chemical-resistant overalls)
- Coveralls (optional, as applicable)
- Gloves, outer, chemical-resistant
- Gloves, inner, chemical-resistant
- Boots, outer, chemical-resistant steel toe and shank
- Boot-covers, outer, chemical-resistant (disposable) (optional, as applicable)
- Hard hat (optional, as applicable)
- Face shield (optional, as applicable)

9.4.3 Level C (rarely required on this project)

The concentration(s) and type(s) of airborne substance(s) are known, and the criteria for using air purifying respirators are met. The following constitute Level C equipment and may be used as appropriate:

- Full-face or half-mask, air-purifying respirators (NIOSH-approved)
- Hooded chemical-resistant clothing (overalls, two-piece chemical-splash suit, disposable chemical-resistant overalls)
- Coveralls (optional, as applicable)
- Gloves, outer, chemical-resistant
- Gloves, inner, chemical-resistant
- Boots (outer), chemical-resistant steel toe and shank (optional, as applicable)
- Boot-covers, outer, chemical-resistant (disposable) (optional, as applicable)
- Hard hat (optional, as applicable)
- Escape mask (optional, as applicable)
- Face shield (optional, as applicable)

9.4.4 Level D (standard equipment on this project)

A work uniform affording minimal protection is needed, used for nuisance contamination only. The following constitute Level D equipment and may be used as appropriate:

- Clothing suitable for weather and working conditions, long or short sleeve shirts and long (not baggy) pants
- Hand protection appropriate for the hazard
- Safety glasses with side shields (in hazardous work areas)
- Hard hat
- Leather or suitable protective safety-toed work boots, ANSI Z41
- High-visibility vest, ANSI Type 2
- Ear plugs/Ear Muffs (where noise levels dictate)
- Boots, outer, chemical-resistant (disposable) (optional, as applicable)
- Safety glasses or chemical splash goggles (optional, as applicable)
- Escape mask (optional, as applicable)
- Face shield (optional, as applicable)

Level B is expected when working with a drum with unknown contents. Modified level C is the expected level of PPE to be used during the remaining removal action effort.

9.5 PROTECTIVE SUPPORT EQUIPMENT

The following additional safety equipment and information will be brought to the work sites:

- Portable eyewash
- Whistle or Air Horn
- First aid kit
- Burn Kit
- Type A-B-C fire extinguisher

10.0 SITE CONTROL

Effective site control procedures will reduce the potential exposure of the project team, other workers in the vicinity, and the surrounding environment from the onsite hazards. The preliminary plan for site control is presented in Figure 10-1. The preliminary site control plan presents the anticipated work areas and exclusion zones within the FCS site. Site control includes:

- Limiting site access to only essential personnel
- Conducting operations in a manner that reduces the exposure of personnel and equipment to hazards or hazardous atmospheres and eliminates the potential for offsite dispersion
- Establishing decontamination procedures for personnel and equipment
- Alerting personnel to the presence of wildlife in the area

10.1 WORK ZONES

Clearly delineated work zones and exclusion areas will help ensure that:

- Site personnel are adequately warned of a potential or existing hazard.
- Specific activities and hazards are confined to controlled areas.
- Personnel can be accurately and quickly located and evacuated during an emergency.

10.2 BUDDY SYSTEM

For added safety, this project requires personnel performing fieldwork to work with a buddy at all times. The buddy must be capable of:

- Assisting his/her partner
- Monitoring partner for signs of chemical or other exposures (e.g., heat or cold)
- Periodically verifying the integrity of partner's PPE
- Notifying SSHO when emergency help is needed
- Keeping the Site Manager abreast of location and expected time of return
- Observing work area for unexpected weather hazards and wildlife

Figure 10-1 Preliminary Site Control Plan

10.3 COMMUNICATIONS

Site personnel will communicate using radios, mobile phones, voice, hand signals, and line of site communications. Communication with personnel not located at the project site (i.e., in Anchorage) will be made via cell phone or land-line telephone when located at the Jacobs field office. The majority of phone communications will take place via land-line or cell phone from the Jacobs field office.

10.4 SITE SAFETY AND SECURITY

Site security is essential to:

- Prevent unauthorized, unprotected, or unqualified people from being exposed to site hazards
- Protect established and safe working procedures
- Protect personnel from wildlife

Site safety and security will be maintained by:

- Working inside a chain linked fence
- Limiting access to authorized and essential personnel through a gate controlled by Jacobs
- Requiring the SSHO to approve all visitors to the site
- Stopping work immediately if unknown or unauthorized personnel enter the site.

10.5 DECONTAMINATION PROCEDURES

Decontamination protects workers, the public, and the environment by limiting exposure to harmful substances and by preventing the spread of contamination. The SSHO will oversee initial decontamination procedures to determine their effectiveness and will revise them if necessary to improve contamination control.

10.6 PERSONNEL DECONTAMINATION

All personnel exiting a site will follow the site/area specific decontamination procedures. Under no circumstances (except emergency evacuation) will personnel be allowed to leave a

site/area before decontamination. The SSHO may approve reducing the decontamination procedures in the field when determined the contamination level(s) have been reduced that lessen the requirements.

Decontamination procedures for the POL-contaminated sites are as follows:

- Wipe off gross contamination from clothes and equipment.
- Scrub boots and gloves in a premixed decon solution or detergent water, if necessary.

Decontamination procedures for the drum burial sites are as follows:

- Level A, B, and C decontamination will be performed in accordance with HSEPs
- Level A decontamination will use Jacobs HSEP reference 11.9.1,
- Level B decontamination will use Jacobs HSEP reference 11.9.2
- Level C decontamination will use Jacobs HSEP reference 11.9.3, and
- Level D and D-Modified decontamination procedures will be followed as described in Jacobs HSEP reference 11.9.4.

At the FCS site it is considered that Level D and modified level C decontamination procedures will be followed. Modified level C decontamination would include the following;

- Removal of equipment plastic drop sheets,
- Washing and rinsing outer gloves and boots in decon solution or detergent and water, and
- Depositing outer gloves and TyVex suit in lined Overpack® for disposal.

10.6.1 Equipment and Vehicle Decontamination

Small instruments and equipment will be protected from contamination by draping, masking, or otherwise covering the instruments with plastic to the degree possible without hindering the operation of the unit. Contaminated protective coverings will be removed from the equipment and disposed of in the appropriate containers. Any dirt or obvious contamination on the equipment will be brushed or wiped with damp disposable wipes, and the equipment will be dried. The units will be checked, field calibrated, and recharged if necessary for the next day's operation.

Equipment used onsite will undergo decontamination prior to leaving the site to eliminate contaminant migration from the site and potential cross-contamination of sites. Gross decontamination includes the removal of potentially contaminated materials by use of a shovel or other hand tools and stiff bristle brushes. All materials removed during gross decontamination will be accumulated and managed with similar waste streams.

10.7 WASTE HANDLING AND DISPOSAL

Waste generated onsite from field activities includes investigation-derived waste, PPE, field trash, and office trash. Wastes will be containerized and transferred to the civil subcontractor or waste subcontractor, as appropriate. Disposal of all wastes will be in accordance with state and federal requirements, as discussed in the Work Plan.

10.8 CONFINED SPACE

Confined space entry is not anticipated as part of the scope of this project; however, the information in this section is included in the event that unforeseen conditions onsite are encountered. Excavations or trenches four-feet deep or greater are considered confined spaces when personnel enter them. Generally, other potentially hazardous confined spaces include but are not limited to:

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

Jacobs HSEP 7.2 Confined Space Entry (Attachment B-4) will be followed should confined space work be required.

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11.0 INSPECTIONS

Site and equipment inspections will be performed on a routine basis as described in the following sections.

11.1 SITE INSPECTIONS SAFETY EVALUATION

The following inspections are required:

- The Site Manager/SSHO shall conduct an HSE review of the job site before any new phase of work is initiated and periodically thereafter.
- The Site Manager/SSHO shall conduct daily safety HSE inspections of each job site. Observations noted during the inspection will be documented on SORs (Attachment 6). Deficiencies shall be posted on the deficiency tracking log.

All site inspection results should be reviewed with the Site Manager and site personnel as applicable. All deficiencies will be corrected. Serious deficiencies must be corrected immediately.

11.2 EQUIPMENT INSPECTIONS

Any machinery or mechanized equipment shall be inspected and tested by a competent person and determined to be in safe operating condition prior to use at the site. Inspections and tests shall be in accordance with the manufacturers' recommendations and shall be documented. Records of tests and inspections shall be maintained at the project field office.

11.2.1 Daily/Shift Inspections and Tests

All machinery and equipment shall be inspected daily (when in use) to ensure safe operating conditions as indicated below:

- Tests shall be conducted at the beginning of each shift during which equipment is in use to determine that brakes and operating systems are in proper working condition and that all required safety devices are in place and functional.
- When any machinery or equipment is found to be unsafe, or when a deficiency affecting the safe operation of equipment is observed, the equipment shall be immediately taken out of service and not used until the unsafe conditions have been corrected.

- A tag indicating that the equipment “shall not be operated and the tag not be removed” shall be placed in a conspicuous location on the equipment. Where required, lockout tag-out procedures shall be followed.
- The tag shall remain in its attached location until it is demonstrated to the individual who found the equipment unsafe that the equipment is safe to operate.
- When deficiencies are corrected, the machinery or equipment shall be re-tested and re-inspected before being returned to service.

11.2.2 Vehicle Inspections

All motor vehicles owned or rented by Jacobs or its subcontractors will be inspected prior to use (Attachment 6). All deficiencies found during the inspection will be noted and corrected prior to equipment use. Vehicles that cannot be brought to safe operating condition will not be used. In addition to pre-use inspections, the vehicle’s primary driver will be responsible for inspecting the rental vehicle and ensuring scheduled and periodic maintenance to maintain a safe operable condition. At no time will anyone operate a vehicle s/he believes to be unsafe.

11.3 SAFE PLAN OF ACTION ASSESSMENTS

Management and HSE shall routinely monitor and assess the development and implementation of the SPA. The SPA assessment shall be made using the [SPA Assessment form](#) or other means that achieves the same result. Based on a qualitative review of relative risks and complexity of the tasks, SPA assessments will be accomplished as follows:

- | | |
|---------------------------------|---|
| • Level B Drum Sampling | • Daily |
| • MEC Excavation | • Weekly |
| • Soil Excavation and transport | • Weekly |
| • IDW management | • Weekly |
| • | • Weekly |
| • | • Weekly |
| • | • Weekly (as required during mobilization and demobilization) |

Task-specific AHAs are presented in Attachment 4. AHAs have been developed for mobilization/demobilization, IDW management, soil and debris investigation, sampling, backfilling and site restoration and stockpile construction, maintenance and decommissioning.

11.4 SAFETY OBSERVATION REPORTS

All site personnel, not just the site SSHO, are to complete an SOR form (Attachment 6) when real or potential unsafe acts or unsafe conditions have been identified. The success of this program increases when SORs completed by non-HSE specialists exceed those completed by HSE specialists. This indicates all personnel are developing safety-conscious attitudes and habits.

SORs shall also be used to encourage and reward safe behavior. Providing positive reinforcement of a job or task well executed is far more encouraging than recognizing unsafe behavior. Encouragement can be rewarding for the whole project and lead the project in providing a better and healthier environment.

Any corrective measures shall be documented on the SOR form. All SORs shall be submitted to the SSHO within 24 hours of their completion.

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12.0 EXTREME WEATHER SITEWORK

For the purposes of this SSHP, temperatures below –15 degrees Fahrenheit (°F) will be referred to as extreme cold weather. The 2008 field activities will be performed during the summer; therefore, extreme cold weather is not expected.

Site personnel, however, should be prepared for warmer temperatures during the summer months. Field personnel wearing additional PPE may be more susceptible to heat stress. There four environmental factors affect the amount of stress workers experience in hot work areas: temperature, humidity, sun (radiant heat), and wind.

Additional stress levels are associated with age, weight, fitness, medical condition, and acclimation to heat. Symptoms of heat stress are heat rash (prickly heat), increased heart rate, loss of concentration, and irritability. These symptoms may lead to fainting or death. The following steps are recommended to reduce the risk of heat stress:

- Move to a cooler place,
- Reduce workload or pace,
- Rest in cool areas (may consider taking longer breaks and monitor stress),
- Wear lightweight clothing,
- Perform strenuous activities during hours when the sun is less intense or temperatures are cooler, and
- Drink plenty of water (one pint per person per hour is recommended).

If the ambient air temperature reaches below 30 °F or above 80 °F, the SSHO will monitor and provide work-rest regiments to the Site Manager. Work-rest regiments will be based upon the guidelines in ACGIH's *Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*.

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13.0 EMERGENCY PROCEDURES

The following sections describe:

- Pre-emergency planning,
- Emergency equipment and supplies,
- Emergency contacts,
- Emergency procedures,
- Emergency response, and accident follow-up,
- Evacuation information and contacts,
- Post-incident notifications,
- Recordkeeping, and
- Vehicle accident procedures.

13.1 PRE-EMERGENCY PLANNING

The Site Manager/SSHO will coordinate with applicable emergency service providers for all jobsite locations. Contacts, contact numbers, and primary gathering points will be reviewed prior to mobilization to the FCS. Attachment 1 provides an emergency contact list.

13.2 EMERGENCY COMMUNICATION

In addition to communication methods described in the SSHP, the following communication and contact methods will be used:

- Land-line phone
- Cellular phone
- Satellite phone

When placing a call for emergency response, report the following information:

- Your name
- Your company's name
- Type of emergency and perceived severity
- Location of accident or injury (Taku Gardens, Fort Wainwright, next to the gas station)

- Time of incident
- Type of first aid or response being given

DO NOT HANG UP until the operator or emergency dispatcher has received the complete information and directs you to hang up.

Notify the Site Manager/SSHO and your immediate supervisor immediately after hanging up the phone. Further information or assistance may be needed from you to complete the accident investigation process.

13.3 EMERGENCY MEDICAL TREATMENT

Should a person become injured, site personnel, along with the SSHO, will determine the severity of the injury(s) sustained. If the victim cannot be treated onsite, evacuation will likely be necessary. There are several medical facilities located close by, Bassett Army Hospital, U.S. Army Hospital and Fairbanks Memorial Hospital. Of these hospitals Fairbanks Memorial Hospital is best equipped to deal with severe medical emergencies.

In the event that a serious injury occurs and further treatment is needed, evacuation to Anchorage will be arranged. Emergency contacts are attached (Attachment 1).

An Authorization for Medical Treatment form (Attachment 6) shall be taken with the employee to the destination medical facility. The site personnel shall complete the top portion of the form and the doctor at the medical facility shall complete the bottom portion of the form. The Site Manager shall:

- Secure the accident area and complete an accident report with all applicable witness statements
- Prepare figures depicting the general site layout, directions, emergency contacts, and the location of the medical facility

13.4 FIRE

Upon notification of a fire, all field crews will assemble at the predetermined point onsite. The muster point will be the Jacobs field office.

13.5 PERSONAL PROTECTIVE EQUIPMENT

If any site worker experiences a failure of PPE that person and his/her buddy will undergo decontamination immediately, and the Site Manager/SSHO will be notified. Return to work will not be permitted until the equipment has been properly repaired or replaced.

13.6 OTHER EQUIPMENT FAILURE

If other equipment onsite fails to operate properly, the equipment shall be red tagged and removed from service and the SSHO notified. After completion of repairs, the equipment shall be re-inspected and evaluated, and appropriate actions will be taken. The SSHO will evaluate the safety hazards to site personnel before continuing operations.

13.7 EVACUATION

If an evacuation of the work area is necessary, the following steps should be followed:

- Site personnel shall enter the vehicle nearest to them and proceed to a pre-established meeting point (the Jacobs field office).
- The supervisor will account for field team members at the assembly points.
- The supervisor will complete an incident report with applicable witness statements as soon as possible after an incident.

Evacuation routes and assembly points shall be designated to facilitate access and provide direction for emergency responders. All onsite personnel will be advised of evacuation routes and assembly points during the safety orientation and/or daily tailgate meetings. The Site Manager/SSHO shall document the actual evacuation routes and assembly points, whenever evacuation occurs.

13.8 EMERGENCY RESPONSE AND ACCIDENT FOLLOW-UP

Following an incident or emergency, the Site Manager or designee shall directly notify the Health and Safety Manager (HSM), and Jacobs Project Manager soon as possible. The client will be notified after the Jacobs PM. The Site Manager shall be prepared to provide the following information:

- SSHO name
- Project name and number
- Exact location of incident
- Name victim and their employer
- Nature and extent of injuries
- The name and address of medical facility (if personnel were transported offsite)
- The name of physician providing offsite care
- A phone number where the SSHO can be contacted during the next 24 hours

13.9 EXPOSURE TO BLOODBORNE PATHOGENS

The following procedures will be implemented when a potential exposure to blood borne pathogens occurs:

- The SSHO must be notified immediately when a first-aid incident occurs.
- The SSHO shall provide a report to the HSM, as required by reporting procedures.
- The report shall include names of all first aid providers who rendered assistance and a description of the incident, including time, date, and types of barriers used.
- If a blood borne pathogen or other potentially infectious material exposure has occurred, the description of the incident (above) must include an exposure summary to ensure proper post-exposure evaluation, prophylaxis, and immediate follow-up procedures.
- The report shall be recorded on the first aid register.
- Hepatitis B vaccination must be offered to all workers who have occupational exposure to blood or other potentially infectious materials.

An accident with any of the consequences listed below shall be reported immediately to the Jacobs HSM. A government-designated representative will also be notified if the following events occur:

- Fatal injury
- One or more persons admitted to a hospital
- Property damage in an amount specified by the designated authority

Daily records of all first aid treatments not otherwise reportable shall be maintained on prescribed forms and furnished to the HSM weekly.

13.10 VEHICLE ACCIDENT

The Site Manager and SSHO shall be promptly notified of any accidents involving vehicles. The Site Manager will be responsible for notifying the Project Manager, HSM, and client representative. A determination of operator drug testing will be made at that time. Vehicle accident procedures shall be followed and report forms completed (Attachments 3 and 6).

13.11 INJURY AND ILLNESS

An initial accident investigation will begin in accordance with HSEP 5.1, Accident and Incidents (Attachment 3). At a minimum:

- The scene will be secured with no movement of material or equipment until a review of the accident is completed.
- Signed statements from witnesses will be obtained.

If an employee requires medical treatment, the Authorization for Medical Treatment form (Attachment 6) shall be completed and delivered to the HSM as soon as possible. The USACE Accident Investigation Report (Form 3394) and USACE Report of Accident (Form 265-R) are provided in Attachment 6. Both Jacobs and USACE forms shall be completed.

13.12 SPILL OR RELEASE PROCEDURES

The SSHO and Site Manager shall be notified immediately when a spill or release occurs. The SSHO or Site Manager shall notify the Project Manager and client as soon as the site is under control and an AHA/SPA has been developed and implemented. No one shall enter the site until the AHA/SPA is in place and approach has been approved. Regulatory agencies will be notified by the Project Manager or the client.

Personnel involved with containment or cleanup shall wear appropriate PPE as defined in AHA/SPA for specific contaminants. Immediately notify the SSHO or Site Manager. The SSHO or Site Manager will be responsible for notifying the Project Manager and the client. The client and Project Manager will determine the strategy for notifying regulatory agencies.

Appropriate methods to contain, control, or remove released product shall be followed by all personnel involved.

14.0 ORIENTATION AND TRAINING

Prior to the start of work activities all personnel working on this project and any new person visiting or conducting work on this project shall be briefed on this plan. All personnel shall sign the FCS Safety and Health Agreement Sign-off Sheet (Attachment 2), indicating they have been briefed and understand the requirements contained in this SSHP.

Prior to work, a daily safety tailgate meeting will be held to discuss planned work activities, safety precautions, AHAs, emergency response updates, employee concerns, SORs, site conditions, monitoring results, injuries/illnesses that may have occurred, exclusion zone entries, client issues, and other topics of concern to employees. The Safety Tailgate Meeting and Exclusion Zone Entry Log (Attachment 6) will be used to document the meeting.

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15.0 SITE POSTINGS

The following employment-related posters are required bulletin board(s) and will be displayed prominently at each field office:

- Employee Polygraph Protection Act
- Notice To Employees—Federal Minimum Wage
- You Have a Right to a Safe and Healthful Workplace
- Equal Employment Opportunity Is the Law
- The Alaska Human Rights Law & Federal Law Prohibit Sexual Harassment
- Jacobs Sexual Harassment Policy
- Unemployment Insurance
- Family and Medical Leave Act
- Safety and Health Protection on the Job
- Alaska Wage and Hour Act
- Notice of Insurance
- Uniformed Services Employment and Reemployment Rights Act
- Map denoting route to nearest care facility
- Emergency phone numbers
- Copy of SSHP
- OSHA 300A Form
- Copy of deficiency tracking log
- Safety and health promotional posters
- Date of last lost workday injury

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16.0 REFERENCES

Alaska Community Database, Community Information Systems. 2004.
<http://www.commerce.state.ak.us/dca/commdb/CIS.cfm>

OFR (Office of the Federal Register). 1999 (July). *Hazardous Waste Operations and Emergency Response*. National Archives and Records Administration. 29 CFR 1910.120 and 1926.65.

USACE (U.S. Army Corps of Engineers). 2003 (November). *Safety and Health Requirements Manual*. EM 385-1-1.

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ATTACHMENT 1

FSC Contact List, Emergency Numbers, and Location Map

CONTACT LIST AND EMERGENCY NUMBERS

Client: USAED P.O. Box 6898 Elmendorf AFB, Alaska 99506-0898		Phone: (907) 753-2689 Fax: (907) 753-5626
Jacobs 4300 B Street, Suite 600 Anchorage, Alaska 99518		Phone: (907) 222-6256 Fax: (907) 222-6258
Project Manager	Terry Heikkila	Phone: (907) 751-3312 Mobile: (907) 227-3466
Safety and Health Manager (acting)	Jon McVay	Phone (907) 751-3395 Mobile: (907) 230-5395
Project Manager	Brian Roberts	Phone: (907) 751-3356 Mobile: (907) 351-9158
Senior UXO Supervisor	Dave Frandsen	Mobile: (865) 621-1632

EMERGENCY CONTACTS

Medical and Fire Emergency	911
Bassett Army Community Hospital 4065 Spruce St Fort Wainwright, AK 99703	(907) 353-5108
US Army Hospital Fort Wainwright, AK 99703	(907) 353-6370
Fairbanks Memorial Hospital Tanana Valley Clinic Location 1001 Noble St, Fairbanks, AK 99701	(907) 458-5606
Fairbanks Memorial Hospital 1650 Cowles St. Fairbanks, AK 99701	(907) 452-8181

Alaska Airlines	1-800-252-7522

Spills and Toxins	
National Response Center (Oil & Toxic Chemical Spills)	(800) 424-8802
ChemTrack (Customer ID #JAC001)	(800) 424-9300
Poison Control Center	(800) 222-1222

Hospital Location Plan

ATTACHMENT 2
FCS Safety and Health Agreement Sign-off Sheet

ATTACHMENT 3
Applicable Health, Safety, and Environmental Procedures
and Material Safety Data Sheets

Applicable Health, Safety, and Environmental Procedures

- 2.16 Safe Plan of Action
- 2.17 Safety Observation Report
- 5.1 Accidents and Incidents Investigating and Reporting
- 5.2 Vehicle Accidents
- 7.3 Hazardous Materials/Waste Sites
 - 7.3.3 Utility Clearance
- 8.3 Excavating Equipment Use and Operator Qualification
- 8.4 Excavations
- 11.1 Biological Hazard Control
- 11.2 Bloodborne Pathogen Exposure Control Program
- 11.3 Chemical Warfare and Incendiary Agents
- 11.4 Cold Stress Control
- 11.5 Heat Stress Control
- 11.6 Occupational Noise
- 11.7 Spill Containment
- 11.8 Ergonomics
- 11.9 Decontamination
 - 11.9.1 Level A Decontamination
 - 11.9.2 Level B Decontamination
 - 11.9.3 Level C Decontamination
 - 11.9.4 Level D Decontamination
- 13.1 Personal Protective Equipment
- 13.2 Personal Protective Equipment Environmental Activities
- 13.3 Head Protection
- 13.4 Hand Protection
- 13.5 Foot Protection
- 13.6 Eye and Face Protection
- 13.7 Work Attire and Clothing
- 13.8 Fall Prevention and Protection
- 13.9 Respiratory Protection Program
- 14.1 Emergency Evacuation
- 14.2 Earthquake
- 14.4 Remote Site Emergency Preparedness
- 16.1 Compressed Gas Cylinder Storage
- 16.2 Flammable and Combustible Liquids Storage
- 16.3 Fuel Storage
- 16.4 Housekeeping and Material Handling
- 16.5 Waste and Trash Receptacles
- 18.3 Ladders and Stairways
- 20.1 Fire Prevention
- 20.2 General Fire Protection
- 20.3 Fire Extinguishers
- 21.2 Motor Vehicle Safety

Project-Specific Material Safety Data Sheets (General)

RRO

PCB (Aroclor 1254 and 1260)

Clorox Bleach

Windex

OFF! Insect Repellent

Duracell Alkaline Batteries

Marking paint (all colors)

Motor Oil

Unleaded Gasoline

Leaded Gasoline

Propane

Diesel Fuel

Lead-Acid Battery

Benzene

Ethylbenzene

Toluene

Xylenes

TCE

Naphthalene

Methoxychlor

Petroflag test kit

Rapid Assay Test Kit (PCB)

Bear Spray

Spray adhesive (3M)

Vermiculite

Liquid Air (SCBA and calibration gas)

Project-Specific Material Safety Data Sheets (HAZCAT KIT)

Acid Test	Iodine Test
Alcohol Solubility Test	Iron Test
Alcohol Test	Lead Test
Aluminum Test 1	Magnesium Test
Aniline Test	Metal Analysis Test1
Arsenic Test 1	Metal Analysis Test2
Arsenic Test 2	Metal Analysis Test3
Arsenic Test 3	Metal Analysis Test4
Arsenic Test 4	Metal Analysis Test5
Arsenic Test 5	Metal Analysis Test6
Barium Test	Metal Analysis Test7
Cadmium Test	Metal Analysis Test 8
Calcium Test	Metal Extraction Solution
Chloride Test	Nickel Test
Chromium Test	Oil Test
Chlor-N-Oil (Dexsil)	Organic Acid Test
Chlor-N-Soil (Dexsil)	Perchlorate Test
Cobalt Test	Sugar Test 1
Concentrated Sulfuric Acid	Sugar Test 2
Cyanide Test 1	Sulfate Test
Cyanide Test 2	Urine Test
Detergent	Viscosity Standard
Ephedrine Test 3 (Meth Kit option)	Water Solubility Test
Flour Test	Xylene Solubility Test
Fluoride Test	Zinc Test
Iodine Crystal Test	

Project-Specific Material Safety Data Sheets (Sampling Preservatives)

Acetone

Ammonium Chloride

Ascorbic Acid

Buffer Solution pH 4.00

Buffer Solution pH 7.0

Buffer Solution pH 10.00

Chloroacetic Acid

Ethylenediamine

Ferrous Ammonium Sulfate

Hydrochloric Acid, Concentrated

Magnesium Carbonate

Manganese Sulfate

Methanol

Nitric Acid

Phosphoric Acid, Liquid

Potassium Acetate

Potassium Chloride

Potassium Hydroxide

Potassium Iodide

Sodium Hydroxide

Sodium Sulfite

Sodium Thiosulfate

Sulfuric Acid

Zinc Acetate

Sodium Sulphate

Physical Agent Data Sheets (PADS)

Cold Stress

Hand-Arm Vibration

Heat Stress

Ionizing Radiation

Lasers

Noise

Radio Frequency/Microwave Radiation

Ultraviolet Radiation

ATTACHMENT 4
FCS Activity Hazard Analysis

ATTACHMENT 5
FCS-Specific Hazard Communication Program

ATTACHMENT 6

Project-Specific Forms

Safety Observation Report
Visitor Check-in Log
Air Monitoring Record Form
Health and Safety Calibration Log
Exposure Monitoring Log
Hazardous Material Exposure and Field Activities Report
Daily Health and Safety Report
USACE Equipment Inspection Forms
ChemTrack-Jacobs Equipment Inspection Forms
Welding/Brazing/Hot Work Permit
Authorization for Medical Treatment
USACE Accident Investigation Report (3394)
USACE Report of Accident (265-R)
ERS Incident Reporting Flowchart
Safety Tailgate Meeting Log