6. PERSONAL PROTECTIVE EQUIPMENT

This section provides guidance for the selection and use of PPE to be worn for project tasks and contingencies for upgrading and downgrading PPE. Types of PPE are generally divided into two broad categories: (1) respiratory protective equipment and (2) PPE. Both of these categories are incorporated into the standard four levels of protection (Levels A, B, C, and D). Level D PPE is anticipated for all aspects of this project.

The purpose of personal protective clothing and equipment is to shield or isolate individuals from chemical, physical, radiological, biological, and safety hazards encountered during project tasks when engineering and other controls are not feasible or cannot provide adequate protection. It is important to realize that no one PPE ensemble can protect against all hazards under all conditions. Proper work practices and adequate training will serve to augment PPE usage to provide the greatest level of worker protection.

The PPE policy requires field workers to wear, as a minimum, sturdy leather boots above the ankles, safety glass with side shields, and hard hats which is classified as level D. Safety boots will be required for activities where objects, materials, or equipment have the potential to fall on the feet of workers, occasional workers, visitors, and inspectors. The project HSO or safety professional will determine where and when this requirement will be invoked for each project.

The type of PPE will be selected, issued, used, and maintained in accordance with applicable company policies and procedures. Selection of the proper PPE is based on the following considerations:

- Specific conditions and nature of the tasks including well equipment installation, well monitoring, and well maintenance activities
- Potential contaminant routes of entry
- Physical form and chemical characteristics of hazardous materials, chemicals, or waste
- Toxicity of hazardous materials, chemicals, or waste
- Duration and intensity of exposure (acute or chronic)
- Compatibility of chemical(s) with PPE materials and potential for degradation or breakthrough
- Environmental conditions (e.g., humidity, heat, cold, rain)
- The hazard analysis (Section 3) evaluation of this HASP.

The PPE requirement for specific project tasks is identified in Table 6-1. This list may be augmented by the activity JSA and/or RWP. Potential exposures and hazards will be monitored (as discussed in Section 3) during the course of the project to evaluate changing conditions and determine PPE level adequacy and modifications.

Table 6-1. Task-based PPE requirements and modifications.

Task	Initial Level of Personal Protective Equipment	Upgrade Contingency	Downgrade Contingency	Upgrade or Downgrade Criteria	Personal Protective Equipment Modifications and Comments
Well drilling and instrument placement, repair, removal	D	C	D	Upgrade to Level C if airborne concentrations exceed action limits. Downgrade to Level D if contact with waste containers can be avoided or surveys show no detectable contamination on surfaces.	Level C respiratory protection defined by industrial hygienist, based on airborne contaminant. Leather gloves for all material handling tasks.
Well sampling activities	D	D+	N/A	Upgrade to Level D+ when attaching or removing straps if contamination is detected on the outside of waste containers.	D+ protective clothing consists of Tyvek hooded coveralls (or equivalent). Leather gloves.
Wastewater transfer/handling operations	D	D+	N/A	Upgrade to Level C if airborne levels exceed action limits. Downgrade to Level D if contact with waste containers can be avoided or surveys show no detectable contamination on surfaces.	Level C respiratory protection defined by industrial hygienist, based on airborne contaminant. Leather gloves for all material handling tasks.
Heavy equipment operations	D	D+	N/A	Upgrade to Level D+ if contact with waste material cannot be avoided.	D+ protective clothing consists of Tyvek hooded coveralls (or equivalent). Leather gloves.
Site grading	D	D+	N/A	Upgrade to Level C if airborne concentrations exceed the action limits.	Level C respiratory protection defined by industrial hygienist, based on airborne contaminant. Level C protective clothing consists of Tyvek hooded coveralls (or equivalent). Leather gloves for all material handling tasks.

Table 6-1. (continued).

Task	Initial Level of Personal Protective Equipment	Upgrade Contingency	Downgrade Contingency	Upgrade or Downgrade Criteria	Personal Protective Equipment Modifications and Comments
Equipment decontamination	C	C+	D+	Upgrade to Level C+ if splashing during decontamination of lead, cadmium, radiologically contaminated equipment cannot be avoided.	Level C respiratory protection defined by industrial hygienist, based on airborne contaminant. Level C protective clothing consists of Tyvek (or equivalent) hooded coverall. Level C+ protective clothing consists of Saranex (or equivalent coated hooded coverall). Leather gloves over nitrile for equipment and material handling before or after decontamination tasks. Double pair nitrile gloves during decontamination tasks.
				Downgrade to Level D+ for decontamination of small items using spray and wipe decontamination methods.	

6.1 Respiratory Protection

In the control of those occupational diseases caused by breathing air contaminated with harmful dusts, fogs, fumes, mists, gases, smokes, sprays, or vapors, the primary objective will be to prevent atmospheric contamination. This will be accomplished as far as feasible by accepted engineering control measures (e.g., enclosure or confinement of the operation, general and local ventilation, and substitution of less toxic materials). When effective engineering controls are not feasible, or while they are being instituted, appropriate respirators will be selected and used.

Required task-based respiratory protection and protective clothing are listed on Table 6-1. Respirators will not be required for specific project tasks. All personnel required to wear respirators will complete training and be fit-tested before being assigned a respirator in accordance with the training and documentation requirements in Section 6. Requirements for respirator use, emergency use, storage, cleaning, and maintenance, as stated in the applicable company policies and procedures, will be followed.

6.2 Personal Protective Equipment Levels

Table 6-2 lists PPE requirements for the two levels of PPE that may be worn during the course of the project. Applicable PPE levels include level D and Level C PPE which will be required for conducting project tasks. Modifications to these levels will be made under the direction of the HSO in consultation with the project IH and RadCon personnel, as appropriate. Such modifications are routinely employed during HAZWOPER site activities to maximize efficiency and to meet site-specific needs without compromising personnel safety and health. Level D PPE is the anticipated level of protection for project activities and will be upgraded if warranted by the presence of contaminants above action limits.

6.2.1 Level D Personal Protective Equipment

Level D PPE will only be selected for protective clothing and not on a site with respiratory or skin absorption hazards requiring whole-body protection. Level D PPE provides no protection against airborne chemical hazards, but rather is used for protection against surface contamination and physical hazards. Level D PPE will only be allowed in areas that have been characterized as having limited contamination hazards.

6.2.2 Level C Personal Protective Equipment

Level C PPE will be worn when the task site chemical and radiological contaminants have been well-characterized indicating that personnel are protected from airborne exposures by wearing an air-purifying respirator with the appropriate cartridges, no oxygen-deficient environments exist (less than 19.5% at sea level), and that there are no conditions that pose immediate danger to life or health.

6.3 Personal Protective Clothing Upgrading and Downgrading

The project HSO, in consultation with the project industrial hygienist and RadCon personnel, will be responsible for determining when to upgrade or downgrade PPE requirements. Upgrading or downgrading of PPE based on changing site conditions or activities is a normal occurrence. Action levels listed in Table 3-2 serve as the initial basis for making such decisions. Additional reasons for upgrading or downgrading are listed in the following subsections.

Table 6-2. Levels and options of PPE.

Personal Protective Equipment Level	PPE Required	Optional Personal Protective Equipment or Modifications
D	Coveralls or standard work clothes (coverall material type based on industrial hygiene determination). Hard hat (unless working indoors with no overhead or falling debris hazards) meeting ANSI Z89.1 requirements. Eye protection (safety glasses meeting ANSI Z87.1 requirements as a minimum). Hand protection (material based on type of work and hazardous materials being handled). Safety footwear (steel or protective toe and shank) meeting ANSI Z41 requirements or sturdy leather above the ankle for construction tasks.	Chemical or radiological protective clothing (Tyvek or Saranex) by industrial hygienist or RCT. Chemically resistant hand and foot protection (e.g., inner and outer gloves and boot liners). Radiological modesty garments under outer protective clothing (as required by RWP). Any specialized protective equipment (e.g., hearing protection, cryogenic gloves, face shields, welding goggles, and aprons).
C	Level D ensemble with the following respiratory and whole-body protection upgrades:[a] • Full-facepiece air purifying respirator equipped with a NIOSH-approved high-efficiency particulate air (HEPA) filter or chemical combination cartridge (industrial hygienist to specify cartridge type) OR • An air hood operating at a minimum pressure of 6 cfm or a full-facepiece supplied air respirator with a 10-minute escape bottle, a self-contained breathing apparatus (SCBA) or an escape air-purifying combination HEPA or chemical cartridge (supplied air respirator hose length no more manufacturer's specification and under no circumstances greater than 91 m [300 ft]) • Standard Tyvek (or equivalent) coverall OR • Chemical-resistant coveralls (e.g., Tyvek QC, Tychem 7500, or Saranex-23-P) (industrial hygienist to specify material).	Chemical-resistant outer shoe or boot cover (industrial hygienist or RCT to specify material). Inner chemical-resistant gloves with cotton liners (as determined by the industrial hygienist and RWP). Outer chemical-resistant gloves (as determined by the industrial hygienist). Radiological modesty garments under outer protective clothing (as required by RWP). Any specialized protective equipment (e.g., hearing protection, welding lens, and aprons).

a. Upgrades are determined by the industrial hygienist in conjunction with other environment, safety, and health professionals.

NOTE: Personnel must inspect all PPE before donning and entry into any work zone. Items found to be defective or that become unserviceable during use will be doffed and disposed of in accordance with posted procedures and placed into the appropriate waste stream. The PPE inspection guidance is provided in Table 6-1.

6.3.1 Upgrading Criteria for Personal Protective Equipment

The level of PPE required will be upgraded for the following reasons and work will halt until PPE upgrading has been completed:

- Identification of new, unstable, or unpredictable site hazards
- Temporary loss or failure of any engineering controls
- Contaminants that present difficulty in monitoring or detecting
- Known or suspected presence of skin absorption hazards
- Identified source or potential source of respiratory hazard(s) not anticipated
- Change in the task procedure that may result in an increased contact with contaminants or meeting any of the criteria listed above.

6.3.2 Downgrading Criteria

The level of PPE will be downgraded under the following conditions:

- Elimination of hazard or completion of task(s) requiring specific PPE
- Implementation of new engineering or administrative controls that eliminate or significantly mitigate hazard
- Sampling information or monitoring data that show the contaminant levels to be stable and lower than established action limits
- Elimination of potential skin absorption or contact hazards.

6.3.3 Inspection of Personal Protective Equipment

All PPE ensemble components must be inspected before use and when in use within project work zones. Self-inspection and the use of the buddy system, once PPE is donned, will serve as the principle forms of inspection. If PPE should become damaged or degradation or permeation is suspected, the individual wearing the PPE will inform others of the problem and proceed directly to the work zone exit point to doff and replace the unserviceable PPE. Table 6-3 provides an inspection checklist for common PPE items. Where specialized protective clothing or respiratory protection is used or required, the manufacturer's inspection requirements in conjunction with regulatory or industry inspection practices will be followed. Consult the project industrial hygienist, safety professional, and RCT about PPE inspection criteria.

Table 6-3. Inspection checklist for personal protection equipment.

Personal Protection Equipment Item	Inspection
Respirators (full-facepiece air-purifying and supplied air respirators with escape-only SCBA bottles or escape cartridges)	Before use:
	Ensure airline matches the airline respirator to be used (black hose).
	Inspect airline hose connections (sections of hose) to ensure all are threaded or permanent metal-to-metal connections (no quick disconnect pieces).
	Check condition of the facepiece, head straps, valves, connecting lines, fittings, and all connections for tightness.
	Check cartridge to ensure proper type or combination are being used for atmospheric hazards to be encountered, and inspect threads and O-rings for pliability, deterioration, and distortion.
	Check for proper setting and operation of regulators and valves, check all hose connections back to the breathing-air compressor, check the pressure to the airline station and on individual airline connections to ensure pressure is within required range (in accordance with the manufacturer's specifications).
Level D and C clothing	Before use:
	Visually inspect for imperfect seams, nonuniform coatings, and tears.
	Hold PPE up to the light and inspect for pinholes, deterioration, stiffness, and cracks.
	While wearing in the work zone:
	Inspect for evidence of chemical attack such as discoloration, swelling, softening, and material degradation.
	Inspect for tears, punctures, and zipper or seam damage.
	Check all taped areas to ensure they are still intact.
Gloves	Before use:
	Pressurize rubber gloves to check for pinholes: blow in the glove, then roll until air is trapped and inspect. No air should escape.
	Leather gloves:
	Inspect seams and glove surface for tears and splitting and verify no permeation has taken place.

7. PERSONNEL TRAINING

All INEEL personnel will receive training, as specified in 29 CFR 1910.120 and/or 29 CFR 1926.65 and INEEL companywide manuals, as applicable. Table 7-1 summarizes the project-specific training requirements for personnel-based access requirements, responsibilities at the project site, potential hazards, and training level requirements.

Modifications (e.g., additions to or elimination of) to training requirements listed in Table 7-1 may be necessary based on changing field conditions. Any changes to the requirements listed in Table 7-1 must be approved by the HSO, with concurrence from the FTL, project manager, RCT, and industrial hygienist, as applicable. These changes should be based on site-specific conditions and will generally be considered a minor change to the HASP, as defined by instructions from applicable company forms because they are administrative in nature.

7.1 General Training

All project personnel are responsible for meeting training requirements including applicable refresher training. Evidence of training will be maintained at the project site, field administrative location, or electronically (e.g., Training Records and Information Network [TRAIN]). Nonfield team personnel and visitors must be able to provide evidence of meeting required training for the area of the site they wish to access before being allowed into a project area. **As a minimum**, all personnel who access project locations must receive a site-specific briefing, are required to wear PPE, and must provide objective evidence of having completed applicable company training) or equivalent, in accordance with 29 CFR 1910.132, "Personal Protective Equipment." When activities are conducted outside a facility boundary, all personnel must complete unexploded ordinances training.

7.2 Project-Specific Training

Before beginning work at the project site, field team members will receive project-specific HASP training that will be conducted by the HSO (or designee). This training will consist of a complete review of (1) a controlled copy of the project HASP, attachments, and document action requests, (2) applicable JSAs and SWPs (if required), (3) work orders, and (4) other applicable work control and work authorization documents, with time for discussion and questions. Project-specific training can be conducted in conjunction with, or separately from, the required formal prejob briefing applicable company policies and procedures.

At the time of project-specific HASP training, personnel training records will be checked and verified to be current and complete for all the training requirements shown in Table 7-1. After the HSO (or designee) has completed the site-specific training, personnel will sign applicable company forms indicating that they have received this training, understand the project tasks, associated hazards and mitigations, and agree to follow all HASP and other applicable work control and safety requirements.

A trained HAZWOPER 8-hour supervisor (FTL or other person who has been trained by the HAZWOPER supervisor) will monitor the performance of each newly 24-hour or 40-hour trained worker to meet the 1 or 3 days of supervised field experience, respectively, in accordance with 29 CFR 1926.120(e). Following the supervised field experience period, the supervisor will complete applicable company forms to document the supervised field experience. Figure 7-1 outlines personnel training requirements at CERCLA sites.

Table 7-1. Required project-specific training.

Required Training	Field Team Leader, Health and Safety Officer, and Samplers	Other Field Team Members	Access into the Designated or Controlled Work Area, Construction Area or Contamination Reduction Zone	Access to Project Areas Outside Designated or Controlled Work Area, Construction Area or Support Zone
40-hour hazardous waste operations (HAZWOPER)[a] - operations	Yes	Yes		
24-hour HAZWOPER[b] - operations			Yes	
HAZWOPER supervisor	Yes			
Project-specific health and safety plan training[c]	Yes	Yes	Yes	
Project-site orientation briefing[d]				Yes
Fire extinguisher training (or equivalent)	e	e		
Cardiopulmonary resuscitation, medic first-aid	e	e		
Use of PPE (00TRN288)	Yes	Yes	Yes	
Hearing conservation	g	g	g	
Hantavirus (SMTT0008)	Yes	Yes		
Heat stress training (00TRN606)	Yes	Yes		
Working in hazardous temperatures - cold stress (SMTT0010)	Yes	Yes		
JSA training	Yes	Yes	Yes	
Respirator training (contingency only)	f	f	f	
Prejob briefings and postjob reviews (00TRN732)	h			
Prejob briefing performance evaluation (00TRN754)	h			
DOE radiological worker II/radiological worker I	h	h	h	

NOTE: Shaded fields indicate specific training is not required or applicable.

a. Includes 8-hour HAZWOPER refresher training as applicable, and supervised field experience as follows: 40-hour HAZWOPER = 24-hour supervised field experience and 24-hour HAZWOPER = 8-hour supervised field experience).

b. 40-hour or 24-hour HAZWOPER training requirement will be determined by the HSO based on the nature of the project tasks and potential for exposure to contaminants or safety hazards.

c. Includes project-specific hazards communications (29 CFR 1910.120), site-access and security, decontamination and emergency response actions, as required by 29 CFR 1910.120(e).

d. Orientation includes briefing of site hazards, designated work areas, emergency response actions, and PPE requirements. Personnel receiving project-site orientation briefing only are limited to the areas outside designated work areas and must be escorted by a project supervisor or designee who is fully trained on the requirements of the HASP.

e. At least one trained person onsite when field team is working and the HSO will determine appropriate number of personnel requiring training.

f. Only required if entering area requiring respiratory protection (e.g., action levels exceeded or the IH sampling shows respirators required).

g. Only if entering areas where initial exposure determination indicates exposure above the action limit is possible.

h. As required, based on project duties and/or site zone access requirements.

NOTE 1: Supervised field experience is only required if personnel have not previously completed this training at another CERCLA (42 USC 9601) site (documented), or they are upgrading from 24- to 40-hour HAZWOPER training. A copy of the training record must be kept at the project site as evidence of training or be available electronically.

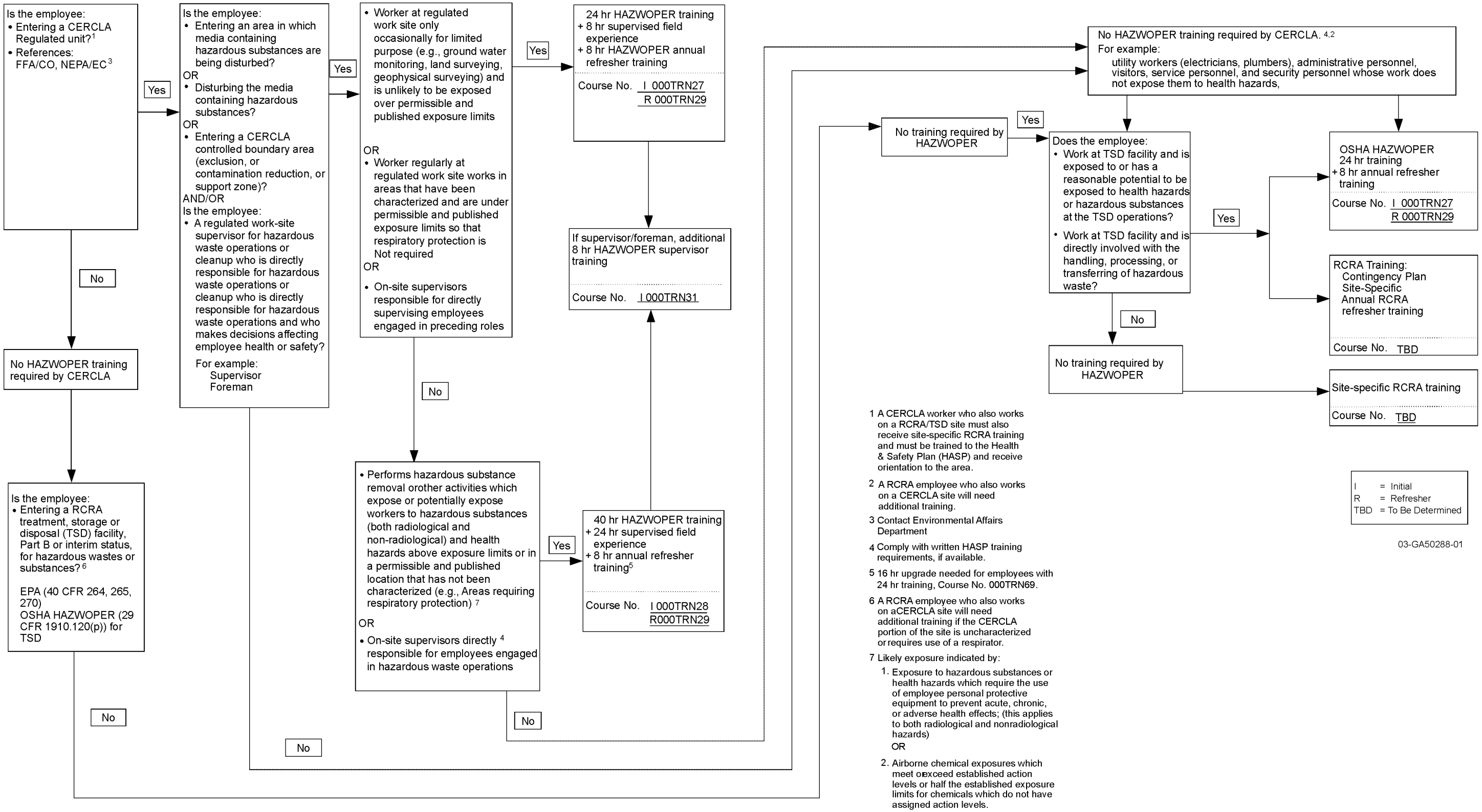
NOTE 2: Completed training project forms should be submitted to the training coordinator for inclusion in the TRAIN system within 5 working days of completion.

7.3 Plan-of-the-Day Briefing, Feedback, and Lessons Learned

A daily prejob briefing or equivalent meeting will be conducted by the FTL, STR, or designee. During this meeting, daily tasks are to be outlined; hazards identified, hazard controls, mitigation, and work zones established; PPE requirements discussed; and feedback from personnel solicited. At the completion of this meeting, any new work control documents will be reviewed and signed (e.g., SWP, JSA, or RWP).

Particular emphasis will be placed on lessons learned from the previous workday's activities and how tasks can be completed in the safest, most efficient manner. All personnel are encouraged to contribute ideas to enhance worker safety and mitigate potential exposures at the project sites.

Safety and health topic-specific training or safety meetings may also be conducted during the course of the project to reinforce key safety topics. They may be conducted by project safety and the industrial hygienist or any field team member and should be performed in conjunction with the prejob briefing. Credit for a safety meeting can be received for such topic-specific training if a tailgate training form or equivalent is completed and submitted to the appropriate training coordinator (within 5 days) for entry into TRAIN.



1 A CERCLA worker who also works on a RCRA/TSD site must also receive site-specific RCRA training and must be trained to the Health & Safety Plan (HASP) and receive orientation to the area.

2 A RCRA employee who also works on a CERCLA site will need additional training.

3 Contact Environmental Affairs Department

4 Comply with written HASP training requirements, if available.

5 16 hr upgrade needed for employees with 24 hr training, Course No. 000TRN69.

6 A RCRA employee who also works on aCERCLA site will need additional training if the CERCLA portion of the site is uncharacterized or requires use of a respirator.

7 Likely exposure indicated by:

1. Exposure to hazardous substances or health hazards which require the use of employee personal protective equipment to prevent acute, chronic, or adverse health effects; (this applies to both radiological and nonradiological hazards)

   OR

2. Airborne chemical exposures which meet oexceed established action levels or half the established exposure limits for chemicals which do not have assigned action levels.

Figure 7-1. Model identifying employees requiring HAZWOPER training at CERCLA sites.

8. SITE CONTROL AND SECURITY

Site control and security will be maintained at the project site during all activities to prevent unauthorized personnel from entering the work area. Entry into and exit out of these areas will be controlled through the appropriate use of barriers, signs, and other measures in accordance with applicable company policies and procedures.

The HSO and safety professional should be consulted regarding equipment layout at the project site (in conjunction with the subcontractor superintendent for subcontractor-owned equipment) to minimize personnel hazards from equipment. The focus should be on equipment with stored energy (electrical, pressurized systems, elevated materials/equipment, chemical), moving and rotating parts (equipment that is guarded and that has open rotating parts such as a drill rig), and other equipment with the potential to result in personnel injuries from being struck-by, caught-between, or entangled in such equipment. The layout at the project site of equipment should reflect the nature of the hazard presented and should be mitigated through the use of engineering controls (barriers, guards, isolation), administrative controls (roped off restricted areas or controlled entry access), and qualifications of operators and those assisting in the operation of the equipment, when required.

Good housekeeping will be maintained at all time during the course of the project to include maintaining working and walking surfaces to minimize tripping hazards, stacking or storing in a centralized location materials and equipment when not in use, and regular cleanup of debris and trash that may accumulate at the project site.

Based on the nature of the project tasks to be completed, a graded approach with two types of site control designations will be used based on the potential hazards, complexity of work tasks, and duration of project tasks. The two types of work areas are

- Controlled work areas (CWAs) established for higher hazard tasks include well installation and well maintenance activities

- A construction area established for all construction tasks at the project site.

The primary differences between the work areas will be the size of the area, method of delineation, and postings as determined by the activity being conducted and associated hazards. The determination of what type of work area will be established will be made by the HSO in conjunction with the FTL and RadCon personnel where radiological concerns exist.

Both radiological and nonradiological hazards (including industrial safety hazards) will be evaluated when establishing the initial work zone size, configuration, and location. Common barriers may be used to delineate both radiological and nonradiological work-zone postings, depending on the nature and extent of contamination. If common barriers are used, they will be delineated and posted in accordance with both sets of requirements (29 CFR 1910.120 and 10 CFR 835), using appropriate colored rope and postings.

Personnel not directly involved with project activities will be excluded from entering these work areas. Visitors may be admitted into work areas provided they are (1) on official business, (2) received site-specific training or orientation by the FTL or designee, and (3) have met all the site-specific training requirements for the area they have a demonstrated need to access (including PPE training), as listed on Table 7-1.

NOTE: Visitors may not be allowed into controlled work areas during high hazard tasks to minimize risks to workers and visitors. The determination as to any visitor's need for access into the CWA will be made by the FTL in consultation with the HSO and RCT, as appropriate.

8.1 Designated Work Area

The DWAs will consist of the area immediately around the project activity site. This type of work area will be established where a more restrictive designated work area would not lend itself to low hazard task of short duration. The boundary of the DWA will typically be marked with cones or stanchions and generally will not be delineated with rope or ribbon or include other demarcation. All personnel who enter the DWA will wear the appropriate level of PPE for the degree and type of hazards present, as listed in Section 6. All DWAs will be delineated and posted with the appropriate signage based on the hazard being controlled, in accordance with applicable company policies and procedures.

Support facilities and equipment (e.g., project administrative trailer, vehicle parking, additional emergency equipment, extra PPE, and stored monitoring and sampling equipment) will generally be located outside the DWA. Visitors who do not have appropriate training or PPE to access the DWA will be restricted from entering.

8.2 Controlled Work Area

The CWAs will be large enough to encompass the equipment and nature of the tasks being conducted to prevent personnel not assigned to the project task and visitors from being exposed to potential safety and health hazards associated with the project tasks. This type of work area will be established where a more restrictive area is required based on increased hazards associated with detected radiation or chemical contamination sites. The boundary of the CWA typically will be marked with a combination of stanchions or posts and delineated with rope or ribbon and include warning signs (e.g., construction area) or other demarcation. Only the minimum number of personnel required to safely perform the project tasks will be allowed into the CWA. The CWA is a controlled area during all project tasks and an entry and exit point will be established at the periphery of the CWA to regulate the flow of personnel and equipment. All personnel who enter the CWA will wear the appropriate level of PPE for the degree and type of hazards present, as listed in Section 6.

Factors that will be considered when establishing the CWA boundary include (1) air monitoring data, (2) equipment in use, and (3) the physical area necessary to conduct site operations. The boundary may be expanded or contracted, as this information becomes available, based on the aforementioned factors. The HSO, in conjunction with the safety professional and industrial hygienist, will establish the CWAs. All CWAs will be delineated and posted with the appropriate signage based on the hazard being controlled in accordance with applicable company policies and procedures.

8.3 Construction Area

The construction area will be large enough to encompass the equipment and nature of the project tasks being conducted to prevent personnel not assigned to the project and visitors from being exposed to potential safety and health hazards associated with the construction tasks. This type of work area will be established where access to the more restrictive construction area is required based on increased hazards associated with well drilling, monitoring equipment installation, well repair and well maintenance activities where drill, core, or augar activities occur. The boundary of the construction area will typically be marked with a combination of stanchions or posts and delineated with rope or ribbon and include warning signs (e.g., construction area) or other demarcation. Only the minimum number of personnel

required to safely perform the project tasks will be allowed into the construction area. The area will be controlled at all times. Also, entry and exit points will be established to regulate the flow personnel and equipment. All personnel who enter the construction area will wear the appropriate level of PPE for the degree and type of hazards present (see Section 6).

Factors that will be considered when establishing the construction area boundary include (1) air monitoring data, (2) equipment in use, and (3) the physical area necessary to conduct site operations. Based on the factors listed above, the boundary may be expanded or contracted as this information becomes available. The HSO, in conjunction with the safety professional and industrial hygienist, will establish the boundary. All CWAs will be delineated and posted with the appropriate signage based on the hazard being controlled and in accordance with applicable company policies and procedures. A typical construction area configuration is identified in Figure 8-1.

NOTE: The safety professional and industrial hygienist will assist the HSO in establishing the access requirements for the truck or heavy equipment traffic routes, designated work areas, and for the project-based equipment in use.

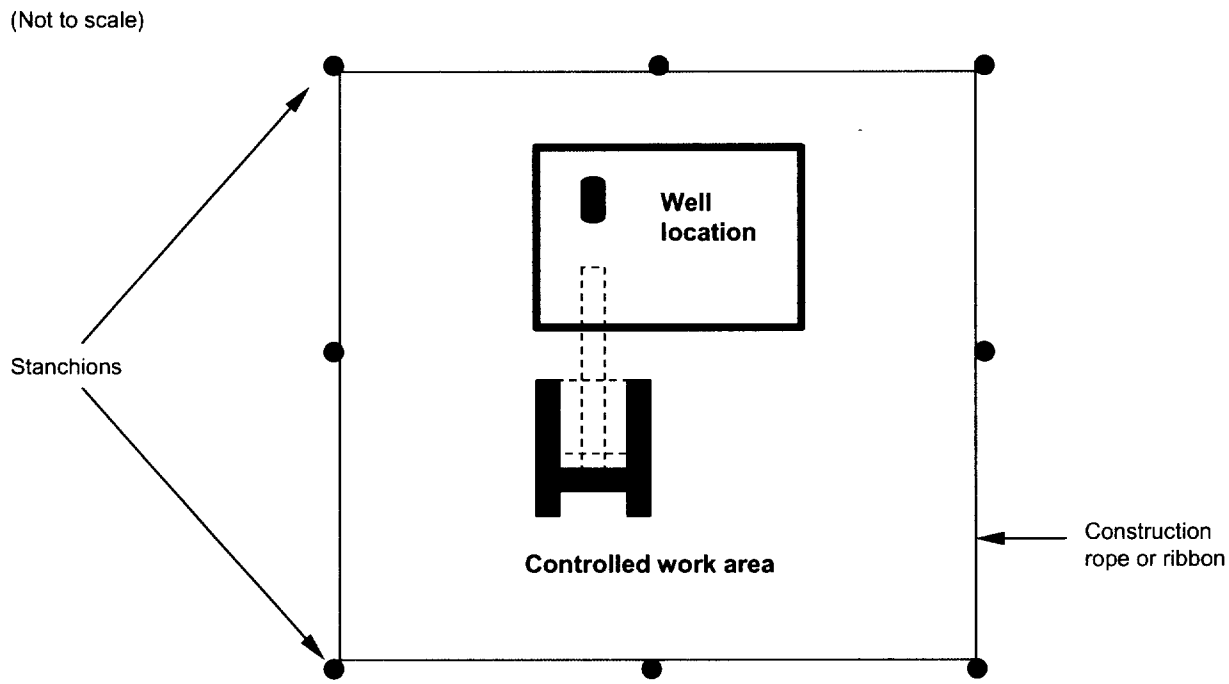


Figure 8-1. Typical configuration of a construction area.

8.4 Exclusion Zone

An EZ will be established when working in CERCLA areas where CERCLA activities are conducted. The EZ will be large enough to encompass the primary task area and to allow equipment and personnel to move about freely and conduct necessary tasks. The minimum number of personnel required to safely perform project tasks will be allowed into the EZ. If the EZ will be relocated to another site or reconfigured, it will be delineated in a configuration large enough to prevent nonfield team personnel in the support zone from being exposed to potential safety and health hazards. The EZ shape and size will be based on the tasks being conducted, existing structures and facilities, and potential for impact to adjacent areas from project tasks or contaminants.

The EZ is a controlled access zone at all times. An entry and exit point will be established at the periphery of the EZ and CRC to regulate the flow of personnel and equipment. The EZ boundary will be delineated with rope or printed hazard ribbon and posted with signs in accordance with applicable company policies and procedures. Figure 8-2 identifies a general work zone diagram where chemical or radiological contamination is anticipated.

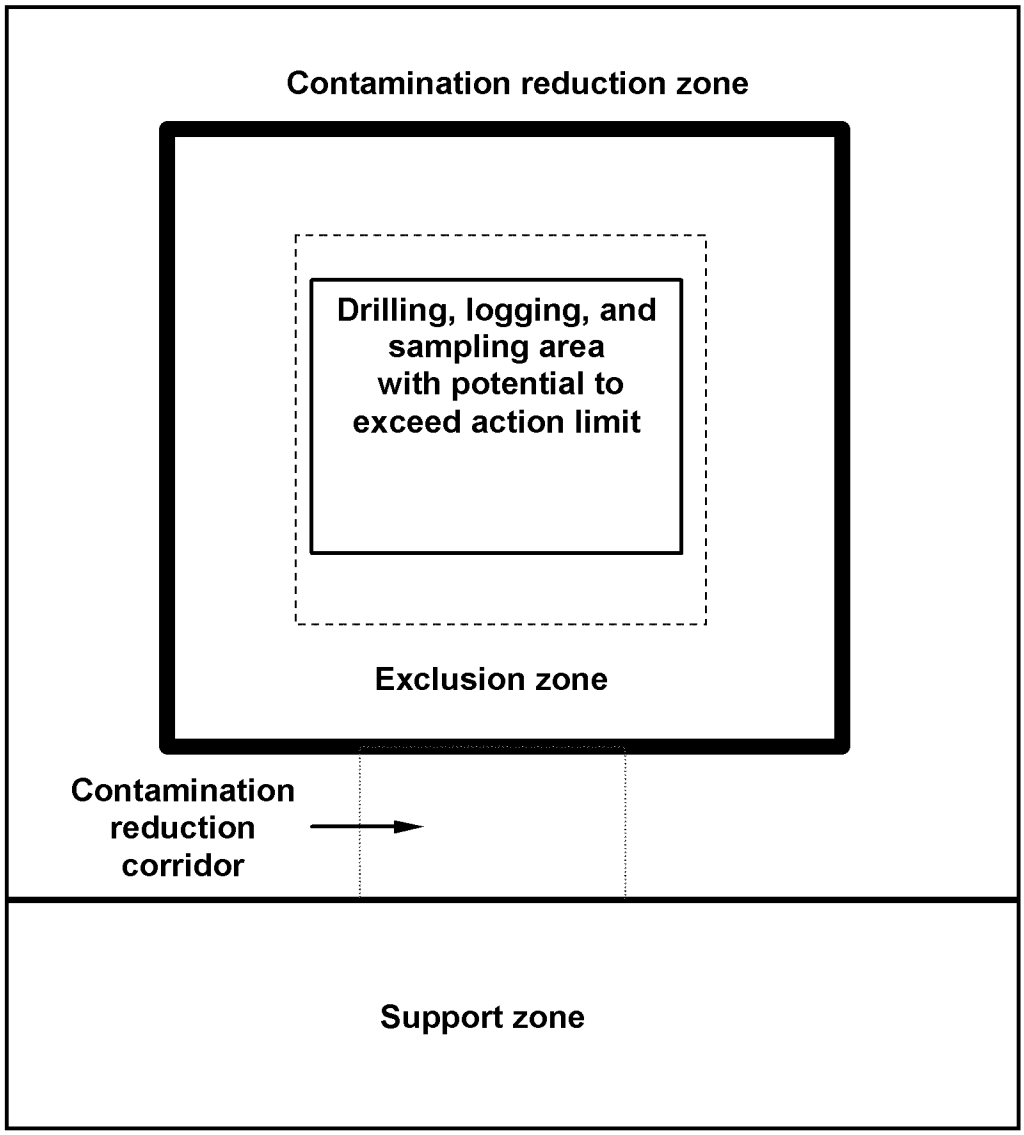


Figure 8-2. General work zones where chemical or radiological contamination is anticipated or known.

Factors that will be considered when establishing the EZ boundary include (1) tasks being conducted, (2) air monitoring data, (3) radiological contamination data, (4) radiation fields, (5) equipment in use, (6) the physical area necessary to conduct site operations, and (7) the potential for contaminants to be blown from the area. The boundary may be expanded or contracted as these factors change or additional monitoring information becomes available. All personnel who enter the EZ will wear the appropriate level of PPE for the hazards present and have required training as listed in Sections 6 and 7 of this HASP, respectively.

8.5 Contamination Reduction Zone and Corridor

The CRZ and CRC are transition areas surrounding the exclusion zone and are located between the exclusion zone and support zone (see Figure 8-2). The CRC may not be formally delineated, but will be designated by the travel path from the established CRZ-controlled entry and exit point and the exclusion zone entry and exit point. The CRZ and CRC will serve to buffer the support zone from potentially contaminated exclusion zone areas. The CRZ and CRC may serve as staging areas for equipment and temporary rest areas for personnel.

8.6 Support Zone

The support zone will be considered a "clean" area. The location of the support zone will be in a prevailing upwind direction from the exclusion zone (where possible) and readily accessible from the nearest road. The support zone is a designated area or building outside the CRZ and does not have to be delineated. Support trailers, vehicle parking, additional emergency equipment, extra PPE, and stored monitoring and sampling equipment may be located in the support zone. Visitors who do not have appropriate training to enter other project areas will be restricted to this zone.

8.7 Site Security

All project site areas will be secured and controlled during normal work hours. During nonworking hours, the general project sites located inside INEEL facilities are controlled by the facility fence and normal security access requirements. However, additional project site security and control will be required to prevent unauthorized personnel from entering the project area and being exposed to potential safety or health hazards. This will be accomplished by delineating project areas with rope boundaries and posting where hazards are left unmitigated (e.g., open trenches, exposed contaminated soils, or equipment left onsite). Signage will be left in place during off-hours and weekends to prevent personnel from inadvertently entering the area.

The FTL has the primary responsibility for ensuring that the project area is secured. The HSO and RadCon, where required, will ensure that all health and safety and radiological postings of the area are intact when leaving the site and will be responsible for maintaining them for the duration of the project. Project personnel are trained about site access and control requirements during project-specific HASP training and will not cross roped areas without the proper training and authorization, regardless of whether a sign is in place or not.

NOTE: Signs are routinely lost because of high winds and will be replaced as soon as possible the next working day following discovery.

8.8 Wash Facilities and Designated Eating Areas

Ingestion of hazardous substances is possible when workers do not practice good personal hygiene habits. It is important to wash hands, face, and other exposed skin thoroughly after completion of work and before smoking, eating, drinking, and chewing gum or tobacco. For project personnel, the nearest facility (INTEC or CFA) may be utilized for eating and as the designated wash facility.

8.9 Smoking Area

Smoking will only be permitted outside designated project or facility work areas. Personnel will comply with all INEEL smoking policies including disposing of smoking materials in the proper receptacle. Smoking will not be permitted outside facilities without establishing a designated smoking area. The project safety professional or HSO will be the single point of contact for establishing any smoking area outside facilities, and such areas may not be permitted at certain times of the year due to high or extreme fire danger.

9. OCCUPATIONAL MEDICAL SURVEILLANCE

Task-site personnel will participate in the INEEL occupational medical surveillance program (or equivalent subcontractor program), as required by DOE Order 440.1, "Worker Protection Management for DOE Federal and Contractor Employees," and 29 CFR 1910.120 or 29 CFR 1926.65. Medical surveillance examinations will be provided before assignment, annually, and after termination of HAZWOPER duties or employment. This includes

- Personnel who are, or may be, exposed to hazardous substances at or above the OSHA permissible exposure limit (PEL), or published exposure limits, without regard to respirator use for 30 or more days per year

- All employees who are injured, become ill, or develop signs or symptoms because of possible overexposure involving hazardous substances or health hazards from an emergency response or hazardous waste operation

- All employees who wear a respirator for 30 days or more a year or as required by "Respiratory Protection" (29 CFR 1910.134).

Personnel who wear a respirator in performance of their job, or who are required to take respirator training to perform their duties under this plan, must participate in the medical evaluation program for respirator use at least annually, as required by applicable company policies and procedures.

A single copy of the project HASP, job hazard analysis requirements, required PPE, confined space entry requirements (as applicable), and other exposure-related information will be made available, upon request, to the INEEL OMP physician (and subcontractor physicians) conducting medical surveillance for employees participating in this project. Exposure monitoring results and hazard information furnished to the OMP physician will be supplemented or updated annually (as stated in Section 12) as long as the employee is required to maintain a hazardous waste and material employee medical clearance. The OMP physician will then evaluate the physical ability of an employee to perform the work assigned.

A documented medical clearance (e.g., a physician's written opinion) will be provided to the employee and line management stating whether the employee has any detected medical condition that would place him or her at increased risk of health impairment from working in hazardous waste operations, emergency response operations, respirator use areas, and confined space areas, as applicable. The physician may impose restrictions on the employee by limiting the amount and type of work performed.

Personnel are responsible for communicating any work or medical restrictions to their supervisor so modified work assignments can be made if necessary. During the applicable company policies and procedures prejob briefing, the supervisor conducting the briefing should ask workers if they have any work restrictions. However, it is the employees responsibility to inform the supervisor of any work or medical restrictions.

9.1 Subcontractor Workers

Subcontractor project personnel will participate in a subcontractor medical surveillance program that satisfies the applicable requirements of 29 CFR 1926.65. This program must make medical examinations available before assignment, annually, and after termination of hazardous waste duties as stated above. The physician's written opinion, as defined by 29 CFR 1910.120(f)(7) (or equivalent), will serve as documentation that subcontractor personnel are fit for duty or will list work restrictions.

Medical data from the subcontractor employee's private physician, collected pursuant to hazardous material worker qualification, will be made available to the INEEL OMP physicians on request.

9.2 Injuries on the Site

It is the policy of the INEEL that an INEEL OMP physician examine all injured personnel for the following reasons:

- An employee is injured on the job
- An employee is experiencing signs and symptoms consistent with exposure to a hazardous material
- An employee is believed to have been exposed to toxic substances or physical or radiological agents in excess of allowable limits during the course of a project at the INEEL.

NOTE: In the event of an illness or injury, the decision to provide first aid and transport to the nearest medical facility or whether to immediately request an ambulance and continue to stabilize and provide first aid should be based on the nature of the injury or illness and likelihood that transporting the individual may cause further injury or harm. Most likely, the person making this decision will only be trained to the medic first/CPR level and should contact the CFA medical facility at 777 or 526-1515 for further guidance if there is any question as to the extent of injury or potential to cause further harm by movement of the injured individual.

In the event of a known or suspected injury or illness caused by exposure to a hazardous substance or physical or radiological agent, the employee will be transported to the nearest INEEL medical facility for evaluation and treatment, as necessary. The HSO and FTL are responsible for obtaining as much of the following information as is available to accompany the individual to the medical facility:

- Name, job title, work (site) location, and supervisor's name and phone number
- Substance, physical or radiological agent exposed to (known or suspected), and material safety data sheet, if available
- Nature of the incident and injury or exposure and associated signs or symptoms of exposure
- First aid or other measures taken
- Locations, dates, and results of any relevant personal or area exposure monitoring or sampling
- List of PPE worn during this work (e.g., type of respirator and cartridge used).

Further medical evaluation will be determined by the treating or examining physician in accordance with the signs and symptoms observed, hazard involved, exposure level, and specific medical surveillance requirements established by the OMP director in compliance with 29 CFR 1910.120 and/or 29 CFR 1926.65.

NOTE: In the event of an illness or injury, subcontractor employees will be taken to the closest INEEL medical facility or be transported by INEEL ambulance to have an injury stabilized before transport to the subcontractor's treating physician or off-Site medical facility.

The INTEC shift supervisor and project manager will be contacted if any injury or illness occurs at a project site. As soon as possible after an injured employee has been transported to the INEEL medical facility, the FTL or designee will make notifications as indicated in Table 11-4.

9.3 Substance-Specific Medical Surveillance

The contaminant concentrations and potential for exposure in Section 8 indicate that no occupational exposures approaching the regulatory substance-specific action limits are anticipated. Therefore, substance-specific medical surveillance is not anticipated for site workers. If contaminants of concern are identified during site work tasks, exposures will be evaluated and quantified to determine the substance-specific applicability.

If new contaminants of concern are identified during the course of project tasks, then exposures will be evaluated and quantified to determine if a substance-specific standard applies. If regulatory mandated substance-specific standard action levels are triggered, then affected personnel will be enrolled in applicable substance-specific medical surveillance programs.

10. PROJECT PERSONNEL

The organizational structure for this project reflects the resources and expertise required to perform the work, while minimizing risks to worker health and safety, the environment, and the general public. The names of the individuals in key roles at the site, and lines of responsibility and communication, are shown on the organizational chart for the site (Figure 10-1). The following sections outline the responsibilities of key site personnel.

10.1 Key Site Personnel Responsibilities

10.1.1 Field Team Leader

The FTL represents the organization at the site with delegated responsibility for the safe and successful completion of the project. The FTL works with the PM to manage field sampling, operations, and to execute the daily work plan. The FTL enforces site control, documents activities, and may conduct the daily safety briefings at the start of the shift. Health and safety issues may be brought to the attention of the FTL.

If the FTL leaves the site, an alternate individual will be appointed to act as the FTL. Persons acting as FTLs on the site must meet all the FTL training requirements outlined in Section 7 of this HASP. The identity of the acting FTL will be conveyed to site personnel, recorded in the FTL logbook, and communicated to the facility representative, when appropriate. The FTL may also serve as the project geologist.

10.1.2 Subcontractor Technical Representative

The subcontractor technical representative (STR) is the individual representing remedial design/remedial action management at the site, with ultimate responsibility for the safe and successful completion of assigned project tasks. The STR manages field operations and executes the work plan, enforces site controls and documents task-site activities, and may conduct the daily plan of the day briefing at the start of the shift. All health and safety issues at the task site must be brought to the STR's attention. The STR also will serve as the primary area warden during the project.

If the STR leaves the project site, an alternate individual will be appointed to act as the STR. Persons acting as STR on the project site must meet all STR training requirements outlined in Section 4 of the project HASP. The identity of the acting STR will be conveyed to task-site personnel, recorded in the daily force reports, and communicated to the facility representative when appropriate.

If the nature of the fieldwork requires involvement of field team staffing by equipment operators, laborers, or other crafts, a representative from the organization supplying these additional resources interfaces with the STR to provide work supervision. This person may be designated the job site supervisor (JSS).

10.1.3 Sampling Team

The sampling team will perform the on-Site task necessary to collect the samples. The sampling team will consist of a minimum of two members, and the buddy system will be implemented. The IH and RadCon personnel will support the sampling team when inside the contamination area. The sampling team will be led by the FTL who may also serve as the field geologist.

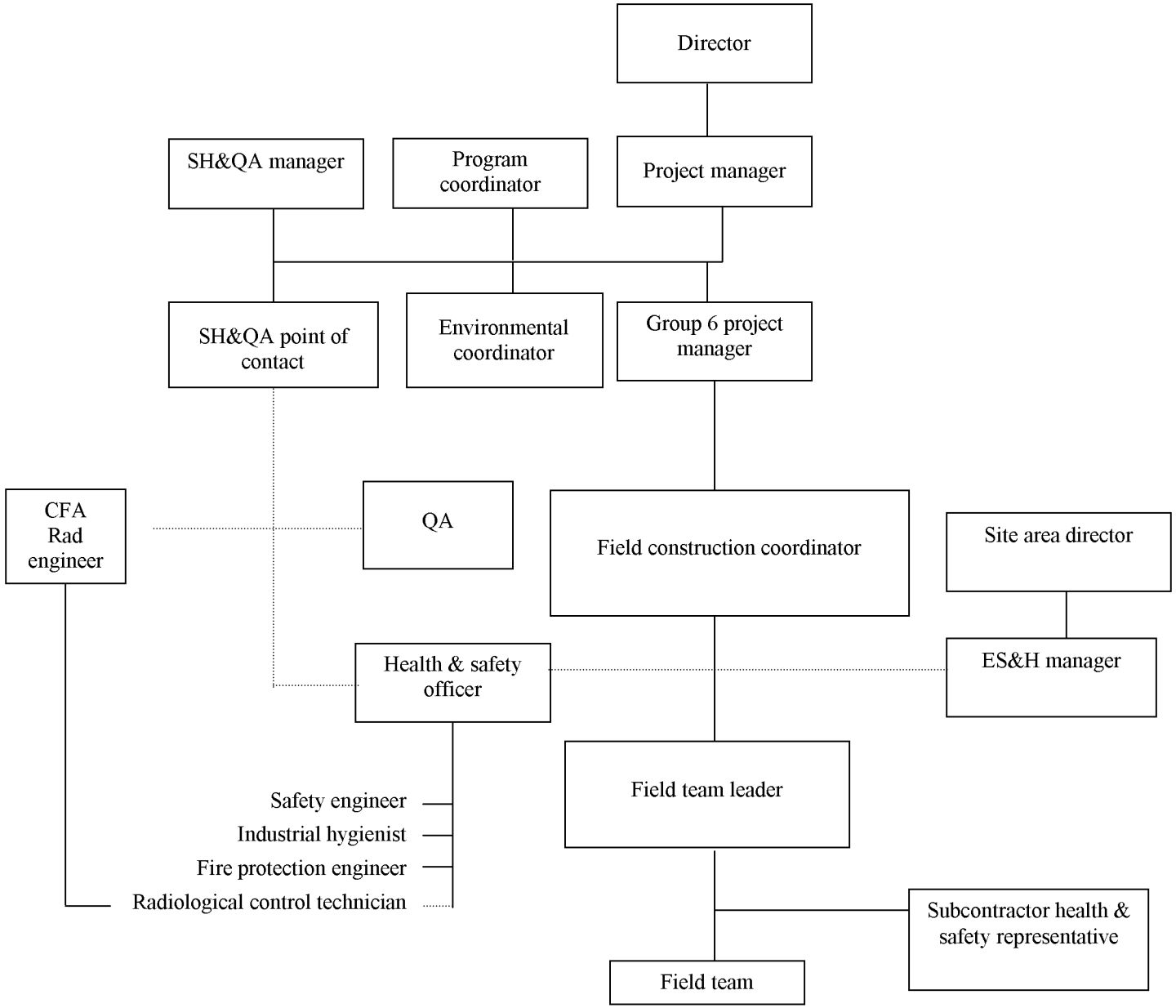


Figure 10-1. Key project personnel organizational chart.

10.1.4 Subcontractor Job Site Supervisor

A subcontractor JSS will accomplish some of the logging tasks during the project. The subcontractor JSS serves as the subcontractor safety representative at the site. The subcontractor JSS may also serve as the subcontractor PM. The subcontractor JSS is the subcontractor field supervisor for subcontractor personnel assigned to work at the site. The subcontractor JSS and FTL work as a team to accomplish daily operations at the site, identify and obtain additional resources needed at the site, and interact with the HSO, IH, SE, radiation engineer (RE), and RCT on matters regarding health and safety. The STR and FTL, must be informed about any health and safety issues that arise at the site and may stop work at the site if an unsafe condition exists. The subcontractor JSS will provide information to the STR, FTL, and HSO regarding the nature of their work for input at the daily prejob briefing.

10.1.5 Site Personnel

All site personnel, including INEEL and subcontractor personnel, will understand and comply with the requirements of this HASP. The FTL or STR will brief site personnel at the start of each shift. During the prejob briefing, all daily tasks, associated hazards, engineering and administrative controls, required PPE, work control documents, and emergency conditions and actions will be discussed. The project HSO, IH, and RadCon personnel will provide input to clarify task health and safety requirements. All personnel are encouraged to ask questions, regarding site tasks and provide suggestions on ways to perform required tasks in a more safe and effective manner, based on the lesson learned from previous day's activities.

Once at the site, personnel are responsible for identifying any potentially unsafe situations or conditions to the FTL, STR, or HSO for corrective action. **If at any time, site personnel discover an unsafe condition, at-risk behavior, or an environmental or quality deficiency, site personnel are authorized to stop work immediately, then notify the FTL, STR, or HSO of the unsafe condition.**

10.1.6 Health and Safety Officer

The HSO is the person assigned to the site who serves as the primary contact for health and safety issues. The HSO advises the PM and FTL on all aspects of health and safety and is authorized to stop work at the site if any operation threatens worker or public health and/or safety. The HSO may be assigned other responsibilities, as stated in other sections of this HASP, as long as they do not interfere with the primary responsibilities. The HSO is authorized to verify compliance to the HASP, conduct inspections, require and monitor corrective actions, monitor decontamination procedures, and require corrections, as appropriate. The HSO is supported by environmental, safety, and health/quality assurance (ES&H/QA) professionals at the site (safety engineer, IH, RCT, RE, environmental coordinator, and facility representative, as necessary).

Persons assigned as the HSO, or alternate HSO, must be qualified (per the OSHA definition) to recognize and evaluate hazards and will be given the authority to take or direct actions to ensure that workers are protected. While the HSO may also be the IH, SE, or in some cases the FTL (depending on the hazards, complexity, and size of the activity involved and requiring concurrence from the safety, health, and quality assurance (SH&QA) manager at the site, other site responsibilities of the HSO must not conflict (in philosophy or in terms of significant added volume of work) with the role of the HSO. If it is necessary for the HSO to leave the site, the HSO will appoint an alternate individual to fulfill this role. The identity of the acting HSO will be recorded in the logbook, and site personnel will be notified. Persons assigned as acting HSO must have all qualifications of the HSO.

10.1.7 Radiological Control Technician

The assigned RCT is the primary source for information and guidance on radiological hazards and will be present at the site during all operations. Responsibilities of the RCT include radiological surveying of the site, equipment, and samples; providing guidance for radioactive decontamination of equipment and personnel; and accompanying the affected personnel to the nearest INEEL medical facility for evaluation if significant radionuclide contamination occurs. The RCT will notify the FTL whenever background levels of radiation are detected. The RWP may be canceled if levels are above those identified on the RWP. The RCT must notify the FTL and HSO of any radiological occurrence that must be reported, and respond as directed by applicable company manuals. The RCT may have other duties at the site, as specified in other sections of this HASP or in applicable company policies and procedures.

10.1.8 Occasional Workers

All persons on the site, but who are not part of the field team, are considered occasional workers for the purposes of this project (e.g., surveyor, equipment operator, or other crafts personnel not assigned to the project). A person will be considered "on-Site" when present in or beyond the designated SZ. Occasional workers will be deemed occasional site workers per 29 CFR 1910.120/1926.65 and must meet minimum training requirements for such workers and any additional site-specific training that is identified in Section 7. If the nature of a occasional workers tasks requires entry into the EZ, or radiologically controlled areas, then he/she must meet all the same training requirements as other field team members. Also, a site representative must accompany all occasional workers until they have completed three days of supervised field experience.

10.1.9 Visitors

All visitors with official business at the site, including INEEL personnel, representatives of DOE, and/or state or federal regulatory agencies, may not proceed beyond the SZ without receiving site-specific HASP training, signing a HASP-training acknowledgment form, receiving a safety briefing, wearing the appropriate PPE, and providing proof of meeting all training requirements specified in Section 7 of this HASP. A fully trained site representative (such as the FTL, STR, HSO, or a designated alternate) will escort visitors at all times while on the site. A casual visitor to the site is a person who does not have a specific task to perform or other official business to conduct at the site. **Casual visitors are not permitted on the site.**

10.2 Facility Support Personnel

Facility Support Personnel represent INTEC Operations and provide support/oversight to project personnel.

10.2.1 INTEC Site Area Director

The INTEC site area director reports to the director of site operations and interfaces with the INTEC facility manager. The INTEC site area director is responsible for several functions and processes in the INTEC area that include the following:

- Performing all work processes and work packages
- Establishing and executing a monthly, weekly, and daily operating plan
- Executing the ES&H/QA program

- Executing the ISMS
- Executing enhanced work planning
- Executing the VPP
- Maintaining all environmental compliance
- Executing that portion of the voluntary compliance order that pertains to the INTEC area.

10.2.2 Facility Manager

The INTEC's facility manager is responsible for maintaining his/her assigned facility, and must be cognizant of work being conducted in the facility. The INTEC facility manager is responsible for the safety of personnel and for the safe completion of all project activities conducted within his/her area. Therefore, the facility manager and INTEC shift supervisor will be kept informed of all activities performed in the area. The shift supervisor and FTL will agree on a schedule for reporting work progress and plans for work. The shift supervisor may serve as advisor to site personnel with regard to his/her area of operation.

10.2.3 Radiological Engineer

The RE is the primary source for information and guidance, relative to the evaluation and control of radioactive hazards at the site. The RE provides engineering design criteria and review of containment structures and makes recommendations to minimize health and safety risks to site personnel. Responsibilities of the RE include: (1) performing radiation exposure estimates and ALARA evaluations, (2) identifying the type(s) of radiological monitoring equipment necessary for the work, (3) advising the FTL and RCT of changes in monitoring or PPE, and (4) advising personnel on the site evacuation and reentry. The RE may also have other duties to perform, as specified in other sections of this HASP or in applicable company manuals.

10.3 Project Technical Support Personnel

Project technical support personnel provide both direct and indirect technical support to the project with frequent project visits, but are normally located at in-town facilities.

10.3.1 Project Manager

The PM will ensure that all activities conducted during the project comply with applicable company policies and procedures; all applicable OSHA, EPA, DOE, Department of Transportation, and State of Idaho requirements; and that tasks comply with applicable company policies and procedures, the Quality Assurance Project Plan, this HASP, and the sampling and analysis plan. The PM coordinates all document preparation, field, laboratory, and modeling activities. The INEEL PM is responsible for the overall work scope, schedule, and budget. The INEEL PM will ensure that an Employee Job Function Evaluation is completed for all project employees, reviewed by the project IH for validation, and then submitted to the OMP for determination of whether a medical evaluation is necessary.

10.3.2 Industrial Hygienist

The IH assigned to the project is the primary source for information regarding nonradiological hazardous and toxic agents at the site. The IH assesses the potential for worker exposures to hazardous

agents according to applicable company policies and procedures, and accepted industry IH practices and protocol. By participating in site characterization, the IH assesses and recommends appropriate hazard controls for the protection of site personnel, operates and maintains airborne sampling and monitoring equipment, reviews equipment for effectiveness, and recommends and assesses the use of PPE required in this HASP, recommending changes, as appropriate. Following an evacuation, the IH in conjunction with other recovery team members will assist the HSO in determining whether conditions exist for safe site reentry, as described in Section 11. Personnel showing health effects (signs and symptoms) resulting from possible exposure to hazardous agents will be referred to an OMP physician by the IH, their supervisor, or the HSO. The IH may have other duties at the site, as specified in other sections of this HASP, or in applicable company policies and procedures. During emergencies involving hazardous materials, airborne sampling and monitoring results will be coordinated with members of the Emergency Response Organization (ERO).

10.3.3 Safety Engineer

The assigned safety engineer reviews work packages, observes site activity, assesses compliance with applicable company manuals, signs SWPs, advises the FTL on required safety equipment, answers questions on safety issues and concerns, and recommends solutions to safety issues and concerns that arise at the site. The safety engineer may have other duties at the site, as specified in other sections of this HASP, or in applicable company policies and procedures.

10.3.4 Fire Protection Engineer

The assigned fire protection engineer reviews the work packages, conducts preoperational and operational fire hazard assessments, and provides technical guidance to site personnel regarding all fire protection issues. Additionally, the assigned project fire engineer will provide fire extinguisher training to all project team personnel as part of the site-specific training.

11. EMERGENCY RESPONSE PLAN

This emergency response plan defines the roles and responsibilities of project personnel during an emergency. Such an emergency could be at the project site, on a tenant facility or collocated facility, or a Site-wide emergency. This section provides details of the INEEL ERO applicable company policies and procedures.

Applicable company policies and procedures may be activated in response to events occurring at the project site, at the INEEL, or at the discretion of the emergency coordinator or emergency action manager. Once the INEEL plan is activated, project personnel will follow the direction and guidance communicated by the emergency coordinator.

NOTE: The OSHA HAZWOPER definition of an emergency is not defined the same as classified by DOE Orders 151.1A, "Comprehensive Emergency Management System," and 232.1, "Occurrence Reporting and Processing of Operations Information." For this reason, the term "event" will be used in this section when referring to project HAZWOPER emergencies.

11.1 Preemergency Planning

The applicable company policies and procedures provide the basis for preplanning all INEEL emergency events. This base plan is supplemented with INEEL facility-specific addendums. This preplanning makes it possible for the project to anticipate and appropriately respond to abnormal events that can affect project activity. Preplanning also ensures that the project emergency response program is integrated with that of the INEEL. Specific procedures for addressing emergency events and actions to be taken are further described in the facility-specific emergency implementing procedures. Finally, the HASP addresses project-specific hazards, potential emergency events, and the actions to take following such events.

11.2 Emergency Preparation and Recognition

The sections for hazards identification and mitigation and accident prevention provided the strategy that will be followed at the project site to prevent accidents. Similarly, emergency preparation and recognition also will require project personnel to be constantly alert for potentially hazardous situations and signs and symptoms of chemical exposure or releases. All field personnel should be familiar with the techniques for hazard recognition and the assigned action levels and associated actions to be taken as identified in Section 3.

Applicable company policies and procedures, requirements for training, emergency actions, and notifications will be followed for all projects conducted outside facility.

Preparation and training on emergencies will include proper site access and egress procedures in response to project events and INEEL emergencies as part of the project-specific HASP training and facility access training where applicable. Visitors also will receive this training on a graded approach based on their site access requirements. Visitor training will include, alarm identification, location and use of communication equipment, location of site emergency equipment, and evacuation. Emergency phone numbers and evacuation route maps will be located in the project trailer.

On-scene response to and mitigation of site emergencies could require the response from both project personnel and INEEL fire department personnel. Emergencies could include the following scenarios:

- Accidents resulting in injury
- Fires
- Spills of hazardous or radiological materials
- Tornadoes, earthquakes, or other adverse natural phenomena
- Vehicle or transportation emergencies
- Safeguard and security emergencies
- Emergencies at nearby facilities that could prompt evacuation or take-cover actions at the task site.

11.3 Emergency Alerting, Responses, and Sheltering

11.3.1 Alarms

Alarms and signals are used at the project site and the INEEL to notify personnel of abnormal conditions that require a specific response. Responses to these alarms are addressed in general employee training. Emergency sirens located throughout the INEEL serve as the primary means for signaling emergency TAKE COVER or EVACUATION protective actions. To signal site personnel of a project-initiated emergency event, a separate set of emergency signals has been established based on horn blasts (e.g., vehicle or air horn).

Depending of the field location (within or outside a facility), facility alarms may not be able to be heard at the project site. If the project site is outside the audible range of the facility alarms, then the notification to take cover or evacuate should be received on the field radio. The project signals will then be used to alert personnel of the emergency actions.

11.3.1.1 Take Cover—Continuous Siren. Radiation or hazardous material releases, adverse weather conditions, or other event or emergency conditions may require that all personnel take cover indoors in the nearest building. A TAKE COVER protective action may be initiated as part of a broader response to an emergency situation and may precede an evacuation order. The order to TAKE COVER is usually announced by activating the emergency siren. The signal to take cover is a CONTINUOUS SIREN.

STEADY = STAY

However, the order to take cover also can be given by word of mouth, radio, or voice paging system. When ordered to TAKE COVER, project personnel will place the site and equipment in a safe configuration (as appropriate) and then seek shelter in the project trailer or vehicle (if outside the facility). Eating, drinking, and smoking are not permitted during take-cover conditions.

11.3.1.2 Total Area Evacuation—Alternating Siren. A total area evacuation is the complete withdrawal of personnel from the project site and the entire facility area. The evacuation signal is an ALTERNATING SIREN. When ordered to EVACUATE, project personnel will place equipment and the site in a safe configuration (as appropriate) and then proceed along the specified evacuation route to the designated assembly area or as directed by the emergency coordinator.

ALTERNATE = EVACUATE

For total area evacuations, the facility command post is activated and all personnel will gather at the primary facility evacuation assembly area or the location designated by the emergency coordinator or FTL if outside a facility. The FTL or trained alternate will then complete the personnel accountability using the attendance log. In this situation, the project area warden will report the result of the accountability process to the facility emergency coordinator.

11.3.1.3 Local Area Evacuation—Vehicle Horn Blast. A local area evacuation is the complete withdrawal of personnel from the project site but it does not require the complete evacuation of the entire facility or INEEL area. A single long horn blast (e.g., vehicle) will serve as the project's primary emergency evacuation signal (as listed on Table 11-1). However, the order to evacuate also can be given by word of mouth, radio, or voice paging system. When ordered to evacuate the project site, personnel will place the site in a safe condition (as appropriate) and then proceed along the specified evacuation route to the assembly area designated for local area evacuations or as directed by the FTL. Eating, drinking, and smoking are not permitted during emergency evacuations.

Table 11-1. Project internal emergency signals.

Device or Communication Method	Signal and Associated Response
Vehicle horn blasts	One long blast—Emergency evacuation, evacuate project site immediately. Proceed in an upwind direction to designated assembly area as specified by the FTL.
	Two short blasts—Nonemergency evacuation of immediate work area. Proceed to designated assembly area as specified by the FTL.
	Three long blasts or verbally communicated—all clear, return to project site.

11.4 Personnel Roles, Lines of Authority, and Training

This section outlines personnel roles and responsibilities associated with emergency action.

11.4.1 The INEEL Response Organization

The INEEL ERO structures are based on the incident command system and are described in applicable company policies and procedures.

11.4.2 Role of Project Personnel in Emergencies

Depending on the event, a graded response and subsequent notifications will take place. FTL and project personnel responsibilities are described below. Personnel will respond to emergencies only within the limits of their training and designated by their position. All personnel are trained to the facility-specific emergency actions as part of the access training or will be escorted by someone who has been trained. Emergency response actions also will be covered as part of the HASP briefing as stated in Table 7-1.

11.4.2.1 Field Team Leader. The FTL (or designated alternate) is responsible for initiating all requests for emergency services (e.g., fire and medical) and for notifying the INTEC shift supervisor of abnormal (or potential emergency) events that may occur during the project. The FTL may also serve as the area warden (or designate that responsibility to another person who has been trained as area warden) and conduct personnel accountability. Personnel accountability will then be reported to the shift supervisor. Additionally, the FTL will control the scene until a higher-tiered incident command system authority arrives at the scene to take control. When relinquishing this role the FTL (or designated alternate) will provide all information about the nature of the event, potential hazards, and other information requested.

11.4.2.2 Project Personnel. Every person at the project site has a role to play during a project event or INEEL emergency. Each employee must be constantly aware of potential problems or unexpectedly hazardous situations and immediately report these situations to the FTL. All personnel are expected to watch out for their fellow workers, to report their concerns to the FTL, and to take emergency actions as described in this section. Roles and responsibilities are further detailed in Table 11-2.

Table 11-2. Responsibilities during an emergency.

Responsible Person	Action Assigned
Field team leader (or designee)	Signal evacuation.
	Report spill to shift supervisor and take mitigative actions.[a]
	Contact shift supervisor or WCC (if the shift supervisor cannot be contacted).
Field team leader (or trained designee)	Serve as area warden and conduct accountability and report to shift supervisor.
Health and safety officer and medic and first-aid trained personnel	Administer first-aid to victims (voluntary basis only).

a. The environmental affairs spill response categorization and notification team will be contacted by the shift supervisor or emergency coordinator.

11.4.2.3 Personnel Accountability and Area Warden. Project personnel are required to evacuate the site in response to TAKE COVER, EVACUATION, and local evacuation alarms. In all cases, the FTL (or trained designee) will account for the people present on the project site. The FTL (or trained alternate) will serve as the area warden for the project and will complete the personnel accountability (following positive sweeps of the project site) based on the attendance log. The results of this accountability will then be communicated to the FTL for reporting to the shift supervisor or emergency coordinator (if the command post has been formed).

11.4.2.4 Spills. If the material spilled is known and is small enough to be safely contained at the task site, task-site personnel will handle spill control using spill supplies at the site and immediately report the incident to the shift supervisor or WCC if the shift supervisor cannot be contacted. Reporting requirements will be determined by the facility emergency coordinator in accordance with applicable company policies and procedures. If any release of a hazardous material occurs, task site personnel will comply with the following immediate spill response actions.

11.4.2.4.1 Untrained Initial Responder—The requirements for the untrained initial responder (or if the material characteristics are unknown) are listed below:

- Place equipment in a safe configuration
- **Evacuate** and **isolate** the immediate area
- Notify and then **seek help** from and **warn** others in the area
- Notify the FTL.

11.4.2.5 Trained Responder. The requirements for the trained responder where material characteristics are known and no additional PPE is required are listed below:

- Place all equipment in a secure configuration
- **Seek help** from and **warn** others in the area
- **Stop** the spill if it can be done without risk (e.g., returning the container to the upright position, closing valve, and shutting off power)
- **Provide** pertinent information to the FTL
- **Secure** any release paths if safe to do so.

11.5 Medical Emergencies and Decontamination

Medical emergencies and responses to injuries or suspected exposures will be handled as stated in Section 9.2. Decontamination of personnel and equipment is described in Section 12.2.2.

11.6 Emergency Communications

In the event of an emergency, the capability to summon INEEL emergency response resources to immediately notify site personnel and inform others of site emergencies is required. Communications equipment at the task site will be a combination of cellular phones and pagers. Communication methods described below will be used during emergency situations.

11.6.1 Notifications

During emergency situations, the INTEC facility shift supervisor will be notified of any project emergency event. The shift supervisor will then make the required ERO notification. The following information should be communicated, as available, to the shift supervisor:

- The caller's name, title (e.g., FTL or HSO), telephone number, and pager number
- Exact location of the emergency
- Nature of the emergency including time of occurrence, current site conditions, and special hazards in the area

- Injuries, if any, including numbers of injured, types of injuries, and conditions of injured
- Emergency response resources required (e.g., fire, hazardous material, and ambulance)
- Additional information as requested.

NOTE: If the shift supervisor cannot be contacted then the WCC will be notified of the event and the information listed below communicated. The WCC also must be told that notification to the facility shift supervisor and emergency coordinator has not been made.

11.7 Emergency Facilities and Equipment

Emergency response equipment maintained at the project site includes the items listed in Table 11-3. The applicable company policies and procedures list emergency equipment available at the facility. This includes the command post, SCBA, dosimeters, air samplers, decontamination and first-aid equipment, and an emergency response trailer). The INEEL fire department maintains an emergency hazardous material response van that can be used to respond to an event or emergency at the project. Fire department personnel also are trained to provide immediate hazardous material spills and medical services. Additionally, the CFA-1612 medical facility is manned by medical personnel to evaluate and stabilize injured personnel or those experiencing signs and symptoms of exposure.

Table 11-3. Emergency response equipment to be maintained at the project site during operations.

Equipment Name and Quantity Required	Location at Task Site	Responsible Person	Frequency of Inspection or Verification[a]
First-aid kit	Project vehicle during well sampling activities, at project site during well installation activities.	FTL	Weekly on construction sites: monthly inventory check and complete applicable company forms
Eyewash bottles[b] Eyewash station[b]	In or near DWA or CWA	FTL	Monthly
Extra personal protective equipment	Project vehicle or support trailer	FTL	Daily verification
Communication equipment (operational)	Onsite	FTL	Daily radio check
Fire extinguishers[c]	In or near DWA or CWA	HSO	Monthly

a. This is verification that equipment is present at the project location before starting tasks and no inspection tag is required.
b. An eyewash bottle will be used to provide an immediate eye flush if required. The location of the eyewash station will be identified by the HSO during the prejob briefing.
c. A minimum of one 10A/60BC extinguisher is required. If it is discharged, it will be returned for servicing and recharging.

11.8 Evacuation Assembly Areas and Central Facilities Area Medical Facility

The INTEC maintains primary and secondary evacuation routes and assembly areas (see Figure 11-1). These routes may be used in response to a total facility area evacuation as directed by the emergency coordinator. Copies of the evacuation assembly areas and the CFA-1612 medical facility route (see Figure 11-2) will be available at the project site.

NOTE: If the project is conducted outside of a facility then the INEEL evacuation routes listed in applicable company policies and procedures will be used. Evacuation routes will be discussed in the daily prejob briefing.

11.9 Reentry, Recovery, and Site Control

All reentry and recovery activities will follow general site security and control requirements identified in Section 8 unless conducted as part of an emergency response action. All entries to the project site performed in support of emergency actions will be controlled by the on-scene coordinator.

11.9.1 Reentry

During an emergency response it is sometimes necessary to reenter the scene of the event. Reasons for performing a reentry may include the following:

- Performing personnel search and rescues
- Responding to medical first-aid needs
- Performing safe shutdown actions
- Performing mitigating actions
- Evaluating and preparing damage reports
- Performing radiation or hazardous material surveys.

Reentries will be carefully planned to ensure that personnel are protected from harm and to prevent initiating another emergency event. Reentry planning is undertaken as a graded approach depending on the nature of the initiating event.

11.9.2 Recovery

After the initial corrective actions have been taken and effective control established, response efforts will shift toward recovery. Recovery is the process of assessing postevent and postemergency conditions and developing a plan for returning to preevent and preemergency conditions, when possible, and following the plan to completion. The emergency coordinator and emergency action manager are responsible for determining when an emergency situation is sufficiently stable to terminate the emergency and enter the recovery phase. The project manager, with concurrence from the area site area director, will appoint the recovery manager.

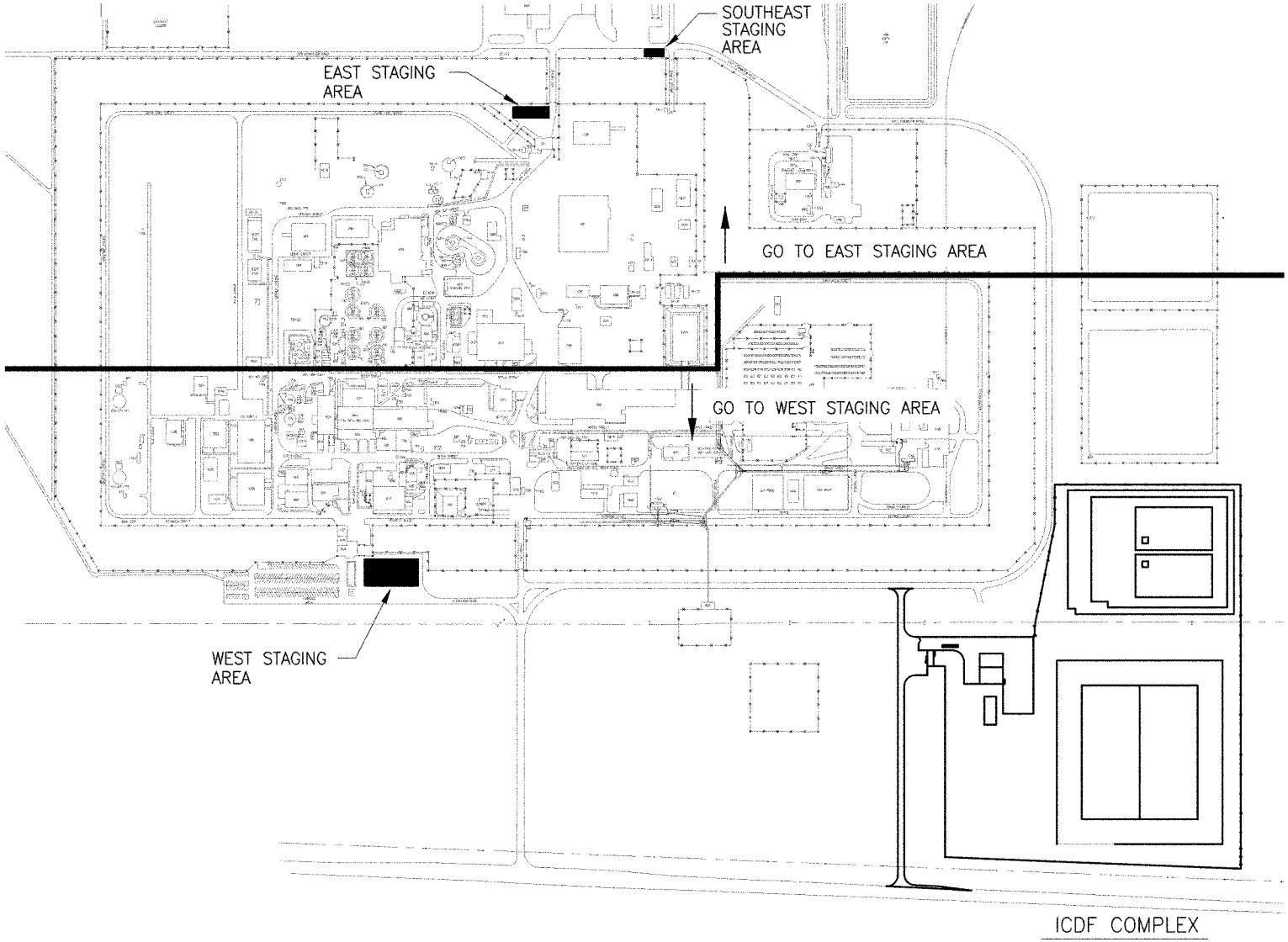


Figure 11-1. INTEC primary evacuation assembly areas.

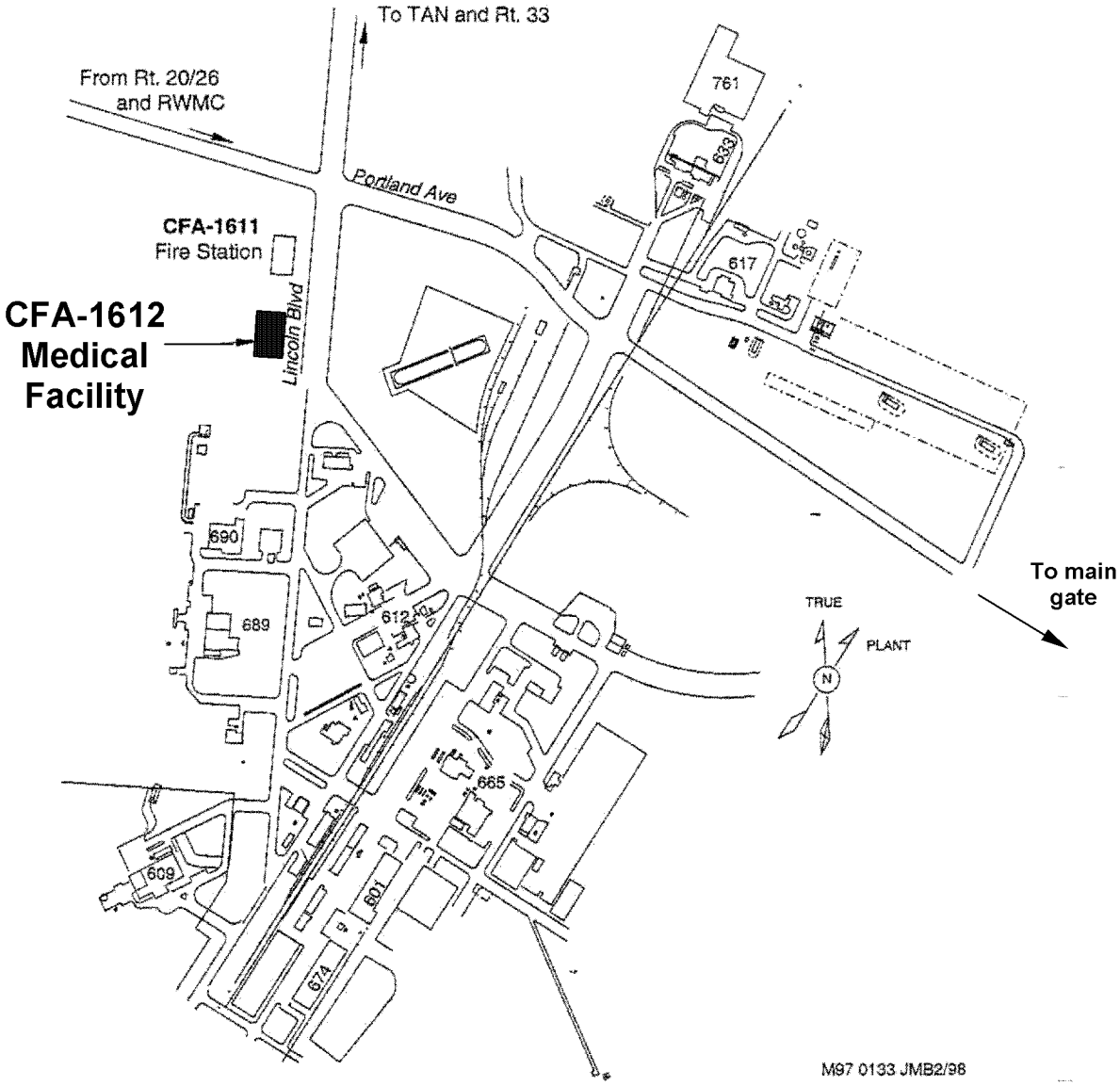


Figure 11-2. Map showing the route to the nearest medical facility (CFA-1612).

11.10 Critique of Response and Followup

A review and critique will be conducted following all emergency events, drills, and exercises at the INEEL. In some cases, an investigation may be required before commencing recovery actions. For this reason care should be exercised to preserve evidence when appropriate.

11.11 Telephone and Radio Contact Reference List

Table 11-4 lists the points of contact for the project. A copy of this list will be kept in the FTL logbook. Because personnel listed may change frequently, working copies of this list will be generated as required to note new positions and changes of personnel assigned. This HASP should not be revised with a document action request to note these changes.

Table 11-4. Project emergency contact list.

Contact Title	Contact Name	Phone Number or Radio Net	Cellular Phone Number	Pager Number
Fire, medical emergency, and security		777		
WCC		526-1515		
INTEC shift supervisor		6-3100		
INTEC site area director	Riley Chase	6-0018	521-6916	5669
INTEC environment, safety, and health manager	Corrine Jones	6-8079	520-4191	5720
RadCon supervisor	Keith Branter	6-2486		5572
DOE-ID representative	Rachel Hall	6-1661		
Manager of projects	Doug Kuhns	6-8226	521-5560	6670
Project manager	Howard Forsythe	6-1603	520-6023	7695
Field team leader	Dave Gianotto	6-8529	520-8637	5484
Health and safety officer	Larry McManamon	6-3658	521-8405	4903
Safety professional	Larry McManamon	6-3658	521-8405	4903
Industrial hygienist	Jonathan D. Roberts	6-5386		3351
Environmental compliance	Lee Tuott	6-7990		7855

Note: Shaded fields indicate information not relevant to emergency contact list.

12. DECONTAMINATION PROCEDURES

Every effort will be made to prevent contamination of personnel and equipment through the use of engineering controls, isolation of source materials, contaminant monitoring, personnel contamination control training, and by following material handling requirements and procedures for contaminated or potentially contaminated materials. If contact with potentially contaminated surfaces cannot be avoided, then additional engineering controls, in combination with PPE upgrades, may be necessary to control the contact hazard. However, if chemical or radiological contamination is encountered at levels requiring decontamination, this section provides guidance on how it will be performed.

12.1 Contamination Control and Prevention

Contamination control and prevention procedures will be implemented to minimize personnel contact with contaminated surfaces if such surfaces are encountered or may be contacted during project tasks. The following contamination control and prevention measures will be employed if contamination is encountered or anticipated:

- Identify potential sources of contamination and design containment, isolation, and engineering controls to eliminate or mitigate any potential for contact or release of contaminants
- Limit the number of personnel, equipment, and materials that enter the contaminated area
- Implement immediate decontamination procedures to prevent the spread of contamination (if contamination is found on the outer surfaces of equipment)
- Use only the established control entry and exit point from the contaminated area to minimize the potential for cross-contamination and expedite contamination-control surveys
- Wear disposable outer garments and use disposable equipment (where possible)
- Use hold points defined in procedures and work orders to monitor for contamination where anticipated.

12.2 Equipment and Personnel Decontamination

Personnel and equipment decontamination procedures are necessary to control contamination and to protect personnel should contamination be encountered. Both chemical and radionuclide contamination will be decontaminated from surfaces of a contaminated area at the exit and other designated work area boundaries.

If radionuclide decontamination operations are required for equipment or areas, they will be performed in accordance with applicable company manuals. Nonradionuclide decontamination will be evaluated by the HSO and project industrial hygienist, on a case-by-case basis, to determine the most appropriate level of PPE to be worn. An RWP will be generated if radiological contamination is encountered. Specific equipment and personnel decontamination methods are provided in the following subsections.

12.2.1 Equipment Decontamination

Decontamination of sampling equipment will be conducted in accordance with applicable company policies and procedures. If contact with potentially contaminated surfaces cannot be avoided, then additional engineering controls in combination with PPE upgrades may be necessary to control the contact hazard. Equipment will be decontaminated based on the source of contamination.

If radionuclide decontamination operations are required for equipment or areas, they will be performed in accordance with applicable company manuals. Nonradionuclide decontamination will be evaluated on a case-by-case basis by the HSO and project industrial hygienist to determine the most appropriate PPE (Level C protective clothing will initially be selected if airborne contaminants may be generated until site monitoring can demonstrate downgrading is warranted).

A decontamination pad may be established if nonradionuclide decontamination is required before equipment can be released. If it is deemed necessary and appropriate by the project industrial hygienist, then a wet wiping with an amended water solution (e.g., amended with a nonphosphate detergent such as Alconox) or a potential steam cleaning of this equipment may be conducted before it is allowed to leave the decontamination area. A drainage system that allows for a single collection point will be established if steam cleaning is performed. Decontamination wastewater will be collected using a submergible pump and containerized and characterized in accordance with applicable company policies and procedures.

12.2.2 Personnel Decontamination

Project activities will be conducted in Level D PPE unless upgrading is warranted. Engineering controls in conjunction with work controls and proper handling of samples will serve as the primary means to eliminate the need for personnel decontamination. If modified Level D protective clothing is required, all items will be inspected following the list in Section 6.

12.2.3 Decontamination in Medical Emergencies

If a person is injured or becomes ill, that person will be immediately evaluated by first-aid trained personnel (on a voluntary basis) at the project task site. If the injury or illness is serious, then the FTL will contact the INTEC shift supervisor or WCC (if the shift supervisor cannot be reached) to summon emergency services (i.e., fire department and CFA medical services) to the project site.

Medical care for serious injury or illness will not be delayed for decontamination. In such cases, gross decontamination may be conducted by removing the injured person's outer protective clothing (if possible) and other contaminated areas may be contained with a bag or glove. If contaminated PPE cannot be removed without causing further injury (except for the respirator, which must be removed), the individual will be wrapped in plastic, blankets, or other available material to help prevent contaminating the inside of the ambulance, medical equipment, and medical personnel.

The industrial hygienist or RCT (depending on the type of contamination) will accompany the employee to the medical facility to provide information and decontamination assistance to medical personnel. Contaminated PPE then will be removed at the CFA medical facility and carefully handled to prevent the spread of contamination. The applicable company policies and procedures contain information on proper handling of radionuclide-contaminated wounds.

12.3 Doffing Personal Protective Equipment and Decontamination

As stated earlier, no personnel decontamination beyond doffing of PPE is anticipated for this project. Careful removal of the outer PPE will serve as the primary decontamination method.

The specific doffing sequence of modified Level D or C PPE, and associated decontamination procedures, will be based on the nature of the contamination. A general approach for doffing modified Level D or C PPE is described below. However, no one doffing strategy works for all circumstances. Modifications to this approach are appropriate if site conditions change or at the discretion of the project HSO in consultation with the project industrial hygienist and RCT.

12.3.1 Modified Level D Personal Protective Equipment Doffing and Decontamination (if Required)

If required to be worn, modified Level D protective clothing (e.g., disposable coveralls) will be doffed following standard radiological removal techniques (rolling outside surface inward and down) and will constitute the initial decontamination step. All PPE will be placed in the appropriately labeled containers.

12.3.2 Level C Personal Protective Equipment Doffing and Decontamination (if Required)

If respiratory protection is worn in conjunction with protective clothing (e.g., Level C PPE), then the modified Level D sequence will be followed with one additional step. That additional step is to remove the respirator and place it in a separate container from the discarded protective clothing. Depending on the type of contamination encountered, this step will be followed by a radiological survey or industrial hygienist evaluation.

12.3.3 Site Sanitation and Waste Minimization

Personnel inside the INTEC fence may use the restroom facilities at CPP-1605. Portable toilet facilities provided at the project drill site will be provided by the drilling subcontractor. Sanitary hand wash will be provided within each portable toilet facility to ensure personnel have the capability to wash hands following toilet use and prior to food consumption.

Waste materials will not be allowed to accumulate at routine monitoring sites. Appropriately labeled containers for industrial waste and CERCLA waste (as required) will be maintained at the project site, as stated in the applicable FSP. Personnel should make every attempt to minimize waste through the judicious use of consumable materials. All site personnel are expected to make good housekeeping a priority at the job site.

13. RECORDKEEPING REQUIREMENTS

This section discusses the requirements for recordkeeping for this project.

13.1 Industrial Hygiene and Radiological Monitoring Records

When IH support is required, the industrial hygienist will record airborne monitoring and sampling data (both area and personal) collected for exposure assessments. All monitoring and sampling equipment will be maintained and calibrated in accordance with INEEL procedures and the manufacturer specifications. IH airborne monitoring and sampling exposure assessment data are treated as limited access information and maintained by the industrial hygienist in accordance with INEEL companywide safety and health manual procedures.

The RCT maintains a record of radiological monitoring, daily project operational activities, and instrument calibrations. Radiological monitoring records are maintained in accordance with applicable companywide manuals.

Project personnel or their representatives have a right to the monitoring and sampling data (both area and personal) from both the industrial hygienist and the RCT. Results from monitoring data also will be communicated to all field personnel during daily plan-of-the-day meetings and formal prejob briefings, in accordance with applicable company policies and procedures.

13.2 Field Team Leader and Sampling Logbooks

Logbooks will be maintained in accordance with applicable company policies and procedures. The FTL will keep a record of daily site events in the FTL logbook and will maintain accurate records of all personnel (e.g., workers and nonworkers) who are onsite each day in a site attendance logbook. Logbooks must be obtained from the field data coordinator for the INEEL Sample and Analysis Management (SAM) Office. The completed logbooks must be returned to the INEEL SAM within 6 weeks of project completion. The logbooks are then submitted to Document Control.

13.3 Document Control

The Document Control organizes and maintains data and reports generated by program field activities. The Document Control maintains a supply of all controlled documents and provides a documented system for the control and release of controlled documents, reports, and records. Copies of the project plans, this HASP, the applicable company policies and procedures, the *Quality Assurance Project Plan for Waste Area Groups 1, 2, 3, 4, 5, 6, 7, 10 and Inactive Sites* (DOE-ID 2002b), and other project-specific documents are maintained in the project file by Document Control.

Completed sample logbooks are submitted to the SAM within 6 weeks of project completion. All other project records and logbooks, except IH logbooks, must be forwarded to the Administrative Record and Document Control (ARDC) within 30 days after completion of field activities.

13.4 Site Attendance Record

If required to be maintained separately, the site attendance record will be used to keep a record of all personnel (i.e., field team members and nonfield team members) onsite each day, and to assist the area warden with conducting personnel accountability should an evacuation take place (see Section 11.3 for emergency evacuation conditions). Personnel will only be required to sign in and out of the attendance

record once each day. The FTL is responsible for maintaining the site attendance record and for ensuring that all personnel on the project site sign in.

13.5 Administrative Record and Document Control Office

The ARDC will organize and maintain data and reports generated by program field activities. The ARDC maintains a supply of all controlled documents and provides a documented system for the control and release of controlled documents, reports, and records. Copies of the management plans for the program, this HASP, the applicable company policies and procedures, the quality assurance project plan, and other documents pertaining to this work are maintained in the project file by the ARDC.

14. REFERENCES

10 CFR 835, 2001, "Occupational Radiation Protection," *Code of Federal Regulations*, Office of the Federal Register, July 2001.

29 CFR 1910, 2002, "Occupational Safety and Health Standards for General Industry," *Code of Federal Regulations*, Office of Federal Register, July 2002.

29 CFR 1910.120, 2002, "General requirements," *Code of Federal Regulations*, Office of the Federal Register, July 2002.

29 CFR 1910.120 (f)(h), 2002, "Hazardous waste operations and emergency response," *Code of Federal Regulations*, Office of the Federal Register, July 2002.

29 CFR 1910.134, 2002, "Respiratory Protection," *Code of Federal Regulations,* Office of the Federal Register, July 2002.

29 CFR 1926, 2002, "Occupational Safety and Health Standards for the Construction Industry," *Code of Federal Regulations,* Office of Federal Register, July 2002.

29 CFR 1926, Subpart B, 2002, "General Interpretations," *Code of Federal Regulations,* Office of the Federal Register, July 2002.

29 CFR 1926.65, 2002, "General Interpretations," *Code of Federal Regulations,* Office of the Federal Register, July 2002.

42 USC 9601 et seq., 1980, "Comprehensive Environmental Response, Compensation, and Liability Act," *United States Code*, 1980.

DOE-ID, 1991, *Federal Facility Agreement and Consent Order Action Plan,* U.S. Department of Energy Idaho Operations Office, U.S. Environmental Protection Agency Region 10, State of Idaho Department of Health and Welfare, December 1991.

DOE-ID, 1997, *Comprehensive RI/FS for the Idaho Chemical Processing Plant OU 3-13 at the INEEL—Part A, RI/BRA Report (Final),* DOE/ID-10534, U.S. Department of Energy, Idaho Operations Office, November 1997.

DOE-ID, 1999, *Final Record of Decision, Idaho Nuclear Technology and Engineering Center, Operable Unit 3-13,* DOE/ID-10660, Rev. 0, U.S. Department of Energy Idaho Operations Office, October 1999.

DOE-ID, 2002a, *Plume Evaluation Field Sampling Plan for OU 3-13, Group 5, Snake River Plain Aquifer,* DOE/ID-10784, Rev. 2, U.S. Department of Energy Idaho Operations Office, July 2002.

DOE-ID, 2002b, *Quality Assurance Project Plan for Waste Area Groups 1, 2, 3, 4, 5, 6, 7, 10, and Inactive Sites*, DOE/ID-10587, Rev. 7, U.S. Department of Energy Idaho Operations Office, September 2002.

DOE-ID, 2003, *Long-Term Monitoring Plan for Operable Unit 3-13, Group 5, Snake River Plain Aquifer,* DOE/ID-10783, Rev. 2, U.S. Department of Energy Idaho Operations Office, March 2003.

DOE O 151.1A, 2000, "Comprehensive Emergency Management System," U.S. Department of Energy, October 2000.

DOE O 232.1A, 1997, "Occurrence Reporting and Processing of Operations Information," U.S. Department of Energy, July 1997.

DOE O 440.1A, 1998, "Worker Protection Management for DOE Federal and Contractor Employees," U.S. Department of Energy, March 1998.

DOE-STD-1090-2001, "Hoisting and Rigging," U.S. Department of Energy, April 2001.

NFPA, 70E, 2000, "Electrical Safety Requirements for Employee Work Places," National Fire Protection Association, 2000.

Appendix A

OU 3-13, Group 5, Snake River Plain Aquifer, Health and Safety Plan Training Acknowledgment Form

Appendix A

OU 3-13, Group 5, Snake River Plain Aquifer, Health and Safety Plan Training Acknowledgment Form

Instructions to complete Training Form-361.02

The Form 361.02 training Attendance Roster goes here. Writer to follow the below instructions.

The training roster must be completed in the following manner as part of the issued HASP:

1. The Course Number is ER HASP 99 (this number has been decided by Coleman for input into the TRAIN system) and should be already in the box.

2. Revision is 0.

3. Course Title is "Health and Safety Plan Acknowledgment, Class Title: (Insert name and number of the project here)." This box needs to be completed at the time of the writing of the HASP.

4. The remarks section is already completed.

0361.02
10/13/98
Rev. 03

TRAINING ATTENDANCE ROSTER

Records Use Only	Date	S#	Initial
Quality Check			
TRAIN Entry			
Class Code			

Page _____ of _____

Course Number	Revision	Course Title	Starting Date / Time
ER HASP 03	2	Health and Safety Plan HAZWOPER Site Specific Training Form Class Title: OU3-13 Group 5 Snake River Plain Aquifer	

Remarks	Instructional Org / Vendor	Ending Date / Time
The employee's and supervisor's signature indicates that they have completed the 24-hour field supervised experience for the (insert project name and #).		

Training Setting: ☐ Classroom ☐ CBT ☐ Practical ☐ Lab ☐ Self-Paced ☐ OJT ☐ Vendor ☐ Walk-Through ☐ Simulator ☐ Conference ☐ Live-Fire Range ☐ Drill ☐ Emergency Event

Student Roster						Class Attendance Dates					Completion Status
S#	Print Name (Last, First, MI)	Signature	Charge Number	Phone #	Org. #						

0361.02
10/13/98
Rev. 03

TRAINING ATTENDANCE ROSTER

Records Use Only	Date	S#	Initial
Quality Check			
TRAIN Entry			
Class Code			

Page _____ of _____

Course Number	Revision	Course Title	Starting Date / Time
ER HASP 03	2	Health and Safety Plan HAZWOPER Site Specific Training Form Class Title: OU3-13 Group 5 Snake River Plain Aquifer	

Instructor's S#	Instructor's Name	Instructor's Signature	Instructor initial each day's class attendance						

Appendix B

OU 3-13, Group 5, Snake River Plain Aquifer, HAZWOPER 24-Hour Supervised Field Experience Acknowledgment Form

Appendix B

OU 3-13, Group 5, Snake River Plain Aquifer, HAZWOPER 24-Hour Supervised Field Experience Acknowledgment Form

HAZWOPER 24-Hour Supervised Field Experience Acknowledgment Form

This checklist is to be reviewed with each HAZWOPER worker performing field tasks lasting longer than three working days. The review is to be completed by the immediate field supervisor based upon the supervisor's direct observations and worker refresher training during daily plan-of-the-day meetings. For BBWI and Subcontractor personnel, the signed form is to be submitted to the BBWIER training coordinator at MS 3902 and a copy retained in the field project files.

Project: Postrecord of Decision Monitoring System and Installation Plan, OU 3-13, Group 5

- Knowledge of names of personnel and alternates responsible for project safety and health
- Knowledge of safety and health hazards at the project site and co-located facilities
- Knowledge of PPE requirements
- Knowledge of operating/maintenance procedures and safe-work practices
- Knowledge of hazard control
- Knowledge of medical surveillance requirements, including recognition of signs and symptoms that may indicate overexposure to hazards
- Knowledge of decontamination procedures
- Knowledge of project site and facility emergency response procedures
- Knowledge of emergency signals, take cover areas and evacuation routes
- Knowledge of spill containment and waste management/minimization procedures
- Knowledge of project-site-access-controls and postings
- Knowledge of location of first aid kits, eye wash stations, fire extinguishers and energized system controls.

Please complete the Training Attendance Roster Form (361.02) on the next page and return to the environmental operations training coordinator to have this information placed into the TRAIN system. Retain a copy for the project files.

Instructions to complete Training Form-361.02

The Form 361.02 training Attendance Roster goes here. Writer to follow the below instructions.

The training roster must be completed in the following manner as part of the issued HASP:

1. The Course Number is ER HASP 99 (Number established by Coleman for input into the TRAIN system) and should be already in the box.

2. Revision is 0.

3. Course Title is "Health and Safety Plan HAZWOPER 24 hour Supervised Field Experience Acknowledgment form, Class Title: (Insert name and number of the project here)." This box needs to be completed at the time of the writing of the HASP.

4. The remarks section is already completed.

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10/13/98
Rev. 03

TRAINING ATTENDANCE ROSTER

Records Use Only	Date	S#	Initial
Quality Check			
TRAIN Entry			
Class Code			

Page _____ of _____

Course Number	Revision	Course Title	Starting Date / Time
HAZWOPER 03	2	Health and Safety Plan HAZWOPER 24-hour Supervised Field Experience Acknowledgment Form Class Title: Monitoring and Monitoring System and Installation Plan OU 3-13 Group 5 Snake River Plain Aquifer	

Remarks	Instructional Org / Vendor	Ending Date / Time
The employee's and supervisor's signature indicates that they have completed the 24-hour field supervised experience for the (insert project name and #).		

Training Setting: ☐ Classroom ☐ CBT ☐ Practical ☐ Lab ☐ Self-Paced ☐ OJT ☐ Vendor ☐ Walk-Through ☐ Simulator ☐ Conference ☐ Live-Fire Range ☐ Drill ☐ Emergency Event

Student Roster						Class Attendance Dates					Completion Status
S#	Print Name (Last, First, MI)	Signature	Charge Number	Phone #	Org. #						

0361.02
10/13/98
Rev. 03

TRAINING ATTENDANCE ROSTER

Records Use Only	Date	S#	Initial
Quality Check			
TRAIN Entry			
Class Code			

Page _____ of _____

Course Number	Revision	Course Title	Starting Date / Time
HAZWOPER 03	2	Health and Safety Plan HAZWOPER 24-hour Supervised Field Experience Acknowledgment Form Class Title: Monitoring and Monitoring System and Installation Plan OU 3-13 Group 5 Snake River Plain Aquifer	

Instructor's S#	Instructor's Name	Instructor's Signature	Instructor initial each day's class attendance