

ATTACHMENT 9 -PERSONNEL TRAINING

9.1 General Provisions

The Permittee shall ensure site operating personnel have the necessary knowledge and skills to perform hazardous waste duties safely and efficiently, and will ensure that hazardous activities are conducted in an environmentally sound manner.

All EDS monitoring personnel are required to meet the minimum training requirements outlined in the OSHA standard Title 29 Code of Federal Regulations (CFR) 1910.120 covering Hazardous Waste Operations and Emergency Response (HAZWOPER). All monitoring and laboratory personnel must also meet the training and certification criteria detailed in the CMA LMQAP.

9.2 Purpose

The purpose of the training program is to prepare Explosive Destruction System (EDS) operating personnel for mission responsibility, with emphasis on reducing potential risks that may threaten human health or the environment. This will be accomplished by ensuring that personnel handling hazardous waste are thoroughly familiar with, and can properly perform, their assigned duties and responsibilities.

The Permittee shall provide training in the mechanics of the EDS operations. The training program shall provide personnel with an understanding of the EDS operations, including safety, environmental, and emergency response operations. This training description focuses on the training requirements and implementation for the EDS operators as these personnel are responsible for conducting operations and performing hands-on hazardous waste operations.

The Permittee shall provide both initial and continuing training specific to the various hazardous waste management positions.

The Permittee shall meet training requirements by:

- Ensuring that personnel complete their training program prior to assignment to the EDS site or to a new position associated with the EDS operations
- Ensuring that personnel do not work unsupervised at EDS operations until they are certified under the EDS Work Force Qualification/Certification Program
- Ensuring the training program is directed by qualified personnel trained in hazardous waste management procedures
- Providing training that enables EDS personnel to respond effectively to emergencies
- Providing annual and periodic reviews of applicable training and ensuring EDS operating personnel participation
- Maintaining required training records and documentation

- Ensuring personnel do not engage in waste management operations until they have completed the requisite health and safety training [Occupational Safety and Health Administration (OSHA) 29 CFR 1910.120].

9.3 Outline of Training Program

The Permittee shall provide a training program that will be comprised of both initial and continuing training relevant to an employee's position and applies to personnel who manage hazardous waste, including but not limited to, personnel who handle, move, perform maintenance on, and operate hazardous waste management equipment or supervise those who do.

Training shall consist of both introductory and continuing training for supervisors, operators, maintenance personnel, and other personnel involved in EDS site waste management operations. Introductory training will include classroom and hands-on training consisting of process demonstrations, equipment operation, and hands-on experience with hazardous waste procedures and instruction in emergency response. Continuing training will include safety briefings, procedure reviews, and annual refresher courses (for example, 8-hour annual refresher for hazardous waste operations training). The training for EDS personnel will incorporate training required by the Resource Conservation and Recovery Act (RCRA), OSHA, and U.S. Army (for chemical agent topics).

EDS personnel shall receive training on the following topics commensurate with their job duties and responsibilities:

- Hazardous Waste Operations and Emergency Response (HAZWOPER) (per 29 CFR 1910.120)
- Communications and alarm systems
- Hazard communication (per 29 CFR 1910.1200)
- Hazardous waste management procedures, including use, inspection, repair, and replacement of emergency and monitoring equipment; container management; labeling and weekly inspections; waste sampling and waste determinations; management of solid and liquid wastes; recordkeeping requirements and spill reporting for releases
- Contingency plans and emergency response procedures
- Response to fires or explosions
- Protective clothing and equipment
- Shutdown operations
- Preventative procedures and spill response to prevent groundwater contamination
- Medical surveillance.

Operating personnel shall be trained in cardiopulmonary resuscitation (CPR) and first aid.

9.4 Job Titles and Qualifications

Job titles and duty descriptions of EDS site support personnel are provided here:

RCMD Site Manager: Responsible for the programmatic control and authority of EDS operations; works in conjunction with the ECBC Operations Manager; acts as interface with Tooele Army Depot South (TEADS), Materiel Assessment Review Board (MARB), Treaty, and RCMD management for TEADS-EDS operations.

Minimum Qualifications/Experience: Bachelor's degree in related field, minimum of 2 years planning, operating, or overseeing chemical agent or hazardous waste operations. Must have experience managing multi-disciplinary teams including engineers, scientists, safety professionals, environmental professionals, public affairs, and resource management.

ECBC Operations Manager: Responsible for executing and directing all TEADS-EDS site operations; responsible for overall site safety and environmental compliance; first line management/supervision; responsible for supply orders and maintenance issues; overall site logistics; may substitute for Site Safety and Health Officer or Quality Assurance Coordinator.

Minimum Qualifications/Experience: 3 years' experience managing operational personnel or 3 years' experience with chemical handling operations.

ECBC Crew Chief: Responsible for day-to-day operation of an EDS unit; responsible for overall use of an EDS crew and shared use of the Personnel Decontamination Station (PDS) crew; responsible for coordinating with other EDS crews to ensure synergistic operations; responsible for safety, environmental compliance, and quality assurance for specific EDS unit; reviews and certifies limiting conditions of operation status; has maintenance responsibility for EDS unit; and provides data to ECBC Operations Manager on logistics for each EDS unit.

Minimum Qualifications/Experience: High School diploma or GED; 3 years' experience managing operational personnel; 3 years' experience with chemical handling operations.

ECBC Site Safety and Health Officer: Responsible for overall TEADS-EDS site safety and health concerns; reviews limiting conditions of operations, checklists for accuracy, and monitors heat and cold stress. Is point of contact for accident and chemical agent reports; reports to the ECBC Operations Manager.

Minimum Qualifications/Experience: Bachelor's degree in related field and/or minimum 2 years' experience managing safety and occupational health programs; experience with OSHA safety compliance federal and state requirements.

ECBC Training Manager: Responsible for personnel training, records, certifications, and updates; ensures that personnel are properly trained in operating the EDS units according to Federal, State, Army, and local environmental regulations and permits/permit requirements; coordinates continuing training; maintains records; and identifies training resources to meet training requirements.

Minimum Qualifications/Experience: Bachelor's degree in related field and/or minimum 2 years' experience in training programs with emphasis on hazardous waste management and treatment, storage, and disposal facility operations.

ECBC Environmental Officer: Responsible for TEADS-EDS site compliance to state permits; responsible for hazardous waste documentation and labeling; reports to ECBC Operations Manager.

Minimum Qualifications/Experience: Bachelor's degree in the Sciences or Environmental Engineering and/or 3 years' experience with hazardous material handling under Federal and State laws; RCRA hazardous waste training required.

ECBC Quality Assurance Coordinator: Responsible for verifying compliance with the quality assurance plan and site-specific monitoring plan; reviews and certifies data prior to submitting data to Data Management System (DMS)/INACCMO; monitors site to ensure proper procedures are followed prior to operation; assists in review of near real-time (NRT) CHROM-NET™ data; reports to ECBC Operations Manager.

Minimum Qualifications/Experience: High School diploma or GED; 3 years' experience with quality assurance and quality control programs.

ECBC Chemical Operator: Responsible for chemical warfare materiel (CWM) chemical treatment activities and processes and for hazardous waste handling. Cross-trained to multiple job capabilities.

Minimum Qualifications/Experience: High School diploma or GED; experience with chemical handling and operations.

ECBC Explosives Operator: Responsible for explosives operations, including CWM initial unpack and explosives handling and preparation. Assists in hazardous waste handling. Cross-trained to multiple job capabilities.

Minimum Qualifications/Experience: High School diploma or GED; successful completion of the Defense Ammunition Center Courses AMMO-45 and AMMO-61; trained in the safe handling, placement, and operation of explosives, explosive components, and firing system for the RCMD system to be operated.

ECBC Maintenance Operator: Responsible for maintenance activities for EDS units. Also conducts preventative maintenance measures on the EDS units.

Minimum Qualifications/Experience: High School diploma or GED; experience with maintenance activities and processes.

EDS Operators

A qualification/certification program has been established by the U.S. Army for the EDS operators, titled EDS Workforce Qualification/Certification Program. The EDS operators will be responsible for conducting and performing hazardous waste operations at the EDS site.

9.5 EDS Site Visitors, Inspectors, and Non-routine Workers

During EDS site operations, certain personnel may be present who will not actively or routinely engage in hazardous waste treatment or handling operations. These personnel may be visitors, such as regulatory agency inspectors; Chemical Weapons Convention (CWC) inspectors/observers; independent contractor data collectors/observers/inspectors; and non-routine workers such as electricians and engineers to repair equipment or perform structure repairs. These types of personnel shall, at a minimum, receive the General Site Orientation Briefing. In addition, these personnel may also attend a daily safety briefing as applicable and other training on the EDS operations, depending on the level of participation or work activity to be conducted.

9.6 Training Coordinator/Manager

Each organization (contractor and government) that will be working at the TEADS EDS site is responsible for training their employees or ensuring that the employee receives required training for work at the TEADS EDS site commensurate with the employee's responsibilities and duties.

RCMD has oversight and training responsibility for the *Explosive Destruction System Workforce Qualification and Certification Program* and works in coordination with the ECBC Training Manager regarding EDS unit training.

The ECBC Training Manager is responsible for ECBC training, records, certifications, and updates, and ensures that personnel are properly trained in operating the EDS units in accordance with Federal, State, Army, and local environmental regulations and permit/permit requirements.

RCMD also has oversight and training responsibility to ensure that all TEADS EDS site employees are trained in the TEADS EDS site hazardous waste permit, emergency response, and contingency plan actions commensurate with employee responsibilities and duties.

The responsibilities of RCMD are:

- Ensure EDS operator personnel are properly trained in the safe operation of the EDS unit in accordance with Federal, State, Army, and local environmental regulations, including the TEADS EDS Hazardous Waste Treatment Permit.
- Coordinate continuing training as necessary to inform TEADS EDS site personnel of new procedures, provide refresher training, and provide training for new personnel.

- Identify and review vendors and other training resources to meet training requirements, as applicable.
- Ensure maintenance of training records in accordance with R315-8-2.7(d)(4) and (e) for each organization.
- Ensure TEADS EDS site personnel are trained in hazardous waste management and contingency plan implementation, including emergency procedures.
- Ensure TEADS EDS site personnel receive training appropriate to their positions.

9.7 Training Staff

All instructors shall be knowledgeable in the areas in which they will be teaching. Subject matter experts (SMEs) will be used as they possess the knowledge, training, and experience in a subject content area. For example, munition handling and safety personnel must be part of training material development as well as part of actual training, as applicable.

9.8 Relevance of Training to Job Position

All personnel shall be trained in the duties and responsibilities relevant to their job position as it relates to hazardous waste operations. Course requirements have been tailored to the subject areas and levels of detail appropriate for each position. Training (initial and continuing) relevant to each EDS site job position is presented in Table 22 and Table 23.

Table 22. TEADS EDS Personnel Introductory Training Requirements

Job Title	Training Courses				
	General Site Orientation Briefing	Safety, Health, and Environmental Training	EDS Operating System Course	EDS Maintenance Course	EDS System Manager's Training
RCMD Site Manager ^a	X	X			X
ECBC Operations Manager ^a	X	X			X
ECBC Crew Chief ^a	X	X	X		
ECBC Site Safety and Health Officer ^a	X	X			X
ECBC Environmental Officer ^a	X	X			
ECBC Training Manager	X	X			
ECBC Quality Assurance Coordinator ^a	X	X			
ECBC Chemical Operator	X	X	X		
ECBC Explosives Operator	X	X	X		
ECBC Maintenance Operator	X	X		X	
Visitors and Non-routine Workers ^b	X				

Notes:

^a Must take 8-hour HAZWOPER Supervisor Training

^b Visitors include regulatory agency personnel and other personnel. Non routine workers will already hold a certificate in the required OSHA HAZWOPER training for RCRA treatment, storage, and disposal facilities.

ECBC = Edgewood Chemical Biological Center
 EDS = Explosive Destruction System
 RCMD = Recovered Chemical Materiel Directorate
 TEADS = Tooele Army Depot South

Table 23 - TEADS-EDS Personnel Minimum Continuing Training Requirements

Job Title	Training Courses		
	General Site Orientation Briefing	Safety, Health, and Environmental Training	Specific Refresher Training
RCMD Site Manager	X	X	X
ECBC Operations Manager	X	X	X
ECBC Crew Chief	X	X	X
ECBC Site Safety and Health Officer	X	X	X
ECBC Environmental Officer	X	X	X
ECBC Training Manager	X	X	
ECBC Quality Assurance Coordinator	X	X	X
ECBC Chemical Operator	X	X	X
ECBC Explosives Operator	X	X	X
ECBC Maintenance Operator	X	X	X

Notes:

ECBC = Edgewood Chemical Biological Center
 TEADS = Tooele Army Depot South
 EDS = Explosive Destruction System
 RCMD = Recovered Chemical Materiel Directorate

9.9 Training for Emergency Response

Emergency response training shall be provided to all EDS site personnel relevant to their positions. At a minimum, the training has been designed to ensure that site personnel are able to respond effectively to emergencies by becoming familiar with site emergency procedures, equipment, and systems including:

- Procedures for locating, using, inspecting, repairing, and replacing site emergency and monitoring equipment
- Location and use of communications and alarm systems
- Response to fires, explosions, or other releases
- Who to inform in the event of an emergency
- Response to groundwater contamination incidents
- Shutdown of operations and evacuation.

At a minimum, the Permittee shall train its employees with the courses listed in Tables 22 and 23.

Course descriptions are provided here:

9.10 Courses

General Site Orientation Briefing

This briefing describes general site operations and covers the following topics: hazard communications (HAZCOM), general security, use of personal protective equipment (PPE), and emergency response, alarms, and evacuation.

Safety, Health, and Environmental Training

This training is provided by various sources/vendors and provides information on the following topics:

- Toxic Aid
- Site decontamination and other contingency measures
- RCRA/Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) requirements, permits, documents, recordkeeping, waste management, etc.
- CWM handling
- Hazardous waste handling (includes regulations and site-specific requirements, as applicable)
- PPE

- 40-hour HAZWOPER training
- 8-hour annual HAZWOPER refresher training
- 8-hour HAZWOPER supervisor training
- Medical surveillance and requirements
- Hazardous materials transportation [requirements under Department of Transportation (DOT)].

Not all topics listed will be applicable to all positions.

EDS Operating System Course

This course provides an overview of the EDS operations and addresses the components and operation of the EDS system including: trailer, electrical systems, treatment vessel, hydraulic system, helium leak detection, waste transfer system, and reagent supply system. This course also covers the use and application of Standing Operating Procedures (SOPs) that will be used to operate the EDS and addresses routine operational procedures as well as procedures for unusual events.

EDS Maintenance Course

This course presents a maintenance overview and then provides specific training on maintenance of the EDS systems, as well as preventive maintenance measures.

EDS Explosives Operator Course

This course familiarizes students with the EDS, its sub-components, operating parameters, and key system documentation with emphasis on components and procedures related to explosive ordnance disposal.

EDS-Specific Refresher Training

This course provides system-specific operating system and maintenance refresher training on an annual basis and will be divided into three modules: operating systems, system maintenance, and explosive operators' training. The specific modules completed will depend on the student's job description and work experience.

EDS System Manager's Training

This course familiarizes students with the EDS components, subsystems, operating parameters, and site operations; also includes Command Post operations, responsibilities, and regulatory and documentation requirements.

9.11 Training Implementation

Introductory training will be conducted using a variety of training techniques, including classroom instruction, demonstrations, drills, and hands-on exercises. A proficiency demonstration (for example, written test, hands-on demonstration, etc.) shall be required to verify trainee comprehension of the subject material.

Supervised hands-on training shall take place at the EDS site. Evaluations shall be administered by the supervisor or designated representative and performance checklists will be used to verify competence on the subject task.

Continuing training shall supplement initial training and will be used to demonstrate continued proficiency in their assigned job areas. Continuing training will include required annual refresher training (for example, 8-hour annual HAZWOPER training), as well as review of initial training topics as necessary and will also consist of a combination of classroom instruction, drills, and hands-on training.

The EDS Workforce Qualification and Certification Program and/or other required personnel training for site operations shall be reviewed and updated by RCMD whenever there are changes in regulations, waste types handled or managed, design or operation, waste management equipment or techniques, or Contingency Plan procedures to maintain compliance with permit and regulatory requirements. The training program also may be updated at the request of the operator.

EDS site personnel shall be required to complete training specific to their job position within 6 months of assignment at their respective sites or to a new assignment at the respective site and will not work unsupervised until all relevant training has been successfully completed and documented. Furthermore, site personnel must complete the requisite classroom and on-the-job training prior to engaging in any hazardous waste operations. For EDS operators, this includes the EDS site Workforce Qualification Program.

All training shall be based on analyses that identify the specific tasks to be performed by each job position as well as identify the knowledge, skills, and attitudes required to perform those tasks. Each training course will have learning objectives based on analysis of the tasks required to operate the EDS. Special emphasis will be placed on personnel safety and environmental compliance in every training module.

Training aids, such as handouts, reference materials, models, or actual pieces of equipment, will be used as appropriate. Specialized vendor or commercially provided training may be required in some areas.

Written test and/or practical demonstration of skills (includes hands-on) shall be administered during all courses to test the students' mastery of learning objectives to established job performance standards. Certificates of completion will be issued to all students who demonstrate proficiency of the course materials. At this point, the student will be considered qualified and

may work under supervision. Individual employee training will be documented after completion of each course.

Hands-on training of the EDS shall be administered to test student's mastery of operations while being observed by a supervisor. When the supervisor has determined that the student has met all training requirements, the certifying official will certify the student, who will then be able to perform EDS operations (as applicable) unsupervised.

Courses specific to the EDS shall provide a thorough background in basic design, proper operation, and maintenance of the systems.

9.12 Training Records

Training records for the TEADS EDS site personnel shall be maintained, readily available, and include, at a minimum:

- Job title for each position that is related to TEADS EDS sites hazardous waste management operations and activities, and the name of each employee filling the position
- Job description specifying duties for each position, minimum qualification required to fill the position, and required training for the position
- Description of the type and amount of introductory and continuing training that will be given to each employee
- Date each employee started working at the TEADS EDS sites and termination date
- Course enrollment, attendance, and successful completion information
- Copies of course materials and instructional methods (outlines, schedules, instructional techniques and materials).

All training records and documentation on current TEADS EDS site personnel shall be kept until closure of the EDS site. Training records on former TEADS EDS site personnel will be kept for at least 3 years from the date last worked at the respective site.