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120-D-1 (100-D) Ponds Training Plan

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1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

This is the Environmental Restoration Contractor (ERC) Team training plan for the 100-D Ponds treatment, storage, and disposal (TSD) unit. This plan is intended to meet the requirements of WAC 173-303-330 and the Hanford Dangerous Waste Permit. Training unrelated to compliance with WAC 173-303-330 is not addressed in this training plan. The WAC 173-303-330(1)(d)(ii, v, vi) requires that personnel be familiar, where applicable, with waste feed cut-off systems, proper responses to groundwater contamination incidents, shutdown of operations, response to fire or explosion, and other process operation activities. The 100-D Ponds TSD unit is no longer receiving or storing dangerous waste; therefore, the requirements in WAC 173-303-330(1)(d)(ii, v, vi) are not relevant to this unit and are not covered in this training plan.

2.0 TRAINING REQUIREMENTS

2.1 TRAINING MATRIX

2.1.1 FACILITY PERSONNEL

Table 2-1 provides a matrix of the training facility personnel must receive relative to their position each calendar year to perform work at the 100-D Ponds TSD Unit. After a course has been taken, only a refresher course is necessary for subsequent years. Training must be successfully completed by personnel within 6 months after employment at or assignment to 100-D Ponds TSD Unit or associated inspection functions. Within the 6-month period, employees must be supervised until they complete training required for their position.

2.1.2 NONFACILITY PERSONNEL

If nonfacility personnel (such as delivery truck drivers or Washington State Department of Ecology inspectors) will be anywhere near dangerous waste management activities, they must receive site-specific training relative to 100-D Ponds or be escorted by trained personnel.

Table 2-1. Training Requirements for 100-D Ponds Treatment, Storage, and Disposal Unit Workers.

Category	Waste Handlers	General Workers	Supervisors	Emergency Coordinators
Hazardous Waste Operations	Yes	No	Yes	Yes
HESO/HGET	Yes	Yes	Yes	Yes
100-D Ponds Site Specific	Yes	Yes	Yes	Yes
Building Warden/BED	No	No	No	Yes

HESO = Hanford Employee Safety Orientation.

HGET = Hanford General Employee Training.

2.2 COURSE DESCRIPTIONS

2.2.1 HAZARDOUS WASTE OPERATIONS 24-HOUR OR 40-HOUR AND ANNUAL REFRESHER

This course provides training relative to dangerous waste management, hazard identification, and protective clothing.

2.2.2 HANFORD EMPLOYEE SAFETY ORIENTATION (HESO) AND ANNUAL REFRESHER HANFORD GENERAL EMPLOYEE TRAINING (HGET)

This course provides training relative to contingency plan implementation, effective response to emergencies, communications and alarm systems, and response to fire or explosion.

2.2.3 SITE SPECIFIC

This course provides unit-specific training relative to dangerous waste management hazards, contingency plan implementation, effective response to emergencies, and communications and alarm systems.

2.2.4 BUILDING WARDEN TRAINING OR BUILDING EMERGENCY DIRECTOR TRAINING AND ANNUAL REFRESHER FOR EITHER COURSE

This course provides training relative to emergency coordinator responsibilities.

2.3 TRAINING DIRECTOR

Personnel directing training under this plan shall be knowledgeable in dangerous waste management procedures.

3.0 ADMINISTRATIVE REQUIREMENTS

3.1 RECORDS RETENTION

This training plan includes employee training records. The employee training records are maintained electronically. This training plan shall be kept at the Hanford Site and be readily retrievable. A hard copy of any site-specific training that is not recorded electronically must be kept on file and be readily retrievable.

3.2 REVISION

The task manager is responsible for keeping this training plan up to date. This training plan shall be revised whenever the following occur:

- C When titles or numbers of training courses change
- C When employees change positions
- C When new employees are assigned to the 100-D Ponds TSD Unit
- C When training requirements in WAC 173-303-330 or the Hanford Site dangerous waste permit are revised.

4.0 DANGEROUS WASTE MANAGEMENT POSITION DESCRIPTIONS

This training plan applies only to employees who perform work at the 100-D Ponds or are Emergency Coordinators. If an employee fits into more than one position, he or she will receive the highest level of training applicable to the positions.

4.1 WASTE HANDLER

Duties include the following:

- C Perform inspections
- C Treat wastes
- C Perform treatability tests
- C Take samples
- C Package and ship waste
- C Respond to emergencies.

Required skills are basic communication skills, and the ability to follow instructions. There are no specific education or other qualification requirements.

4.2 GENERAL WORKER

Duties include the following:

- C Perform inspections
- C Respond to emergencies
- C Provide maintenance services
- C Operate equipment
- C Set up equipment.

Required skills are basic communication skills, and the ability to follow instructions. There are no specific education or other qualification requirements.

4.3 SUPERVISOR

Duties include the following:

- C Supervise waste handlers and general workers
- C Assure personnel training

- C Perform inspections
- C Respond to emergencies.

Required education includes a 4-year college degree or equivalent knowledge and experience. There are no other required qualifications.

4.4 EMERGENCY COORDINATOR

Duties include proper response to emergencies per WAC 173-303-360. Required education includes a 4-year college degree or equivalent knowledge and experience. There are no other required qualifications.

APPENDIX A
EMPLOYEE LISTING –WASTE HANDLERS

A1.0 WASTE HANDLER

Employees listed in this table are Waste Handlers that are qualified to work at the 100-D Ponds TSD Unit. Refer to the training matrix (Table 2-1 in Section 2.1) to determine training requirements for Waste Handlers.

B. Brown	8A000
D. Haugen	84375
F. Hubbard	8A172
L. Martell	85902
I. Mata	82697
G. Potter	82745

A2.0 GENERAL WORKER

Employees listed in this table are General Workers that are qualified to work at the 100-D Ponds TSD Unit. Refer to the training matrix (Table 2-1 in Section 2.1) to determine training requirements for General Workers.

B. Brown	8A000
D. Haugen	84375
F. Hubbard	8A172
L. Martell	85902
I. Mata	82697
G. Potter	82745

A3.0 SUPERVISOR

Employees listed in this table are Supervisors that are qualified to work at the 100-D Ponds TSD Unit. Refer to the training matrix (Table 2-1 in Section 2.1) to determine training requirements for Supervisors.

W. Osborne	64212
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A4.0 EMERGENCY COORDINATOR

Employees listed in this table are Emergency Coordinators that are qualified to work at the 100-D Ponds TSD Unit. Refer to the training matrix (Table 2-1 in Section 2.1) to determine training requirements for Emergency Coordinators.

W. Hayward	66516
W. Osborne	64212

APPENDIX B
SITE-SPECIFIC TRAINING PLAN

B1.0 OBJECTIVES

Site-specific training will provide the facility worker with the facility-specific knowledge relative to the following:

- C Dangerous waste management hazards
- C Contingency plan implementation
- C Effective response to emergencies
- C Communications and alarm systems.

B1.1 DESCRIPTION

The 100-D Ponds TSD unit is located adjacent to and north of the north perimeter fence of the 100-D Area. The unit was constructed primarily for the impoundment, treatment, and disposal of nonradioactive, nondangerous liquid effluent from the 183-D Water Treatment Facility (WTF) and began operations in 1977. This unit currently consists of two surface ponds interconnected by effluent transfer piping.

Beginning in 1950, before the operation of this site as a TSD unit, this location served as the 188-D Ash Disposal Basin which received coal ash from the 184-D Powerhouse. Between 1950 and 1966, the location only received ash/water effluent. The ash basin was retired in 1966, and between 1966 and 1977 the site received no discharges. By 1977, when pond operations began, the 100-D Area industrial sewer system had been permanently diverted to discharge solely into 100-D Ponds. All discharges to this location have arrived by the same influent pipe from the 100-D Area process sewer system. The pond was operated as a TSD facility until June 1994 when all discharges to the pond ceased.

The sources of effluent that entered the 100-D Ponds are the 183-D WTF, the 182-D Reservoir, and the 189-D Mechanical Development Laboratory (MDL). The average 183-D WTF daily discharge to the pond was 19 to 265 L/min (5 to 70 gal/min). In addition to this daily discharge, the 183-D WTF multimedia filters were backwashed monthly. This generated 530,600 L (140,100 gal) of waste discharged to 100-D Ponds. Biannually, the 183-D WTF settling ponds were washed down and this generated 2,728,800 L (720,400 gal) of waste per year that was discharged to the pond. Any discharge from the 182-D Reservoir resulted from reservoir overflow and consisted of raw water from the Columbia River. From 1977 to 1988, discharge from the 189-D MDL contributed to the waste disposed at 100-D Ponds. The 189-D MDL complex consisted of activities involved in the 185-D/189-D, 190-D, 190-DA, and 1724-DA facilities. The discharges from these facilities were small and of an intermittent nature. The 100-D Ponds is identified as a TSD unit because the 189-D MDL complex discharged corrosive demineralizer regenerative solutions to the pond. Corrosive wastes are classified as characteristic dangerous waste, waste code D002. The 100-D Ponds have not received dangerous waste since January 1986.

B1.2 DANGEROUS WASTE MANAGEMENT HAZARDS

The facility no longer receives waste water. Because no waste water is being discharged, no immediate dangerous waste hazards are present. The facility is secured by a single strand cable with warning signs posted on the cable. The two sampling programs performed to date have indicated a radioactive "crust" over most of the settling pond bottom of approximately 100 mrem/yr and the soil beneath it at slightly elevated levels of approximately 30 mrem/yr. There are also elevated levels of polychlorinated byphenyls within the soil in the northeast corner of the pond at levels up to 30 parts per million (ppm) and metals contamination of arsenic and lead just above the regulatory release limits (maximum values in soil of 62.2 ppm and 519 ppm for arsenic and lead, respectively).

Cleanup of contaminated materials, including removal of piping and contaminated soil associated with past waste disposal practices, is planned. Approximately 1,030 m³ (1,350 yd³) of sediment removal will be excavated for disposal. Pipes embedded in the earthen dike between the two ponds and corrugated pipe located in the percolation pond will be removed. Waste materials will be transported to the appropriate disposal facility, and noncontaminated material will be stored adjacent to the D-Ponds.

B1.3 IMPLEMENTATION OF THE SITE-SPECIFIC CONTINGENCY PLAN

The site-specific contingency plan can be obtained through the Facility Emergency Coordinator, document control center, or the inspection supervisor. Each worker must be familiar with the site-specific contingency plan and its requirements. The site-specific contingency plan will be implemented by the Facility Emergency Coordinator whenever there is an immediate threat to human health or the environment.

B1.4 RESPONSE TO EMERGENCIES

All emergencies (e.g., fires, explosions, personnel injury) shall be reported to the Facility Emergency Coordinator who will respond to all emergencies as outlined in the Facility Specific Contingency Plan and the Hanford Site Contingency Plan.

B1.5 COMMUNICATIONS

There are no fixed communication systems at 100-D Ponds. Work at 100-D Ponds will always involve at least two people with portable communication devices (e.g., cellular phones, radios, etc.).

B1.6 ALARMS

Normal Hanford Sitewide audible emergency signals will be observed. No facility specific alarms are necessary for 100-D Ponds.

B1.7 MONITORING

Required monitoring is outlined in the Facility Specific Inspection Plan and is performed by the Hanford Site Groundwater Monitoring Program.

B1.8 INSPECTIONS

It is required that the 100-D Ponds be inspected at least once each calendar quarter of the year, in accordance with the Facility Specific Inspection Plan.

B1.9 ENVIRONMENTAL HAZARDS

The 100-D Ponds are approximately 3.7 to 5.5 m (12 to 18 ft) deep with some relatively steep but stable side slopes. Accumulation of water at the bottom of the ponds from storm events is possible but has not been visibly identified in the past as being a significant concern. Environmental hazards consist of snakes, spiders, varmints, tripping hazards, extreme heat in the summer, and extreme cold in the winter.

B1.10 RADIOLOGICAL HAZARDS

The 100-D Ponds is a radiological controlled area; a Radiation Work Permit is required to enter the facility.

B1.11 DOCUMENTS TO BE REVIEWED

Each facility worker must review and be cognizant of the following site-specific documents:

- C 100-D Ponds Site Specific Contingency Plan
- C 100-D Ponds Site Specific Inspection Plan
- C 100-D Ponds Site Specific Waste Analysis Plan
- C 100-D Ponds Site Specific Training Plan.