

U.S. Department of Energy, Richland Operations Office

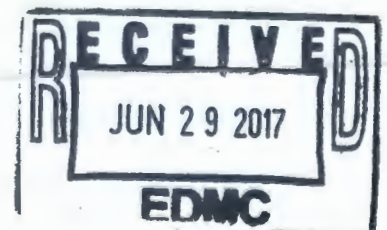
Liquid Effluent Retention Facility Environmental Compliance Assessment

Issued: September 2000



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Analysis and Evaluation Division Assessment A&E-ASS-071



Executive Summary

The Richland Operations Office (RL) Analysis and Evaluation Division (A&E) performed an assessment for environmental compliance at the Liquid Effluent Retention Facility (LERF) on September 18, 2000. The scope of the assessment was the contractor's compliance with the Hanford Site Federal Resource Conservation and Recovery Act (RCRA) Permit Number WA7890008967 requirements covering the treatment, storage, and disposal of mixed waste.

An entrance meeting was conducted on September 18, 2000, at the 200 Area Effluent Treatment Facility (ETF) conference room. The entrance meeting was attended by the A&E assessment team, the Fluor Hanford, Inc. (FHI) points of contact, and a Waste Management/Environmental Programs coordinator. A joint exit meeting was held on September 26, 2000, for the ETF and LERF assessments.

The assessment concluded no findings and no observations. A training program finding was identified in the ETF assessment (A&E-00-ASS-070). This finding also applies to LERF, since both facilities are under the Liquid Waste Processing Facilities (LWPF) programs and use the same procedures.

The facility's management and workers provided the assessment team with individual courtesy and cooperation, and demonstrated a commitment to working safely, and providing a quality product. The remaining requirements for environmental compliance that were reviewed by the assessment team at the facility were acceptably met.

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I. Introduction and Scope

A. Background

The LERF is defined as a "Final Status," treatment, storage, and disposal (TSD) unit per RCRA, and the Dangerous Waste Regulations of Washington State, Washington Administrative Code (WAC). The LERF is authorized to store dangerous and mixed waste in accordance with the conditions of the Hanford Site RCRA Dangerous Waste Permit, the applicable provisions of the WAC Chapter 173-303, and 40 Code of Federal Regulations (CFR). The LERF is one unit of a multi-part aqueous waste treatment system. Aqueous mixed waste streams, as well as nondangerous aqueous waste streams, are stored in the LERF. Aqueous waste is generated from various Hanford Facility waste management and remediation activities.

The LERF is composed of three surface impoundments, or basins, with a nominal capacity of 24.6 million liters each. The LERF provides interim storage and treatment until the waste is transferred to the ETF for final treatment. Treatment at the LERF consists of flow and pH equalization, consistent with the surface impoundment treatment exemption (40 CFR 268.4).

The LERF basins are provided with primary and secondary composite liners, a leachate collection and removal system between the liners, and a floating cover. The LERF also includes piping, and pumping systems, utilities, and a basin operations structure. Aqueous waste from the LERF is transferred to the ETF via pipelines.

B. Assessment

This assessment covers the permittee's program for compliance with the RCRA Permit requirements pertaining to the receipt and storage of mixed waste at the LERF. The purpose of this assessment was to evaluate the LERF for compliance with the Hanford Facility RCRA Permit Number WA7890008967, and to meet a commitment of the Department of Ecology "Final Determination Pursuant to the Hanford Federal Facility Agreement and Consent Order (HFFACO) regarding the U.S. Department of Energy's (DOE) compliance with the Land Disposal Restriction (LDR) Requirements of Washington State's Hazardous Waste Management Act (HWMA), the Federal Resource Conservation and Recovery Act (RCRA), DOE's Annual Land Disposal Restrictions (LDR) Report, and HFFACO Milestone M-26-01."

The success of any organization at Hanford depends upon the extent to which its products or services satisfy DOE requirements and expectations. Delivery of products or expectations occurs through the implementation of programs, systems, and processes. The responsibility for satisfying the program requirements lies with each member of an organization. The intent of this assessment is to provide objective evidence of the areas which management and workers need to improve on their ability to perform on the mission and achieve management's goals.

Third party assessments are conducted by DOE to evaluate the total picture of how well the Hanford contractor's (in this case, FHI) management system complies with the applicable regulatory requirements and standards. This assessment was applied using a graded approach. The assessment was tailored to the specific activities being performed at the LERF.

II. Method

An assessment entry meeting was held at the facility on September 18, 2000. The assessment team members were identified. The purpose of the assessment was declared and the scope of the assessment was described. The conduct of the assessment was reviewed along with the assessment schedule.

The method used for this assessment was a combination of document review, facility walkdown/inspection, and interviews. Regulatory documents were reviewed to develop the areas of primary focus for the assessment. The areas of focus are listed below and are not exclusively related to mixed waste storage, but are instead, a "comprehensive" look at operational and regulatory compliance areas. The documents used to develop the list for the assessment areas were the Part B permit application, the Dangerous Waste Regulations (WAC 173-303), 40 CFR, RL Facility Representative (FR) Surveillances, contractor self-assessments and independent assessments. This assessment focused on the following specific areas:

- Facility records;
- procedures;
- facility contingency plan;
- personnel training and qualification;
- waste analysis plan;
- operating log and logkeeping practices;
- facility security; and
- self and independent assessments.

The Contractor Oversight and Evaluation Planning process provides the mechanism whereby RL personnel (mission element, mission support, and support service) evaluate contractor performance to ensure work is performed in accordance with the applicable requirements. This process also provides the mechanism to evaluate the adequacy of the contractors' self-assessment (including independent) program, and fulfills an important part of the feedback and improvement function of the RL Integrated Management System (RIMS). This process supports implementation of DOE 411.1A, *Safety Functions, Responsibilities and Authorities Manual*, DOE 450.5, *Line Environment, Safety, and Health Oversight*, and DOE O 224.1, *Contractor Performance Based Business Management Process*.

III. Results

A. General

- 1) **General operations:** The facility's general housekeeping was maintained, appropriate warning signs inside the facility were established, spill kits were available for use, and fire protection equipment was clearly marked and accessible. The personal protective equipment was present and appropriately staged. Radiation survey maps were current. Prior to the facility tour, visitor safety requirements, and emergency response expectations were discussed.

No issues were found.

- 2) **Inspections:** There was a written facility inspection plan with specified frequencies. Evidence was present that indicated the daily operator rounds, weekly/monthly/quarterly health and safety inspections, and annual uninterrupted power supply inspections were performed, and documented as required. Documents reviewed:

- POP-30-001, *Outside Operator Rounds*;
- POP-60K-005, *Inspect Waste Management Area*; and
- WMP-200, Section 1.13, *Health and Safety Self-Inspection Program*.

No issues were found.

B. Specific

- 1) **Records:** The facility records of the information related to the waste treatment operations were reviewed. The waste profile sheets and the waste acceptance checklists are retained at the Liquid Waste Processing Facilities (LWPF) Records Control Center per WMH-331, Section 3.11. All other records pertaining to the waste analysis, inspections, waste receipt, waste handling, and waste shipping were acceptable.

No issues were found.

2) Procedures: Procedures reviewed for the LERF are written as part of the FHI LWPF program. Procedures covering waste receiving, treatment operations, drum handling, drum storage, and designation of waste storage areas were up-to-date and readily accessible. The following procedures were reviewed during the ETF assessment performed the previous week, and are relevant to the LERF:

- POP-30-001, *ETF Control Room, MTT, STT, Outside Operator Rounds;*
- POP-60K-001, *Operate Waste Storage Areas;*
- POP-60K-005, *Inspect Waste Management Areas;*
- POP-60K-006, *Accept Waste Containers From Other Facilities;*
- POP-65D-001, *Ship Waste;* and
- POP-65D-003, *Package Waste.*

No issues were found.

3) Facility Contingency Plan: The facility's emergency preparedness plan was established and fire extinguishers, and emergency exit signs are in the correct locations. When at the LERF, the on-shift duty operators remain in constant communication with the control room via radios.

No issues were found.

4) Personnel Training and Qualifications: Training records indicated that the training coordinator was assigned, that all of the applicable courses were listed, and all personnel requiring training in their particular areas were current as required in the permit. The written training plan had the necessary content, training frequencies, and training techniques, but was very difficult to follow. Job descriptions were matched to the training requirements covering requisite skills, education, qualifications and duties for each position. It was clear that the training was relevant to the positions. A finding was identified that involved the six-month time limit to complete a new or transferred employee's training. The time limit was specified in the Part B permit application, and in the Project Hanford Management Contract (PHMC) HMC procedures (HNF-PROs), but not in any facility specific procedure.

This finding was attached to assessment A&E-00-ASS-070 (ETF).

According to plant staff, a sitewide project is now in the process of being confirmed with DOE to upgrade the Dangerous Waste Training Plan. This upgrade would tailor the training more to the actual work done by an individual, rather than to job title, and, in addition, the training would be conducted at their facility.

- 5) **Waste Analysis Plan:** The waste profile sheets characterized the waste prior to shipment, and contained the required information pertaining to the waste generator, the receiver, waste description, container information (if applicable), and waste quantities. Waste acceptance checklists were used to document preparations for waste receipt. The facility's use of a waste planning checklist to aid the workers in reviewing waste minimization and waste disposal requirements is a commendable practice. These checklists are part of every work package that has the potential to generate waste. The liquid waste processing, and routing of effluent from the 242-A Evaporator, to the LERF, and eventually the ETF, is controlled by the Liquid Waste Processing Facilities (LWPF) program. The LWPF utilizes the same personnel to operate the three facilities. Reviewed WMH-331, Section 3.11.

No issues were found.

- 6) **Operating Logs and Log-keeping Practices:** Logbooks (kept at ETF) were in order. The necessary entries were made in the appropriate logbook whenever waste was received, processed, moved, stored, or shipped. The logbooks also recorded safety and process equipment inspections. In an interview with a Nuclear Control Room Operator (NCO), the daily checklist was reviewed. The NCO maintained radio contact with two roving NCOs doing equipment inspection rounds, and a work crew in the facility. Several computer terminals report facility processing status.

No issues were found.

- 7) **Facility Security:** The facility has posted the correct warning signs on the outside of the facility, and at all entry points. The gate to the secured area around the LERF basins was locked. There were areas posted as radiological buffer areas.

No issues were found.

- 8) **Self and Independent Assessments:** The facility self-assessment program contained in the Administration Manual, WMP-200, Section 1.13, was reviewed. Every month, each Facility Manager and the Facility Corrective Action Management Coordinator meet with the Company Management Assessments Director as well as the Vice Presidents for Operations and Environmental, Safety and Health, and Quality Assurance to review status of deficiencies, discuss corrective action commitments, and develop company level assistance, where appropriate. The attention and time that facility and senior company management provide to the status and correction of identified deficiencies ensure a continuing awareness of facility conditions and serve as a catalyst for continuing improvement.

The Facility Evaluation Board (FEB) last completed an independent assessment in September 1998 as a follow-up to a previous assessment done in August 1997. There were no recurring issues from the 1997 FEB assessment. There were no discrepancies identified in the area of the Clean Air Act, Emergency Planning and Community Right to Know Act, National Environmental Protection Act, and Packaging and Transportation.

Since the 1998 FEB assessment, the facility's Dangerous Waste Training Plan has been implemented. Deficiencies noted with the documentation of Facility Training Matrix requirements were resolved.

The team noted that within the past year there have been no documented DOE oversight activities by either FR, or by the mission element. FR Program staff told the team that this was due to the low risk and hazard associated with the facility, and was, therefore, not included in base coverage. They also noted that this was consistent with DOE-STD-1063-2000 guidelines.

Findings and Observations

A. No Findings.

Requirements: N/A

Discussion: N/A

B. No observations

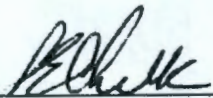
Requirements: N/A

Discussion: N/A

V. Personnel Interviewed

Roger Szelmeczka, Environmental Compliance Officer
Mark Bowman, RCRA Inspection Program

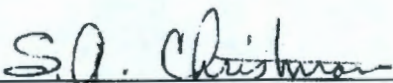
VI. Signatures



S.E. Chalk, Assessment Team Leader

11/14/00

Date



S.A. Christman, Team Member

11/14/00

Date