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Assessment Report
A&E-SEC-01-018

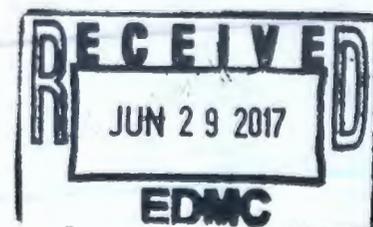
222-S Labs Environmental Compliance Assessment

Analysis and Evaluation Division

October, 2001



United States
Department of Energy
Richland Operations Office



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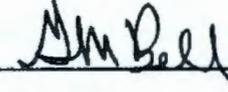
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Prepared by: S. E. Chalk
Analysis and Evaluation, Lead Assessor

Date

 26 Nov 01

Approved by: G. M. Bell
Analysis and Evaluation, Division Director

Date

EXECUTIVE SUMMARY

A Department of Energy, Richland Operations Office (RL), Analysis & Evaluation Division (A&E) assessment for environmental regulations compliance was performed at the 222-S Labs April 16, through May 1, 2001. The scope of the assessment was the contractor's compliance with the Hanford Site 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 April 11, 2001 at the 222-S Lab facility. The entrance meeting was held in conjunction with the entrance meeting for the Facility Evaluation Board's (FEB) performance-based assessment of the Analytical Services Project (ASP). The entrance meeting was attended by the A&E assessment team, the FEB members, the Fluor Hanford points of contact and subject matter experts, and the RL facility representative. The exit meeting was held on May 1, 2001 at the 222-S Labs.

The FEB assessment of the ASP included the 222-S Labs and the Waste Sampling and Characterization Facility. The RL assessment was limited to the evaluation of the Hanford Site RCRA Permit requirements for Treatment, Storage, and Disposal (TSD) units at 222-S. The specific scope of the RL assessment is a result of commitments made to the Department of Ecology (Ecology) for the sixteen TSD units on the Hanford Site. At the same time, RL was evaluating the contractor's chemical management program (CMP) at selected sites, including 222-S. Reference to the CMP assessment is included in this report, but no findings on the CMP are noted.

In order to reduce the impact on the contractor's daily work activities, the A&E assessment schedule for 222-S was accelerated to coincide with the FEB's schedule. Since this assessment was performed, in concert with the FEB environmental assessment, both groups noted the same issues related to environmental compliance. The FEB report, FEB-FY01-04, was reviewed and includes the same findings as described in this report. In general the facility meets the requirements for environmental compliance.

The assessment concluded that the overall performance of FHI in the area of LDR compliance was "green" - satisfactory. Minor issues were identified in the area of procedural compliance, the facility contingency plan, training, and log-keeping practices.

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1.0 INTRODUCTION AND SCOPE

1.1 BACKGROUND

The 222-S Lab is defined as a "Interim Status," TSD unit per RCRA and the Dangerous Waste Regulations of Washington State (WAC). The 222-S Lab is authorized to store, treat and ship 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 CFR. The 222-S Labs has submitted a Part B of the RCRA permit but it is has not been approved by the Department of Ecology.

1.2 ASSESSMENT

This assessment covers the permittee's program for compliance with the RCRA Permit requirements pertaining to the receipt, handling, storage and shipping of mixed waste at the 222-S Labs. The purpose of this assessment was to evaluate the 222-S Labs 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) and the Federal Resource Conservation and Recovery Act (RCRA), and DOE's Annual Land Disposal Restrictions (LDR) Report (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. Fulfillment of DOE 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 in 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, Fluor Hanford, Inc.) 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 222-S Labs.

2.0 METHODS

An assessment entrance meeting was held at the facility on April 11, 2001. The entrance meeting was held in conjunction with Fluor's Office of Independent Assessment's Facility Evaluation Board's (FEB) entrance meeting. The FEB was scheduled to conduct a performance-based assessment of the Analytical Services Project (ASP), which included the 222-S Labs and the Waste Sampling and Characterization Facility (WSCF). It was decided to combine the two assessments in order to minimize the impact on the 222-S Lab's daily activities. The assessment team members were identified at the entrance meeting and the purpose of the assessment and the scope of the assessment was described.

The method used for this assessment was a combination of document review, facility walkdown/inspection and interviews in accordance with A&E procedure A&E-01, "Evaluation of Contractor Performance in Meeting Waste Management Storage Requirements." 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 RCRA Permit Part B application, the Dangerous Waste Regulations (WAC 173-303), 40 CFR, RL Facility Representative 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;
- operating log and log-keeping practices;
- facility security; and
- self and independent assessments.

The Contractor Oversight and Evaluation Planning process provides the mechanism whereby RL personnel 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 M 411.1A, *Safety Functions, Responsibilities and Authorities Manual*, DOE P 450.5, *Line Environment, Safety, and Health Oversight*, and DOE O 224.1, *Contractor Performance Based Business Management Process*.

During the period of April 9-20, 2001, A&E conducted an assessment of the chemical management program (CMP) at selected sites, including 222-S. No findings related to the CMP are noted in this report. References to assessment 01-A&E-ASSMT-006, however, are made to indicate that some issues with the CMP exist in these areas.

3.0 RESULTS

3.1 GENERAL

1) General operations: The facility's general housekeeping was acceptable, appropriate warning signs inside the facility were established, the eye wash/emergency showers were present and located where they would most likely be used, spill kits were available for use and fire protection equipment was clearly marked and accessible. The personal protective equipment was appropriately staged. Radiation survey maps were current. As part of the entrance meeting and prior to the facility tour, visitor safety requirements and emergency response expectations were viewed on videotape. No issues were found.

2) Inspections: The required inspections were performed but there was evidence that performance of required daily inspections of some of the TSD storage areas were not controlled adequately and resulted in some inspection performance and record keeping problems. These inspections/records problems are discussed further in section 3.2.

Documents reviewed:

- HNF-PRO-5127, Section 2.2
- LO-150-106
- LO-100-160
- ASP-200-2.11, Section 2.0

It was determined that improvements in the area of rigorous procedural compliance are needed.

3.2 SPECIFIC

1) Records: Certain lab records had data entered by cutting and pasting from other documents. Some of the information was certifications received from procurement of chemicals, and other information was data from instrument readings. The bound databooks are not designed for insertion of these additional sheets. Improvement in the area of data recording is needed.

2) Procedures: Uncontrolled copies of procedures were present in the work areas (Lab # 2) and were used for ready reference. Although not RCRA related, this issue of compliance with standard conduct of operations requirements should not be overlooked. The CMP assessment noted several cases where procedures were lacking in the areas of :

- Chemicals not in the CMS
- Untracked vials of organic compounds
- Raw lead management
- No process for management of expired chemical standards.
- Storage cabinets and areas had problems with proper labeling and maintenance requirements.
- Issues with shipped solutions that did not meet OSHA requirements.
- Control of peroxide formers were inadequate

Improvements in the area of procedural control for chemical management are needed.

- 3) Facility Contingency Plan: The facility's building emergency plan was established but the facility did not perform well during the observed drill as part of the assessment. Periodic checks of inventories and safety equipment are not being completed as required. The locations of safety equipment do not agree with the locations specified in the Building Emergency Plan. Safety and emergency equipment were not in the specified locations.
- Fire extinguisher locations were incorrect on the duct level,
 - the safety shower was missing in room 1-G-A,
 - the safety shower was in room 1-G-C which was not listed on the emergency plan,
 - the first aid kit in room 5H was missing, and
 - the material safety data sheets were not in room 3b.
- Improvement in the area of Emergency Plan document accuracy is needed.
- 4) Personnel Training and Qualifications: Training records indicated that the training coordinator was assigned and that all of the applicable courses were listed. The training coordinator has developed a written corrective action plan to address deficiencies in the program. There were minor discrepancies in the documentation of qualifications for the management and technical staff. The Chemical Technician training program was not fully implemented. Additional issues related to training are identified in other sections of this report.
- Improvement is needed in the area of training.
- 5) Operating Logs and Log-keeping Practices: The data in some of the logbooks had been entered by taping documents or portion of documents to the logbook. The transparent tape used did not support long-term storage due to deterioration. Changes were made in some of the logbooks without the proper single lineout, initial, and date.
- Improvement is needed in the area of Log-keeping practices.
- 6) Facility Security: The facility has posted the correct warning signs on the outside of the facility and at all entry points. Doors to secured areas were locked. The main treatment and storage areas were posted as radiologically controlled areas and entry required processing through the Access Control/Entry System (ACES) station. The appropriate Radiological Work Permit (RWP) was read and signed by all members of the assessment group prior to entering the radiological areas. Hardhats and safety glasses were provided to the visitors. No issues were found.
- 7) Self and Independent Assessments: The FEB conducted a performance-based assessment of the Waste Management Laboratory, consisting of the 222-S Analytical Laboratory and the Waste Sampling and Characterization Facility, from October 26 through November 6, 1998. The FEB conducted a performance-based assessment of the Analytical Services Project from January 17 through January 28, 2000. As stated earlier in this report, the FEB was conducting a performance-based assessment at the time of this LDR assessment. Within the past year, there have been nine documented oversight activities by the Facility Representatives. No issues found.

4.0 FINDINGS AND OBSERVATIONS

4.1 FINDINGS-NONE

Requirements: N/A

Discussion: N/A

4.2 OBSERVATIONS

4.2.1 A&E-SEC-01-018-O1 CHEMICAL MANAGEMENT

Condition Noted: A comprehensive chemical management system is not complete.

Discussion: It is clear that improvement is needed in the area of procedural adequacy for chemical management. The specifics noted in this report are discussed in detail in the chemical management assessment 01-A&E-ASSMT- 006. Any further discussion on this issue would be redundant.

4.2.2 A&E-SEC-01-018-O2 FACILITY CONTINGENCY PLAN

Condition Noted: A list of all emergency equipment was not kept up to date. The emergency plan must include the location and physical description of each item on the list, (WAC-173-303-350 (3)(e)).

Discussion: The emergency equipment items mentioned in section 3.2 (3) of this report are minor discrepancies but indicate a need for a rigorous review of the drawings included in the facility emergency plan. These items were also noted in the FEB assessment report FEB-FY01-04.

4.2.3 A&E-SEC-01-018-O3 TRAINING AND LOGKEEPING

Condition Noted: FHI has minor discrepancies in their personnel training and facility recordkeeping practices, (WAC-173-303-330), and (WAC-173-303-380).

Discussion: The discrepancies noted in section 3.2 (4) & (5) are considered minor and were also noted by the FEB assessment team and documented in the FEB report FEB-FY01-04.

5.0 PERSONNEL INTERVIEWED

D.J. Hart, Facility Manager
L.E. Borneman, Environmental Compliance Officer
T.A. Brown, Operations
S.S. Mortensen, Operations
D.B. Beagles, Environmental
W.I. Winters, Technology Project Management
K.B. Wehner, Technology Project Management
D.L. Herting, Technology Project Management
B.S. Darling, Training
V.L. Locklair, Emergency Preparedness
E.D. MacA*lister, DOE-RL Facility Representative
A.B. Geppart, FEB Member
J.E. Bramson, FEB Member
R.L. Newell, FEB Member