



## EXECUTIVE SUMMARY

The U.S. Department of Energy (DOE), Richland Operations Office (RL), Analysis and Evaluation Division (A&E) performed an environmental regulations compliance assessment at Central Waste Complex (CWC) during the week of November 28, 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 and storage and disposal of mixed waste.

An entrance meeting was conducted on November 28, 2001, at the Fluor Hanford, Inc. (FHI) offices at MO-720 in the 200 West Area. The A&E Assessment Team, the FHI points of contact, and subject matter experts attended the meeting. The assessment schedule and the areas to be assessed were discussed. An exit meeting was held on December 19, 2001, at MO-720.

The assessment concluded no findings and two observations. The first observation was a "Danger" sign posting improvement on an open gate into the CWC. The second observation concerned administrative corrections needed on the facility contingency plan.

This assessment is rated as "green" - generally meets requirements. The facility is considered adequate for continued safe waste storage. The facility's management and operations demonstrate a commitment to working safely meeting DOE expectations of providing quality service to the Hanford Site.

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## 1.0 INTRODUCTION AND SCOPE

### 1.1 BACKGROUND

The CWC provides for storage for dangerous, mixed, and radioactive waste. The facility is permitted as an "Interim Status" treatment, storage and disposal (TSD) unit in the current RCRA permit. The CWC is a non-land based unit consisting of various buildings, storage modules, and storage pad. The CWC consists of the 2401-W, 2402-W, 2403-W, and 2404-W waste storage buildings, flammable and alkali metal waste storage modules, a waste storage pad, and the waste receiving and staging area. Waste that meets land disposal restriction (LDR) requirements is stored in the CWC. Containerized waste, that is not fully characterized or is awaiting sampling results, can be stored in CWC.

### 1.2 ASSESSMENT

This assessment covers the permittee's program for compliance with the RCRA permit requirements pertaining to the receipt, handling, storage, and treatment of mixed waste at the facility. The purpose of this assessment was to:

- Evaluate the facility for compliance with the Hanford Facility RCRA Permit Number WA7890008967;
- 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);
- evaluate the facility for compliance with RCRA; and
- provide information for DOE's Annual LDR Report (HFFACO Milestone M-26-01)."

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, tailored to the specific activities being performed at the CWC.

## 2.0 METHODS

An assessment entry meeting was held at MO-720 in the 200 West Area on November 28, 2001. 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 assessment was conducted using the process of A&E Procedure A&E-01, "Evaluation of Contractor Performance in Meeting Waste Management Storage Requirements."

The method used for this assessment was a combination of document review and interviews. The inside and outside of the facility was inspected and regulatory documents were reviewed to develop the areas of primary focus for the assessment. The documents used to develop the checklist for the assessment included the Hanford Facility RCRA Permit Number WA7890008967, DOE/RL-90-24, Revision 7, "Hanford Facility Dangerous Waste Permit Application," as applicable to CWC, 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 log-keeping practices;
- facility security; and
- self (management and independent) assessments.

The RL 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' management and independent assessment 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."

## **2.1 ASSESSMENT TEAM MEMBERS**

Steve Chalk of the RL A&E Division led the assessment and Dave Roha was a team member.

## **3.0 RESULTS**

### **3.1 GENERAL**

1. General operations (Permit Section II.O): The facility's general housekeeping was maintained. There was no evidence of discarded waste containers, remains of labels or residual waste equipment, or unpermitted waste discharges. The facility is considered adequate for continued safe waste storage. Documents reviewed:

- Weekly Surveillance Data Sheets.

No issues were found.

2. Inspections (WAC-173-303-320): There was a written facility inspection plan with specified frequencies. Evidence was present that indicated the periodic operator rounds were performed and documented as required. In addition, the annual fire protection inspection was completed as required. The fire protection inspection identified issues for which corrective actions were developed and acceptably closed. Documents reviewed:

- SW-040-043, Revision D-7, "Inspect Central Waste Complex and Sodium Storage Building;" and
- WMP01-SW-GA-FB-263, August 2001, "Fire Protection Facility Assessment."

No issues were found.

### 3.2 SPECIFIC

1. Facility Records (WAC-173-303-380): The facility records of the data related to the inspections were reviewed at the Unit Specific Operating Records area in Trailer 720, 200W. Other documents reviewed:

- SW-040-043, Revision D-7, "Inspect Central Waste Complex and Sodium Storage Building."
- facility operations logbook.

No issues were found.

2. Procedures (WAC-173-303-320 (1)(2)): Procedures for Central Waste Complex covering waste handling and facility maintenance were reviewed. Document reviewed:

- SW-040-051, Revision C-2, "Cold Weather Protection Plan;"
- SW-100-040, Revision D-2, "Receive, Unload and Reassemble 3-82B Transport Cask;"
- SW-100-095, Revision D-3, "Overpack Containers;"
- SW-100-134, Revision A-0, "Packaging Waste in SWSD;" and
- SW-100-143, Revision A-1, "Management of Solid Waste in CWC."

No issues were found.

3. Facility Contingency Plan (WAC 173-303-340 & 350): The facility's emergency preparedness plan was established. Document reviewed:

1. HNF-IP-0263-CWC, Revision 7, "Building Emergency Plan for Central Waste Complex."

Observation: Administrative errors were identified in the paragraph 9.3 table. The information in the table was not appropriate for the heading. For example, "evacuation" was listed under "location" heading on the table. The information under the other table headings was also incorrect.

4. Personnel Training and Qualifications (WAC-173-303-330): Training records indicated that the training coordinator was assigned, that applicable courses were listed, and 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. 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. Documents reviewed:
- RCP-8884, "River Corridor Project, 200 Area Deactivation Project, Dangerous Waste Training Plan (DWTP);" and
  - training records for two Nuclear Chemical Operators (NCOs) that had completed recent facility quarterly inspections.

No issues were found.

5. Waste Analysis Plan (WAC-173-303-300): The A&E assessment team evaluated the program for waste shipments to the TSD facilities managed by Waste Management Project (WMP) and reviewed the records for shipments from Pacific Northwest National Laboratory (PNNL) during the years of 1996 through 1997. The PNNL shipments included low-level waste, low-level mixed waste, and transuranic mixed waste.

The WMP verification program for waste container receipt is intended to ensure that waste shipments meet the conditions identified in the receipt facility's waste acceptance plan (WAP). Waste transferred from an on-site or off-site TSD facility will be subject to verification in accordance with WAP guidelines. In addition, waste that is shipped to a generator or TSD facility outside of the WMP complex and then subsequently returned (whether treated or not) will be subject to the verification as described in the WMP Generator Services Procedures.

The verification process consists of a screening program that includes identifying the physical and chemical aspects of the waste. The results obtained provide confidence that the waste verified and/or surveilled is as expected, meets the necessary acceptance specification, and can be safely stored, treated, or disposed of at the designated receipt facility. The verification team lead selects containers either randomly or selectively if an

issue or reason developed during portfolio review to warrant verification of specific containers. As required by the WAP, a percentage of waste containers sent from each generator is required to be verified.

A performance evaluation system (PES) is used to determine initial physical screening frequency of each generator and is the process utilized to discuss and document when a waste is deemed nonverifiable. The PES requires the TSD Acceptance Representative to review the generator's Waste Profile Sheet to determine the waste stream for that shipment and with others on the PES team, establish the initial physical screening frequency. Nonverifiable containers, that cannot be physically verified, are put through an extensive documentation review of the applicable waste stream. At a minimum, this will include the procedure used to segregate and package the waste, and process the knowledge documentation and sampling and analysis data used to characterize the waste. The PES team will determine if the characterization data and the segregation/packaging procedures provide reasonable assurance that the waste is properly designated and meets the TSD unit's acceptance criteria.

The results of the review concluded that 63 waste shipments were made from PNNL in the 1996-97 time frame, consisting of 443 containers. Of the 443 containers, 259 containers were verified, and 77 containers failed (and were returned to the generator). The failed containers consisted of noncompliant items such as:

- Light bulbs;
- H<sub>2</sub>O;
- incompatible materials;
- excessive void space;
- liquids;
- misc. Lead; and
- misc. prohibited materials and debris

In all cases, staff from the WMP "Waste Services" group were used to perform the verification activities. After reviewing several shipment portfolios and interviewing WMP staff who were involved in the process during that time period, the team concluded that the system in use in the 1996-97 time frame was adequate to achieve the desired results of controlling the unauthorized shipment and storage of certain materials deemed prohibited by the state and Federal regulations.

Other document reviewed:

- HNF-1886, Revision 1, "Central Waste Complex Waste Analysis Plan." dated January 2000.

No issues were found.

6. **Operating Logs and Log-keeping Practices (WAC-173-303-320 (2)):** The operations log that is used for the CWC and the Low Level Burial Grounds (LLBG) was reviewed. The logbook appeared to be in order and all of the entries were clear and concise. The proper initials and management reviews were present. All cross-outs were correctly dated and initialed.

No issues were found.

7. **Facility Security (WAC-173-303-310):** Facility surveillance sheets were reviewed. The facility has posted the correct warning signs on the outside of the facility and at all entry points.

Observation: There was a sign posted on the gate to the CWC/LLBG office trailer that was not readily visible when the gate was open. An additional sign should be posted on the fence adjacent to the gate opening so that it would be readily visible to personnel entering the facility boundary. Other non-routine entry doors and gates were appropriately secured/locked.

8. **Self (management and independent) Assessments (DOE P 450.5):** The assessment team identified that there were three contractor (management) self-assessments performed during the previous 12 months. The contractor deficiency evaluation group assessed the results from the assessments, determined the root causes and specified the corrective actions. All corrective actions have been completed.

The team noted that within the past year there have been 12 independent DOE oversight activities by the FR. The FR surveillances resulted in seven findings, four observations, and one concern. Although the surveillances were not directly related to LDR oversight activities, the number of FR surveillances demonstrates an appropriate level of RL oversight of contractor programs and daily activities.

No issues were found.

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## 4.0 FINDINGS AND OBSERVATIONS

### 4.1 NO FINDINGS WERE IDENTIFIED

### 4.2 OBSERVATIONS

#### **Observation A&E-SEC-02-001-O-001- Facility boundary posting needs improvement.**

The WAC requires that warning signs be posted so they are visible at 25 feet from site boundary. However, a warning sign posted on the gate to the CWC/LLBG office trailer, MO-288, was not readily visible because the gate was open. An additional warning sign should be posted on the fence adjacent to the gate opening so that it would be readily visible to personnel entering the facility boundary.

#### **Observation A&E-SEC-02-001-O-002- Administrative improvements needed in facility contingency plan.**

Administrative errors were noted in the paragraph 9.3 table. The information in the table was not appropriate for the heading. For example, "evacuation" was listed under the "location" heading of the table. The information under the other headings of the table was also incorrect. In addition, the information discussed in the table was not consistent with similar equipment that is listed in the LLBG contingency plan (e.g. cell phones/radios are used for communication at CWC but are not listed).

## 5.0 PERSONNEL CONTACTED

D. G. Saueressig, ECO/FHI  
D. E. Faulk, ECO/FHI  
P. J. Crane, Environ. Mgr./FHI  
R. A. Monlux, NCO/FHI  
F. S. Hubbard, OPS/FHI