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U.S. Department of Energy, Richland Operations Office and the
Office of River Protection

B Plant Complex Environmental Compliance Assessment

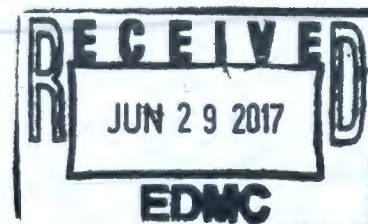
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B Plant Environmental Compliance Assessment

Executive Summary

The U.S. Department of Energy, Richland Operations Office (RL), Analysis and Evaluation Division (A&E) performed an environmental regulations compliance assessment at B Plant December 11 through 15, 2000. 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 December 11, 2000, at Bechtel Hanford, Inc. (BHI), 3350 George Washington Way, Richland, Washington 99352. The A&E assessment team and the BHI points of contact and subject matter experts attended the meeting. The assessment schedule and areas to be assessed were discussed. An exit meeting was held in Richland, Washington at the Federal Building on January 17, 2001.

The assessment concluded no findings and no observations.

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 of the facility RCRA permit that were reviewed by the assessment team were acceptably met.

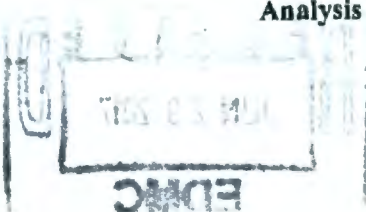


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I. INTRODUCTION AND SCOPE

A. Background

The B Plant Complex was constructed in 1943, and was initially used for the recovery of plutonium using a bismuth phosphate chemical separation process. In the early 1960's the plant process was modified for the recovery and purification of cesium and strontium. The B Plant underwent a transition process where operations ceased and the plant was decommissioned. Past process solutions, wastes, and other material were removed from the plant. Solid mixed waste consisting of failed canyon process equipment, jumpers, and lead shielding materials remain in the containment storage area of the plant. There are no dangerous waste generating activities at B Plant, and no waste is received for treatment, storage, or disposal.

The B Plant Complex is defined as an "Interim Status" treatment, storage, and disposal (TSD) unit in the current Hanford Facility RCRA permit. B Plant is in the surveillance and maintenance (S&M) phase, pending final disposition. The S&M mission is to safely maintain control of the hazardous materials at B Plant until entry into the next phase of plant operation (i.e., decontamination and decommissioning [D&D]) begins. The S&M mission involves surveillance and maintenance activities of the active and passive B Plant structures, systems, and components (SSCs). The principle hazards at the B Plant are related to the inventory of residual radioactive material as stated above. Significant quantities of residual radioactive materials remain in the B Plant Canyon 221-B, and in the retired filter vaults.

B. 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 B Plant. The purpose of this assessment was to evaluate B Plant for compliance with the Hanford Facility RCRA Permit Number WA7890008967, and to meet a commitment of the State of Washington 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), RCRA, DOE's Annual 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 in which management and workers need to improve on their ability to perform on the mission and achieve managements goals.

Third party assessments are conducted by DOE to evaluate the total picture of how well the Hanford contractors (in this case, BHI) 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 B Plant.

II. METHOD

An assessment entry meeting was held at BHI on December 11, 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 and interviews. Since the B Plant canyon is closed off for the S&M phase, and entries are made only on a quarterly basis, no walkdowns were conducted by the assessment team. The 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 Part A permit application HNF 3358, "B Plant Surveillance and Maintenance Phase Safety Analysis Report," 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."

III. RESULTS

A. General

1. **General Operations (Permit Section II.O):** The facility's general housekeeping was maintained, appropriate warning signs inside the facility were established, and fire protection equipment was clearly marked and accessible.

There was no evidence of discarded waste containers, remains of labels or residual waste equipment, or unpermitted waste discharges. The personal protective equipment was present, appropriately staged, and was provided to the visitors. Prior to the facility tour, visitor training was provided to review visitor safety requirements and emergency response actions.

Documents reviewed were:

- OOOOX-SSHS-G0001, "Surveillance, Maintenance and Testing (SM&T) Site Specific Health and Safety Plan"; and
- 0221B-SSHS-G0001, "221-B Building and Ancillary Facilities Area Site Specific Health and Safety Plan."

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 daily operator rounds for the weekly, monthly, and quarterly health and safety inspections and annual uninterruptible power supply inspections were performed and documented as required.

Documents reviewed were:

- EE-02, Rev. 5, "Surveillance and Maintenance of B Plant in accordance with DOE/RL-99-24, Rev. 0"; and

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- WMI-SM&T-001, "SM&T Surveillance and Maintenance of Waste."

No issues were found.

B. Specific

1. Facility Records (WAC-173-303-380): The facility records of the data related to the weekly readings of monitoring equipment, the quarterly (walkabout) inspections, the annual roof walkdown, and the annual passive ventilation draw test were reviewed. No issues were found.
2. Procedures (WAC-173-303-320 (1)(2)): Procedures for B Plant covering waste and facility surveillance and maintenance were reviewed.

Procedures reviewed were:

- BHI-EE-02, Rev 5, "Surveillance and Maintenance of B Plant in accordance with DOE/RL-99-24, Rev. 0"; and
- WMI-SM&T-001, "SM&T Surveillance and Maintenance of Waste."

No issues were found.

3. Facility Contingency Plan (WAC 173-303-340 & 350): The facility's emergency preparedness plan was established, and fire pull boxes, fire extinguishers, etc., were noted. The facility uses cell phones or radios for communications for emergency notifications.

Documents reviewed were:

- BHI-SH-03, Vol. 4, Emergency Management Program, Section 2.0, "200 Areas S/M&T Project Emergency Action Plan"; and
- 0221B-SSHS-G0001, "221-B Building and Ancillary Facilities Area Site Specific Health and Safety Plan."

No issues were found.

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.

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Documents reviewed were:

- BHI-HR-02, "ERC Training Procedures," TSD/Accumulation Area Training;
- BHI-FS-01, Field Support Admin. Procedure 1.1, "Access Control and Administration for ERC Surplus Facilities"; and
- B-200-002, Rev. 1, "Operation of the B Plant Canyon Exhaust System."

No issues were found.

5. Waste Analysis Plan (WAC-173-303-300): The Waste Analysis Plan (WAP) was reviewed. There are no dangerous wastes generated and no dangerous waste received at B Plant for treatment, storage, or disposal.

Document reviewed was:

- BHI-01328, "Waste Analysis Plant B Plant."

No issues were found.

6. Operating Logs and Log-keeping Practices (WAC-173-303-320 (2)): The B Plant logbooks from operations and radiation control were reviewed and found acceptable. The necessary entries were made in the appropriate logbook whenever safety and process equipment inspections and radiation protection activities were performed.

Documents reviewed were:

- BHI-FS-04, Vol. 1, "Ventilation System Surveillance Data Sheets"; and
- Job No. 673, "B Plant ACT Unit Background Radiation Readings."

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. The doors and gates to the secured areas were locked. No issues were found.
8. Self-Assessments (management and independent) (DOE P 450.5): The assessment team found that there was no contractor self-assessments (management) performed during the previous 12 months. The assessment team concluded that BHI has not performed recent management

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assessments due to the low risk and hazard associated with the facility, and that the facility was current with the Safety Analysis Report related surveillances and their own "Compliance and Quality Programs" assessment schedule.

The team noted that within the past year there have been six independent DOE oversight activities by the FRs, although none of the surveillances was related to LDR oversight activities. The FR surveillances and results are listed as follows:

Surveillance S-00-OOD-B PLANT-001: Documented the removal of the damaged portion of the B Plant Canyon Exhaust System (W-059). No adverse findings were identified.

Surveillance S-00-OOD-B PLANT-002: Documented the removal and replacement of the nine pre-filters, and three of the nine primary High Efficiency Particulate Air (HEPA) filters in air cleanup train (Act-002) of the B Plant Canyon Exhaust system (W-059). One adverse finding was recorded that involved failure to provide adequate protection for an electrical extension cord passing through a doorway.

Surveillance S-00-OOD-B PLANT-003: Documented the results of monitoring the installation and testing of new ductwork, system re-start, discovery of cracks in the ductwork, and removal and replacement of ACT-001 filters for W-059. One adverse finding was identified that involved failure to walkdown, or otherwise adequately validate a procedure requirement.

Surveillance S-00-OOD-B PLANT-004: Documented the first annual test of the passive vent system for the retired B Plant Canyon Exhaust System filter vaults. The surveillance also covered the testing to determine the cause of the cracked ductwork, and aerosol testing to ascertain the efficiency of the first of two trains of HEPA filters associated with the W-059 system. The one adverse finding was a worker protection issue involving the use of personal protective equipment that was not specified on the radiation work permit.

Surveillance S-00-OOD-B PLANT-005: Documented the repair of the cracked ductwork associated with the W-059 system. One finding was noted in the area of construction safety that involved an electrical extension cord.

IV. FINDINGS AND OBSERVATIONS

A. No Findings.

Requirements:

N/A

Discussion:

N/A

B. No Observations.

Discussion: N/A

V. PERSONNEL INTERVIEWED

R. L. Henke, Operations Supervisor, BHI
D. R. Byers, Surveillance, Maintenance & Facility Transition, BHI
C. J. Kemp, Environmental Compliance Officer, BHI
M. G. Wininger, Training Coordinator, BHI
J. G. Gilley, Operator, BHI
J. D. Showman, Field Engineering, BHI

VI. SIGNATURES



S. E. Chalk, Assessment Team Leader

2/22/01
Date



D. W. Roha, Team Member

2/22/01
Date