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DNF SAFETY BOARD

Department of Energy
Washington, DC 20585
February 29, 2000

Mr. John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, N.W.
Suite 700
Washington, D.C. 20004-2901

Dear Mr. Chairman:

Thank you for your letter of December 1, 1999, regarding the Hanford 233-S Plutonium Concentration Facility. Your three issues concerning hazard identification and analysis were reviewed by the staffs of Bechtel Hanford, Incorporated (BHI), the U.S. Department of Energy, Richland Operations Office, and my office. While I understand these concerns were addressed briefly during your visit to the Hanford Site on December 9,1999, I have enclosed full responses to your concerns.

I want to assure you that the Department and BHI share your appreciation for the hazards associated with the uncertain environment of decommissioning activities and wish to avoid unnecessary risks to worker health and safety. The lessons learned from the events at 233-S and your comments will contribute towards the continuous improvement of safety at our hazardous materials sites.

Sincerely,

Carolyn L Huntoon

Carolyn L. Huntoon
Assistant Secretary for
Environmental Management

Enclosure

cc:
Keith Klein, Manager
Richland Operations Office

Mark Whitaker, Jr.
Departmental Representative
to the Defense Nuclear
Facilities Safety Board

ISSUES IN DNFSB LETTER

(1) What actions will be taken by Bechtel Hanford, Inc. (BHI) to correct and improve procedures for identifying and characterizing hazards early in the decommissioning process, thus minimizing risks to the workers and public?

BHI has reviewed its policies, procedures, and safety resources for identifying and characterizing hazards early in the decommissioning process. The review concluded the current safety management system and process is adequate for safe performance of BHI activities based on the following considerations. The work planning and control process identifies hazards, defines the safety parameters, provides margins for uncertainty, and includes embedded requirements for verification of conditions before initiating Decontamination and Decommissioning (D&D) work tasks. The work control process is considered protective of the worker and the public during initial phases (e.g., sampling and characterization activities) as well as during the decommissioning activities.

However, RL and BHI recognize there is room for improvement in BHI's current work planning process for hazard identification and analysis at the activity-level. To improve the current process, BHI has formed a multi-disciplinary task group to review the radiological work planning process. This task group is reviewing various methods for hazards identification and analysis, including those recommended by the DNFSB. Improvement efforts will also include reinforcement of management's expectations for following the established work planning process, which stresses the need for a team approach to hazards identification and control (i.e., getting the right people involved at the right time). The task group is expected to have improvement recommendations by late spring. RL will closely monitor the task group recommendations and implementation of improvements in the early identification and characterization of hazards at the activity-level.

(2) What measures are being taken by BHI to ensure that sampling and analysis activities are conducted in a safe and timely manner to support the development of safety documentation and the identification of necessary compensatory measures during planning for decommissioning activities?

When planning entries into facilities for the purpose of sampling and characterization, BHI first gathers institutional and process knowledge to determine the type and level of hazard likely to be encountered by the entry teams. This work planning is done recognizing the degree of uncertainty associated with the knowledge of these hazards.

When planning such entries, engineering controls are selected and applied wherever feasible to minimize exposure to these hazards. Where administrative controls or personal protection equipment (PPE) are utilized, limits are written into radiological work permits, conservative assignments of PPE are used, and workers are consistently reminded of the limiting conditions for continuing work. In daily pre-job safety meetings, workers are reminded to be aware of changing conditions and their obligation to stop work when encountering conditions

that are different than what was planned. This approach has been demonstrated to be effective in protecting workers during characterization.

Where it is not possible to completely characterize a facility prior to development of the authorization basis (AB) documents, the associated hazard analysis and hazard classification are developed based on conservative data and assumptions regarding the uncertainties with the information available. The lesson learned for the 233-S Process Hood discovery is that greater evaluation of initial characterization uncertainty must be performed. This lesson will be applied to future D&D activities. The hazard analysis in the AB document identifies and evaluates the hazards, the associated preventive and mitigating features, and operational requirements that are relied upon by RL to accept risk and authorize work. Any changes to the AB baseline are evaluated and documented in a change control process. Hold points are identified in work packages to identify where additional characterization data must be obtained before work can progress. If additional hazards or unexpected conditions are encountered during the performance of work, the discovery and change control processes are invoked so that these conditions are evaluated to determine if an increase in hazard classification and revised AB documents are required.

(3) What is the status and path forward for implementation of the disposition requirements of DOE Order 430.1A, at defense nuclear facilities?

Many of the DOE Orders cancelled by DOE Order 430.1A, Life Cycle Asset Management (LCAM), are in the current BHI contract. RL is reviewing the orders in the current contract and the LCAM Contractor Requirements Document (CRD) as part of the process to include LCAM in BHI's contract. The review is intended to ensure that essential requirements of the orders in the existing BHI contract are not inadvertently eliminated when LCAM's CRD is implemented by BHI. RL intends to incorporate the LCAM CRD into BHI's contract by June 2000.

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