John T. Conway, Chairman
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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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August 14, 2001

The Honorable Jessie Hill Roberson
Assistant Secretary for
Environmental Management
Department of Energy
1000 Independence Avenue, SW
Washington, DC 20585-0104

Dear Ms. Roberson:

During the last several years, the Defense Nuclear Facilities Safety Board (Board) has followed deactivation and decommissioning activities at the Department of Energy's (DOE) Hanford Site. The Board notes that some projects at Hanford have been used to demonstrate methods, such as the deactivation end-point process, which have since been promoted for use across the complex through DOE Order 430.1A, *Life Cycle Asset Management*, and its associated implementation guides and standard. It is encouraging to see Hanford on the leading edge of some of these developments and contributing to improvements in the disposition process across the defense nuclear complex.

It has come to the Board's attention that the disposition requirements of DOE Order 430.1A have not yet been invoked in some contracts at Hanford. The Board believes that incorporation of DOE Order 430.1A, including appropriate references to the associated disposition guides and standard, in present and future contracts is an important first step toward achieving a seamless, timely, and risk-based disposition process.

The enclosed report on this issue prepared by the Board's staff is forwarded for your information and use as appropriate.

Sincerely,

John T. Conway
Chairman

c: Mr. Keith Klein
Dr. Harry Boston
Mr. Mark B. Whitaker, Jr.

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

Staff Issue Report

July 31, 2001

MEMORANDUM FOR: J. K. Fortenberry, Technical Director

COPIES: Board Members

FROM: J. W. Troan

SUBJECT: Facility Disposition Activities, Hanford Site

This report documents a review performed by the staff of the Defense Nuclear Facilities Safety Board (Board) of transition, deactivation, and decommissioning activities at the Department of Energy's (DOE) Hanford Site. This review focused on implementation of DOE Order 430.1A, *Life Cycle Asset Management*, as it pertains to facility disposition activities at Hanford; facility transition; and specific disposition activities at individual facilities. In conducting this review, the Board's staff toured portions of Buildings 224-T, 224-B, 231-Z (portions viewed by IPEX camera virtual tour), 232-Z, and 209-E.

DOE Order 430.1A. The 1998 version of DOE Order 430.1A, *Life Cycle Asset Management*, modified and added requirements for facility disposition, and added a Contractor Requirements Document (CRD) that can be applied to contractors and subcontractors. At Hanford, the Order has been invoked in some contracts, and progress is being made to incorporate it in others. In January 2001, the Order was included in the new CH2M Hill Hanford Group (CHG) contract, and the Standards/Requirements Identification Document (SRID) will be used instead of the CRD to implement the Order. The Order was incorporated into Fluor Hanford's new contract, but it was subsequently deleted as part of a directives reduction initiative. It is not presently referenced or incorporated in the contract for the site's primary decommissioning contractor, Bechtel Hanford Incorporated (BHI). The DOE Richland Operations Office (DOE-RL) plans to incorporate a modified CRD into the Fluor Hanford and BHI contracts on or about August 15, 2001. Currently, DOE-RL is working toward a decision on the content of the modified CRD. With regard to the Fluor Hanford contract, DOE-RL intends to use a "supplemental" CRD to contractually invoke select requirements from the Order, and is contemplating requesting that the contractor consider using the Order's implementation guides. The Order's implementation guides and DOE-STD-1120-98, *Integration of Environment, Safety, and Health into Facility Disposition Activities*, are important support documents that provide an acceptable approach, offer clarification, and are helpful when implementing the Order. Given that the revised Order was issued by DOE in October 1998, progress toward implementation has been slow and not as deliberate as the staff had expected.

Facility Transition and Disposition. Facilities at Hanford are under the cognizance of one of two DOE field offices and one of several contractors at the site. Institutionalized transition programs to govern facility transfers between or within field offices do not exist in all cases. Although it did not appear that important steps were being missed, development of a more formal approach could help improve consistency, timeliness, and risk-based prioritization. CHG recently issued a facility transition program plan and is working toward its implementation. Six facilities under CHG's cognizance have been forecasted to be excess, and the DOE Office of River Protection (DOE-ORP) has provided incentives for CHG to perform selected transition activities. CHG personnel appeared to recognize areas in which improvements to the transition program are warranted and indicated that they would be working to further develop their approach.

Identification and assessment of excess facilities to support the management of disposition activities also vary across Hanford. Each field office at the site has its own Integrated Priority List, and each contractor has its own way of assessing safety hazards and prioritizing its work activities. Again, some programs appear more structured than others. A comprehensive perspective of facilities and an institutionalized approach for transfer and prioritization across the site was not apparent. The staff believes the site would benefit from a site-wide standard method for identifying, characterizing, prioritizing, transferring, and implementing disposition activities.

One issue identified by a contractor was that a large number of facilities (at least 50) may become excess to the Hanford mission by 2016, and that necessary schedule or budget information was not included in the cost-benefit estimate. This uncertainty illustrates the need to have a more comprehensive and integrated risk-based approach to life-cycle planning.

DOE-RL personnel have recognized that they do not presently implement the Facility Inventory Management System (FIMS) and Condition Assessment Survey (CAS) to the fullest extent, and are working with DOE-Headquarters to determine how to implement these programs more effectively. FIMS provides DOE and contractor personnel with on-line access to DOE facility information. It is an important asset management and planning tool for DOE-Headquarters and the field offices, and must be maintained complete and current under DOE Order 430.1A.

DOE-RL's vision for Hanford's future focuses on accelerating cleanup and restoration of the River Corridor. The River Corridor consists of the 100 Area, where DOE and its predecessor agencies operated plutonium production reactors; the 300 Area, where fabrication of production reactor fuel and associated laboratory operations were conducted; and the 600 Area, which consists of open spaces adjacent to the 100 and 300 Areas. DOE-RL's approach is expected to achieve results in some areas earlier than would be the case under existing plans and result in cost savings. Two major projects target restoration and closure of portions of these areas by the end of 2012. However, this effort will require delaying disposition activities in other areas.

Studies have been done to identify risks, opportunities, and strategies to support the acceleration of River Corridor activities. Currently, the contractor's opinion is that the benefit of accelerating cleanup and restoration of the River Corridor outweighs the increase in life-cycle costs that will result from deferring work in the Central Plateau, and that the risks associated with maintaining a number of excess contaminated facilities are low enough to allow safely deferring some deactivation and decommissioning activities in the 200 Area.

At the time of the staff's review, near-term characterization of suspected hazards at 224-T and 231-Z, decommissioning of 233-S facilities, and mortgage reduction and roof replacement at select facilities were expected to continue. For example, efforts to begin characterization of Building 224-T continue, and entry into E-Cell was recently accomplished. The contractor has also accelerated planning efforts for dispositioning the Plutonium Finishing Plant (PFP). In an effort to reduce PFP's projected budget requirements, various options for the disposition schedule have been identified. The planned approach accelerates the removal of special nuclear material holdup from the PFP facilities and allows for the processing of holdup material in accordance with DOE's Implementation Plan for the Board's Recommendation 94-1, *Improved Schedule for Remediation in the Defense Nuclear Facilities Complex.*