

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

March 7, 1997

TO: G. W. Cunningham, Technical Director
FROM: P.F. Gubanc & D.G. Ogg, Hanford Site Representatives
SUBJECT: Activity Report for Week Ending March 7, 1997

A. Tank Sampling Curtailment: Since Fall 1996, some DOE-RL staff have questioned the adequacy of the existing TWRS authorization basis (AB) for push mode sampling. Recently, DOE-RL also became concerned with how TWRS was conducting its unreviewed safety question (USQ) process. On Thursday, February 27, these concerns reached a head when DOE-RL formally placed a hold on tank intrusive push-mode sampling activities. DOE-RL subsequently issued a letter on March 1 that provided further direction to the contractor. After extensive discussions with DOE-RL and Lockheed Martin Hanford Co. (LMHC), we have discerned the following:

1. DOE-RL's March 1 letter vacated the existing AB for push-mode sampling and replaced it with one specific analysis which inadequately addresses the known hazards. Additionally, DOE-RL's letter restricts the technical references which may be used for USQ determinations. The contractor strongly disagrees.
2. DOE-RL's interest in this subject shows dramatic improvement from two years ago (e.g., tank criticality). Unfortunately, resolving these questions took on an urgency which compelled DOE-RL senior management to take precipitous action.
3. The existing TWRS Interim Safety Basis (ISB) is known to be flawed and difficult to deal with. Its replacement, the TWRS Basis for Interim Operation (BIO), is a major improvement, is approved, but has not yet been implemented. BIO implementation will probably be delayed since the same DOE-RL and contractor resources are instead addressing the ISB questions.
4. The net outcome of this effort will probably be a significantly improved understanding of the ISB and TWRS USQ process by all concerned, minor modifications to the ISB and TWRS USQ process, and several weeks of lost time for push-mode core sampling.

LMHC is expected to provide a written response and recovery plan to DOE-RL on March 7. We will continue to closely monitor efforts to resolve this matter.

B. 233-S Safety Documentation: The 233-S Plutonium Concentration Facility, is an inactive, surplus facility in the Bechtel Hanford, Inc. (BHI) program for surveillance and maintenance. DOE-RL and BHI plan to use the decommissioning of the 233-S Facility as a pilot project for the integration of DOE nuclear safety guidelines and the process set forth by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). The latest estimates from BHI indicate the facility contains approximately 1.6 kg of plutonium, neptunium and americium.

The CERCLA process requires an Engineering Evaluation/Cost Analysis (EE/CA) that presents remediation alternatives for removal actions such as the D&D of the 233-S Facility. DOE-RL issued the EE/CA for the 233-S Facility, DOE/RL-96-93, in January 1997, and the public comment period closed in February 1997. DOE-RL and the EPA have chosen decontamination and demolition of the 233-S Facility as the selected removal alternative. This selection will be documented in an action memorandum to be issued this month.

Currently, the 233-S facility does not have a clearly defined authorization basis. Identification and analysis of facility hazards and identification of controls for those hazards are to be included in a Remedial Design Report (RDR) required by the CERCLA process. Because CERCLA is not well suited to address nuclear safety, the

233-S pilot project will incorporate DOE requirements for nuclear safety (e.g. criticality safety) into the RDR. BHI issued the final draft of the 233-S RDR to DOE-RL for review on March 5th. The site representatives, with the assistance of other Board staff will continue to follow this effort and ensure that all hazards, and controls for those hazards, are appropriately identified.

C. Canister Storage Building (CSB) Construction: On March 6th, the site representatives toured the CSB construction site with the DOE-RL project manager for CSB construction. The constructor, Mowat, is currently focusing its efforts on the ventilation system intake and exhaust stacks which are considered part of the deck structure. Mowat is slightly behind schedule, but DOE-RL estimates that work on the superstructure will begin the first week of April.

As the result of a number of minor but recurring instances of Mowat field work not conforming to the engineering drawings, Duke, with the concurrence of DOE-RL, has required Mowat to complete an independent surveyor's check on all form work and rebar positions prior to all future placements of concrete.

cc: Board Members