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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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95-0004446



September 5, 1995

The Honorable Thomas P. Grumbly
Assistant Secretary for Environmental Management
Department of Energy
Washington, D.C. 20585

Dear Mr. Grumbly:

Members of the Defense Nuclear Facilities Safety Board's (Board) staff recently visited the Hanford site to review the implementation of Recommendation 93-4, particularly focusing on the development and use of the Department of Energy Richland Operations Office (DOE-RL) Technical Management Plan (TMP). Enclosed for your information and use is a trip report prepared by our staff as a result of their review.

The Board's staff found that the DOE-RL TMP does not comply with the Implementation Plan for Recommendation 93-4 nor does it meet the intent of the recommendation. Specifically, the TMP fails to identify the requirements for DOE's technical management of the Hanford environmental restoration contractor. Without an effective TMP or similar safety management plan, the intent of the recommendation is not met. Mr. Daniel Ogg of the Board's staff will be available to provide any additional information you may require.

Sincerely,

A handwritten signature in black ink, appearing to read "John T. Conway".

John T. Conway
Chairman

c: The Honorable Tara O'Toole
Mr. Mark Whitaker
Mr. John Wagoner
Mr. James Owendoff

Enclosure

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

August 15, 1995

MEMORANDUM FOR: G. W. Cunningham, Technical Director

COPIES: Board Members

FROM: Daniel G. Ogg

SUBJECT: Implementation of Recommendation 93-4 - Richland Operations Office Technical Management Plan, Report of Site Visit, August 1-3, 1995

- 1. Purpose:** This memorandum documents the results of a Defense Nuclear Facilities Safety Board (Board) staff visit to Hanford. The review focused on the implementation of Recommendation 93-4 and the development and use of a Technical Management Plan (TMP) at the Department of Energy Richland Operations Office (DOE-RL). The review team included staff members Daniel Ogg and Paul Gubanc.
- 2. Summary:** The Board's staff found that the DOE-RL TMP is not consistent with the Implementation Plan for Recommendation 93-4 and does not meet the intent of the recommendation. Specifically, the TMP fails to identify the requirements necessary for DOE's technical management of the environmental restoration contractor, Bechtel Hanford, Inc. (BHI). DOE-RL Environmental Restoration (DOE-RL/ER) personnel demonstrated a poor understanding of Recommendation 93-4 and have done little to effectively implement the TMP. The Board's staff also found that the technical capabilities and involvement of DOE-RL/ER personnel are inadequate to allow for sound technical management of BHI.
- 3. Background:** The Hanford environmental restoration contractor, BHI, began work at Hanford in the summer of 1994. The scope of their work includes decontamination and decommissioning of the N-Reactor and related facilities, dismantling contaminated structures such as the 183-H solar evaporation ponds and reactor effluent retention tanks. Other work includes groundwater remediation, soil remediation, and construction and operation of the Environmental Restoration Disposal Facility (ERDF).

The DOE-RL TMP was originally issued in June 1994 in response to Recommendation 93-4 and is scheduled for an annual update, to be completed by September 1995. During a June 1995 meeting held between the Board's staff and a representative of DOE-RL, it was learned that the DOE-RL TMP was not being implemented in accordance with the 93-4 Implementation Plan.

4. **Discussion:** Weaknesses in the DOE-RL/ER organization were evident to the Board's staff in several areas relative to the TMP and the management of the environmental restoration contractor at Hanford. Prominent among these weaknesses were a noted lack of technical and managerial capabilities, a lack of understanding of Recommendation 93-4, and a lack of effective implementation of the assessment program set forth by the TMP.

- a. DOE-RL/ER Technical and Managerial Capabilities: The Board's staff noted evidence that the DOE-RL/ER staff lacked the expertise and management involvement to effectively manage BHI. The DOE-RL/ER organization relies heavily on General Support Services Contractors (GSSC) for performance of assessments and technical oversight activities. About half of all assessments completed for DOE-RL/ER in the last year were done by GSSC personnel. In a November 1994 self assessment of the implementation of the TMP, a DOE-RL/ER assessor found that, "Management involvement in the assessment assignment process is essentially nonexistent In reality most of the initial surveillance assignments were made by the General Support Services Contractor and not by DOE-RL/ER management." According to DOE-RL/ER records, no follow-up or corrective action was taken to address this finding.

DOE-RL/ER field oversight of the contractor was also found to be erratic and infrequent. For example, prior to this visit, the cognizant DOE-RL/ER project manager and engineer had not toured the N-basin contaminated work areas since June 1, 1995, when the Board's Hanford Site Representative performed a tour. Conversations with Washington State Department of Ecology personnel, DOE Environmental, Safety and Health Resident Inspectors, and a representative of the Environmental Protection Agency, Region 10 confirmed staff observations regarding DOE-RL/ER abilities. Based on their personal observations, all of these representatives echoed the concern that DOE-RL/ER personnel lacked program management training and qualifications and technical background to effectively manage the activities of BHI. Additional examples of DOE-RL/ER's poor performance are included in Attachment 1.

- b. Implementation of Recommendation 93-4: The DOE-RL TMP does not comply with the Implementation Plan for Recommendation 93-4 and does not meet the intent of the Recommendation. Specifically, the Recommendation requires that the TMP include "identification of policies, practices, Orders, and other key instructions that represent a basic framework to be used in DOE technical management of the contractor . . ." The TMP fails to identify all requirements that apply to DOE. For example, no specific reference is made to DOE requirements found in DOE Orders, and DOE-RL/ER personnel acknowledged that they had made no attempt to identify such requirements as they had focused on requirements that applied to the contractor.

The DOE-RL TMP fails to establish a system within the DOE-RL/ER organization that would create an integrated and well organized safety management program to guide DOE in its technical management of BHI. Without an effective technical management

plan or similar safety management plan, the intent of the Recommendation cannot be met.

- c. DOE-RL TMP Assessment Program: Although the standards base from which the TMP was developed was found to be incomplete, DOE-RL/ER management had made an attempt to establish an assessment program. This assessment program was appropriately geared toward assuring that the contractor was in compliance with its identified requirements. However, the assessment program itself was based on reviews and surveillances that DOE-RL/ER considered appropriate for inclusion, not on the content and significance of requirements found in DOE Orders. In practice, the assessment program was found to be poorly implemented, not on schedule, and lacked follow-up and corrective action.

The Board's staff reviewed all DOE-RL/ER assessments of BHI, both scheduled and unscheduled, that were completed in the last year. Of nineteen reported assessments, one was a self assessment of DOE-RL/ER implementation of the TMP, and most of the remaining eighteen were short duration surveillances. Nine of the assessments were actually conducted by DOE-RL/ER personnel, while the other ten were conducted by GSSC personnel or the DOE-RL Performance Assurance Division. Over 45 assessments were scheduled by DOE-RL/ER to be conducted in the first half of CY 1995, but just nine of the those assessments were actually completed.

The same DOE-RL/ER self assessment, cited above in 4.a, found that none of the four assessments scheduled for the fall of 1994 had been completed and that, "There does not appear to be consistency or obvious rationale for the disparity of frequencies of audits, surveillances, compliance assessments, and self assessments." Again, follow-up or corrective action to address these findings was not evident.

In discussions about the performance of assessments, DOE-RL/ER personnel acknowledged a lack of expertise in many of the technical areas to be assessed. Their proposed solution to this problem was to enlist the assistance of BHI to perform combined assessments of BHI activities. This plan of action would appear to exacerbate DOE-RL/ER's current over-dependence on BHI's explanations and interpretations of BHI's performance.

5. **Future Staff Reviews:** The staff will continue to review the efforts of DOE-RL and BHI during the conduct of environmental restoration activities at Hanford. Additional emphasis is also expected to be placed on the continued development of the Technical Management Plan or equivalent Safety Management Program at DOE-RL and other sites.

Examples of Poor DOE-RL/ER Performance

1. In October 1994, BHI placed a hold on a work activity due to poor radiological work practices identified by the Board's Hanford Site Representative. The cognizant DOE-RL/ER Project Manager acknowledged that she did not understand the concern as she had no prior experience or training in radiological controls.
2. In recovering from the above work stoppage, BHI three times attempted to correct radiological procedure deficiencies. Each time, the DOE-RL/ER Project Manager and Division Director attested to the adequacy of these corrective actions, but the first two attempts failed when it was found that the BHI procedures still did not conform with the referenced technical basis.
3. The DOE-RL/ER Facility Representative has not participated formally in the DOE-RL Facility Representative program despite being assigned to his position for two years. He acknowledged he does not have the background or training to readily complete the DOE-RL Facility Representative program in the suggested twelve month period. He also acknowledged that the Board's Hanford Site Representative had spent more field time with him (6 hours) than any DOE-RL/ER Division Director.
4. In a July 1995 meeting with the Board's Hanford Site Representative, the DOE-RL Assistant Manager for Environmental Restoration acknowledged that few of her staff understood their jobs adequately.
5. In less than five weeks, three BHI workers were injured in similar accidents involving high pressure abrasive blasting equipment (two injuries to the face). After the first two events, DOE-RL/ER personnel were aware only that the events had occurred, not of their circumstances or severity. The critique for the third event was not attended by DOE-RL despite the presence of the DOE-RL/ER Facility Representative at the job site.
6. Until questioned by the Board's Hanford Site Representative, DOE-RL/ER personnel did not routinely attend BHI critiques of significant events or accidents. BHI's management policy had been not to invite DOE to these critiques; a policy not objected to by DOE-RL/ER even when BHI openly stated so.
7. On August 2, during the Board staff review, BHI's understanding of worker qualifications was identified as deficient. As of August 10, DOE-RL/ER had not taken definitive action to compel BHI to address this deficiency. This concern is now being actively pursued by BHI in direct response to inquiries from the Board's Hanford Site Representative and the DOE-RL Office of Training.