

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

April 11, 1995

MEMORANDUM FOR: G.W. Cunningham, Technical Director

COPIES: Board Members

FROM: J. Kent Fortenberry

SUBJECT: Trip Report - Review of the Department of Energy - Richland Operations Office (DOE-RL) Oversight of DOE Order 5480.21, *Unreviewed Safety Questions*, March 28, 1995

- 1. Purpose:** This report documents a review of DOE-RL's progress in improving its monitoring and oversight of the Unreviewed Safety Question (USQ) process.
- 2. Summary:** In August 1993 the Board noted⁽¹⁾ that changing missions and transition activities make the USQ process especially important for maintaining an appropriate safety envelope. The Board also noted⁽¹⁾ a lack of monitoring and oversight of the USQ process by the Richland Operations Office. DOE-RL acknowledged⁽²⁾ these deficiencies and identified specific actions to correct them. Even so, during the eighteen months since these deficiencies were identified, little progress has been made in strengthening DOE-RL's monitoring and oversight of contractor USQ activities.

In the meantime, incidents at the Hanford Site continue to illustrate the absence of an effectively implemented USQ process. At the High Level Waste Tank Farms, an engineer recently changed an operating procedure to allow operation of a push mode core sampler with an inoperable bottom detector.⁽³⁾ The bottom detector is tied into a hydraulic safety interlock designed to prevent penetration through the bottom of the waste tank. At the Plutonium Finishing Plant, technical support personnel recently deleted a monthly Operational Safety Requirement surveillance procedure for Criticality Alarm System batteries.⁽⁴⁾ An effective USQ process would have prevented these cavalier changes to the safety envelope. However, in the absence of forceful monitoring and oversight by DOE-RL, the contractor has not developed an effective USQ process.

- 3. Background:** In August 1993 the Board transmitted⁽¹⁾ several observations on DOE-RL's lack of monitoring and oversight of DOE Order 5480.21, and requested that DOE submit a report of the disposition made of these matters. DOE-RL outlined its proposed actions⁽²⁾ to address the Board's observations. In October 1994, prompted by Board staff inquiries, the Assistant Secretary for Environmental Management forwarded a status⁽⁵⁾ of these corrective actions from DOE-RL and reported⁽⁶⁾ that DOE-RL was making progress in responding to the Board's concerns.

4. **Discussion:** DOE-RL attributed their deficiencies in monitoring and oversight of the USQ process at the Hanford Site to the lack of clear assignment of responsibilities and the lack of training.⁽⁵⁾ Three corrective actions were proposed: (1) identify the 5480.21 requirements applicable to DOE-RL, (2) clearly define responsibilities for these requirements within DOE-RL, and (3) provide training needed by DOE-RL employees to perform USQ oversight. The staff reviewed the implementation of these three corrective actions as discussed below.
- a. **Identify USQ Requirements Applicable to DOE-RL:** The requirements for field office monitoring and oversight of the USQ process are concisely presented in DOE 5480.21. These requirements were rewritten into a DOE-RL implementing procedure⁽⁷⁾ and were assigned primarily to the Division Directors. However, during the staff's previous review it became clear that not all Division Directors were aware of these requirements. To address this problem, DOE-RL cancelled their procedure and rewrote the requirements into an implementing directive,⁽⁸⁾ assigning requirements more specifically to the Line Organization Division Directors, the Quality Safety and Health Programs Division Director, and the Performance Assessment Division Director. This implementing directive is now being cancelled, and the requirements are being rewritten into a DOE-RL Authorities and Responsibilities Manual. These requirements have also been rewritten into the DOE-RL Standards/Requirement Identification Documents (S/RIDs). During this follow-up review, the staff has found that some Division Directors remain unaware of these monitoring and oversight requirements. So, after all the shuffling from procedure, to directive, to manual, and to S/RIDs, the DOE 5480.21 requirements applicable to DOE-RL remain unchanged and continue to be essentially unimplemented.
 - b. **Define and Clarify Responsibilities within DOE-RL related to USQs:** This activity was meant to ensure that responsibilities and needed skills were identified for each position at DOE-RL. In particular, responsibilities and needed skills for meeting the requirements related to the USQ process were to be identified. A review of the Mission & Functions, Position Standards, and the Training Requirements Matrices, recently developed for DOE-RL by Oak Ridge Institute for Science and Education, did not reveal any specific USQ related responsibility, skill, or training requirement for any position at DOE-RL.
 - c. **Provide USQ Training for DOE-RL Personnel:** This activity was meant to provide DOE-RL staff with the skills needed to conduct effective monitoring and oversight of the USQ process. Training records show that in the 18 months since the Board's initial concerns, only ten DOE-RL personnel have completed the one-day USQ training.

5. **Future Staff Actions:** The staff intends to continue, through periodic reviews of USQ activity at the Hanford Site, to emphasize DOE-RL's responsibility to ensure that the contractor's USQ process is effective in maintaining the authorized safety envelope.

6. **References**

- (1) Board letter, Conway to Grumbly, dated August 20, 1993
- (2) DOE-RL letter, Wagoner to Pearman, "Assessment of Defense Nuclear Facilities Safety Board (Board) Trip Report of August 20, 1993, Richland Operations Office (RL) Oversight of DOE 5480.21, Unreviewed Safety Questions (USQ)," dated March 30, 1994
- (3) Occurrence Report RL--WHC-TANKFARM-1995-0014
- (4) Occurrence Report RL--WHC-PFP-1995-0006
- (5) DOE-RL letter, Wagoner to Pearman, "Status of Richland Operations Office (RL) Response Addressing the Defense Nuclear Facilities Safety Board (Board) Trip Report of August 20, 1993," dated October 21, 1994
- (6) DOE letter, Grumbly to Conway, dated October 24, 1994
- (7) DOE-RL Implementing Procedure, RLIP 5480.21, Unreviewed Safety Questions, dated June 2, 1992
- (8) DOE-RL Implementing Directive, RLID 5480.21, Unreviewed Safety Questions, dated December 2, 1994