



The Under Secretary of Energy

Washington, DC 20585

July 16, 1996

96-0002641

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DNF SAFETY BOARD

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

Dear Mr. Chairman:

On March 15, 1996, the Secretary forwarded to you the Department's Plutonium Ventilation System Study Report, which evaluated ventilation systems at several of our major plutonium facilities and noted a number of areas where strengthening our safety practices was required.

In the report, we committed to provide you with a detailed response. Enclosed is a summary of each of the action items and the current status. We apologize for the delay. Your staff has been kept informed of the status of the report.

This information is unclassified and suitable for placement in the public reading room.

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Grumbly", written over the word "Sincerely".

Thomas P. Grumbly

Enclosure

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Plutonium Ventilation System Study Report
Corrective Actions Status as of May 30, 1996

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DNF SAFETY BOARD**6.0 Corrective Actions Summary¹****6.1 Operability During Design Basis Accidents (Section 3.2.1)**

6.1.1 Action: Perform safety analyses to support passive confinement approaches for PFP at Hanford and PF-4 and CMR at LANL

Status: *The approved SARs for PF-4 and CMR will be supported by approved safety analyses. Approval of the PF-4 SAR is expected July 15, 1996. Due to the number of comments on the draft CMR SAR, responses to which are expected from the contractor in July, approval of the CMR SAR is not expected until August 30, 1996.*

6.1.2 Action: Promulgate guidance concerning source term and leakage rate assumptions.

Status: *Guidance concerning source term and leakage rate assumptions to be used in safety analyses has been drafted and is being reviewed within DOE. The guidance will be issued by EH-31 in the form of Interpretation Memos to DOE-STD-3009 by the scheduled commitment date of September 30, 1996.*

6.2 Single Failure and Redundancy (Section 3.2.2)

6.2.1 Action: Determine need for more explicit requirements to perform reliability analyses, such as single failure analysis, to the industry standard on this subject.

Section and paragraph numbers refer to sections and paragraphs in the DOE report, "Plutonium Ventilation System Study Report", dated February 1996.

Status: *This assessment is underway but has taken more time than originally anticipated. We expect to make this determination by July 30, 1996 instead of the original commitment date of April 30, 1996.*

6.3 Emergency Power (Section 3.2.3)

6.3.1 Action: Provide an Uninterruptable Power Supply (UPS) for zone 1 exhaust fans and new air compressors with a 40 minute reserve air tank for the control air supply at PF-4.

Status: The engineering study phase for both projects is approximately 50% complete. Assuming a successful outcome for the engineering studies and availability of FY 1997 funds, detailed design will start in early FY 1997.

6.3.2 Action: Replace the single diesel generator by two diesel generators as part of the canyon exhaust system upgrade at F-Canyon.

Status: *The overall canyon exhaust system upgrade project is on schedule. The result of the system upgrade will be more redundancy and reliability for the main ventilation fan power supplies for F-Canyon and H-Canyon. As a result of design and procurement activity performed after preparation of the Plutonium Ventilation System Study Report, the date by which the new diesel generators will be installed has been revised from August 1998 to December 1998.*

6.4 Seismic (Section 3.2.6)

6.4.1 Action: Upgrade seismic resistance of 12 glove boxes at PF-4. Evaluate another 50 glove boxes for possible upgrade.

Status: *It has been determined that 13 glove boxes will be upgraded instead of the originally-scheduled 12. The design work is underway on these upgrades, and they will be completed by September 30, 1996, as scheduled. A determination as to whether additional glove boxes must be upgraded and the schedule for any additional upgrades will be made by June 30, 1996.*

6.4.2 Action: Complete structural seismic upgrades to the CMR building. Evaluate potential additional, non-structural seismic improvements to safety-significant SSCs.

Status: *Completion of the structural seismic upgrades to the CMR building is still planned for November, 1999. Additional upgrades will be considered after the CMR SAR has been approved, presently scheduled for the end of August, 1996.*

6.4.3 Action: Complete seismic assessment of safety-class structures, systems and components (SSCs) for Building 332 at LLNL.

Status: *DOE comments have been provided to LLNL on the LLNL seismic assessment of safety-class SSCs for Building 332. LLNL is finalizing the report and will resubmit it for information. There are no issues regarding the seismic resistance of the Building 332 ventilation systems.*

6.4.4 Action: Complete seismic qualification program for F-Canyon and FB-Line safety-related systems to see if they meet current seismic design criteria.

Status: *The seismic qualification program for F-Canyon and FB-Line safety-related systems is continuing. Preparations for computer runs are complete and the computer runs began the week of June 10. We expect to complete the seismic qualification program by the scheduled date of July 30, 1996.*

6.4.5 Action: Make seismic improvements to selected components at PFP.

Status: *Seismic improvements have been completed.*

6.5 Operations/Maintenance (Section 3.2.7)

6.5.1 Action: Complete procedure program improvements at PFP.

Status: *The PFP procedure improvement program includes review of all procedures for completeness, correctness and user friendliness. PFP personnel completed review of all procedures in April 1996. All of the maintenance and operating procedures for the ventilation systems have been reissued. This commitment has been met.*

6.5.2 Action: Submit a revised RFETS conduct of operations matrix to DOE-RFFO.

Status: *The revised conduct of operations matrix was submitted on February 29, 1996. Subsequent to that submittal, the contractor committed to a number of additional operating procedure revisions which were to be detailed in the matrix. The matrix will be further updated to include these changes by July 31, 1996.*

6.5.3 Action: Complete procedure improvement program plan for developing operating procedures for all safety-class and safety-significant systems at LLNL Building 332.

Status: *The procedure improvement program plan for developing operating procedures for all safety-class and safety-significant systems at LLNL Building 332 has been reviewed by DOE and is in the process of implementation. Procedures for safety-class systems are scheduled for completion by October 31, 1996. Procedures for safety-significant systems are scheduled for completion by April 30, 1997.*

- 6.5.4 Action:** Improve training of maintenance mechanics at LLNL Building 332.
- Status:** *The Training Implementation Matrix for LLNL Building 332 has been approved by DOE and is in the process of implementation.*
- 6.5.5 Action:** Review and approve new conduct of operations matrix for PF-4.
- Status:** *Due to the extensive changes required as a result of approval comments on the PF-4 conduct of operations matrix, implementation of changes was not possible by April 30 as previously scheduled. The changes are being made, and implementation is now expected by October 30, 1996.*
- 6.5.6 Action:** Develop new ventilation system operating procedures at CMR.
- Status:** *Development of the new ventilation system operating procedures for CMR is underway and is expected to be complete by December 1996.*
- 6.5.7 Action:** Implement more formal training and qualification program at CMR.
- Status:** *We are on schedule for implementing a more formal training and qualification program at CMR by September 1997. This is a milestone in the CMR Training Implementation Plan.*

6.6 Periodic Testing (Bypass Leakage) (Section 3.2.8)

- 6.6.1 Action:** Resolve issue concerning leakage past the supply duct butterfly valves at PF-4.
- Status:** *The issue concerning leakage past the supply duct butterfly valves at PF-4 has been addressed in the SAR scheduled for approval by June 30, 1996.*
- 6.6.2 Action:** Resolve issue concerning leakage from the FB-Line exhaust duct at SRS.

Status: *Complete. The FB-Line exhaust duct has been rerouted to eliminate the potential for unmitigated leakage.*

6.6.3 Action: Complete more detailed assessment of ventilation system bypass leakage and acceptance testing for safety-class ventilation systems.

Status: *Direction to the field to perform the assessments was issued on May 3, 1996. The assessments are scheduled for completion by April 1, 1997.*

6.7 Response to the July 21, 1995, Letter on Rocky Flats (Section 4.0)

6.7.1 Action: Prepare action plan to improve maintenance performance at Rocky Flats facilities.

Status: *This commitment is open and corrective action is overdue. Both an action plan provided to the Department on June 18, 1996, and the reported actions to date are inadequate to support safety requirements. Another action plan is to be provided by July 30. There is clear focus of management attention on Building 371 in maintenance monitoring and management and evidence of improvements in that facility. Adequate information is not yet available to ascertain whether improvements are being made in other facilities. Maintenance assessments of plutonium facilities are scheduled to begin on July 1, 1996.*

6.7.2 Action: Determine what upgrades are to be made to Rocky Flats Building 371.

Status: *The upgrades planned for continued use of Building 371 for plutonium storage are identified in the Integrated Program Plan for DNFSB Recommendation 94-3, which will be issued shortly. In parallel, design has begun on a new plutonium storage vault, and an Environmental Impact Statement which will address the plutonium storage options at Rocky Flats. If the new storage vault is the alternative chosen*

through the NEPA process, the scope of the B371 upgrades may be adjusted.

6.7.3 Action: Take actions to remedy problem with excessive alarms in Rocky Flats Building 371.

Status: *The alarm-reduction target of less than 25/day for OSR-compliance alarms has been met. The number of other alarms has been reduced from approximately 2000/day to approximately 700/day. Actions are continuing to meet the target of 50/day by December 1, 1996.*

6.7.4 Action: Provide an approved justification for continuing operations outside of OSR limits in Rocky Flats Building 776.

Status: *Complete*

6.8 Management Issues (Section 5.0)

- 6.8.1 Action:** Eliminate current ambiguity that exists between DOE 6430.1A and DOE 5400.5 with respect to accident doses to the public.
- Status:** *The implementation guide for DOE 420.1 removes the ambiguity that existed between DOE 6430.1A and DOE 5400.5 and was issued for interim use and comment in October 1995. This item is complete.*
- 6.8.2 Action:** Complete assessment of DOE policy regarding dose at nearest point of public access.
- Status:** *The assessment of DOE policy regarding dose at the nearest point of public access is underway. A revised policy has been conceptually established and will be reviewed within DOE over the next few weeks. It is expected that the policy will be issued as a revision to DOE 420.1 and that the commitment date of August 15, 1996 will be met.*
- 6.8.3 Action:** Generate as-built drawings and P&IDs for safety-class SSCs at PF-4.
- Status:** *The as-built drawings and P&IDs for safety-class SSCs at PF-4 have been prepared. This item is complete.*
- 6.8.4 Action:** Provide a Configuration Management Office and a more formal change control procedure for CMR.
- Status:** *The head of the CMR Configuration Management Office has been hired, and a more formal change control procedure for CMR is being developed. Implementation has been delayed to September 30, 1996, from June 30, 1996, due to resource limitations.*
- 6.8.5 Action:** Prepare as-built documentation for LLNL Building 332.

Status: *As-built documentation for the ventilation system and selected other systems is underway and will be completed by September 30, 1996, as scheduled.*

6.8.6 Action: Reissue an updated Nuclear Air Cleaning Handbook.

Status: *The commitment to issue the revised Air Cleaning Handbook by December 31, 1996, was incorrectly stated in the report. Our plan is to issue the draft revision by December 31, 1996, for comment by all interested parties. We are on schedule to meet this commitment.*

6.8.7 Action: Issue new HEPA filter standards.

Status: *All four new HEPA filter standards have been issued in draft form and 95% of the comments have been resolved. We expect to issue the final standards on or before the scheduled date of December 31, 1996.*