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DEFENSE NUCLEAR FACILITIES SAFETY BOARD

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August 14, 1995

Mr. Robert R. Nordhaus
General Counsel
Room 6A-245/FORS
1000 Independence Avenue, SW
U.S. Department of Energy
Washington, DC 20585

Dear Mr. Nordhaus:

On Thursday, August 3, 1995, the Board received the revised Department of Energy (DOE) Order 430.1 *Life Cycle Asset Management*. The DOE cover note to the revised Order indicated that the transmittal included "changes reflecting the DNFSB's concerns."

The cover note is inaccurate because it leaves the impression that Board staff comments have been fully resolved. Seven of the eight Board staff findings have not been resolved to our satisfaction. A report detailing the status of Board staff findings related to DOE Order 430.1 is enclosed for your information.

Sincerely,

A handwritten signature in black ink, appearing to read "G. W. Cunningham".

G. W. Cunningham
Technical Director

Enclosure

c: The Honorable Archer L. Durham
Mr. Donald W. Pearman

Review Report

1. **Order/Rule.** DOE Order 430.1, *Life Cycle Asset Management*.
2. **Conclusion.** The requirements contained in this Draft Order do not define an adequate basis for protection of the worker, public, and environment.
3. **Introduction.** The DOE draft Order 430.1 revision dated August 2, 1995 was reviewed by the Board staff. The changes incorporated as a result of the Board staff review of the Order were analyzed in comparison with the existing DOE Orders from which its requirements and guidance were taken: DOE Orders 4700.1, *Project Management System*; 6430.1A, *General Design Criteria*; and 4330.4B, *Maintenance Management Program*.
4. **Order Evaluation.** The following evaluation addresses DOE's response to comments generated in the DNFSB staff review of the Draft Order. Several findings will remain open until review of acceptable final guides meeting the criteria detailed below.

| Findings | |
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| 1. | This finding has not been adequately addressed. The Order does not contain specific requirements related to project design, i.e., that life cycle phase following conceptual design and prior to operations. Although minimal requirements are provided for other project life cycle phases, such as conceptual design and project closeout, comparable requirements for design are not included. Appropriate definitions of terms should also be included or expanded to provide clarification where necessary (e.g., test and evaluation). |
| 2. | This finding has not been adequately addressed. Roles and responsibilities of those responsible for project management remain unclear. Final guidance containing responsibility assignments, a standard for project manager qualification, and the critical decision criteria process and its grading have not been provided to the Board for review. |
| 3. | This finding has not been adequately addressed. Final guidance documents that clarify the systems engineering process endorsed by the Department have not been provided to the Board for review. In addition, project design phase requirements are necessary to address this finding as explained under Finding 1 above. |

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| <p>4. This finding has not been adequately addressed. Final guidance documents that clarify the systems engineering process endorsed by the Department have not been provided to the Board for review. Guidance necessary to ensure consideration of health and safety requirements during a project life cycle includes guidance on the following topics:</p> <ol style="list-style-type: none"> 1. Program Management Overview 2. Critical Decision Criteria 3. Engineering Trade-off Studies 4. Project Risk Management 5. Project Reviews 6. Baseline Development <p>These guides should be issued concurrently with the LCAM Order.</p> |
| <p>5. This finding has not been adequately addressed. Final guidance containing responsibility assignments consistent with the DOE FAR Manual and guidance associated with Technical Management Plans has not been provided to the Board for review.</p> |
| <p>6. This finding has not been adequately addressed. Final guidance documents that clarify the systems engineering process endorsed by the Department have not been provided to the Board for review. These guides, covering those topics listed under Finding 4 above, should be issued concurrently with the LCAM Order.</p> |
| <p>7. This finding has not been adequately addressed. A final guidance document that includes a description of how systems engineering should be graded for projects of varying complexity and safety significance has not been provided to the Board for review.</p> |
| <p>8. This finding has been adequately addressed by the current text in Section 2., <u>IMPLEMENTATION</u> of the August 2, 1995 draft of the LCAM Order 430.1 that was provided to the DNFSB staff for review.</p> |

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| <p>Observations</p> |
| <p>1. This observation will be adequately addressed by development and issuance of several acceptable guides for proposed topics following issuance of LCAM..</p> |