

[DOE LETTERHEAD]

September 23, 1997

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

Dear Mr. Chairman:

This is in response to your letter of June 2, 1997, regarding Department of Energy (DOE) actions taken through March 1997 to verify readiness to operate the High Level Liquid Waste Evaporator and the New Waste Calcining Facility (NWCF) at the Idaho National Engineering and Environmental Laboratory. The Department agrees with the Defense Board staff's observation on this issue.

The Idaho Operations Office (ID) implemented a more thorough and documented readiness assessment process for the NWCF since February 1997, based on a critical selfevaluation, discussions with external groups, and utilization of additional subject matter experts. This enhanced process achieved a demonstrable level of readiness which was independently confirmed by the final DOE Operational Readiness Review completed in May 1997. In June, the NWCF was successfully restarted with highlevel waste calcination now underway in support of the State of Idaho Settlement Agreement.

In June 1997 ID formed a Process Improvement Team, to define and implement a corrective action plan addressing weaknesses in the DOE line management operational readiness certification process. In addition to making use of the NWCF experiences, the team relied upon the experiences of Headquarters (HQ) and other field elements (i.e., Savannah River Operations Office, Amarillo Area Office, Richland Operations Office) to incorporate good practices developed elsewhere. Key corrective actions include: (1) earlier planning and proactive involvement of DOE line management in the assessments; (2) increased use of supplemental, qualified personnel; (3) incorporation of a critical assessment and closure verification of any prestart issues and actions; and (4) filling of facility staff vacancies and reassignment of facility line supervisory authority. Enclosed is a report from ID that provides more detail information.

If you have any questions, please contact me or have a member of your staff contact Mr. Joseph Daly, Office of Western Operations at (301) 9038460.

Sincerely,

Alvin L. Alm
Assistant Secretary for
Environmental Management

Enclosure

[DOE MEMORANDUM]

DATE: August 22, 1997

SUBJECT: Report of Actions Taken to Address Defense Nuclear Facility Safety Board (DNFSB) Trip Report of Operational Readiness Effectiveness at the Idaho National Engineering and Environmental Laboratory (INEEL) (OPESP97-091)

TO: Alvin L. Alm Assistant Secretary
Environmental Management
DOEHQ, EM1, 5A-014/FORS

REFERENCE: Letter, J. T. Conway to A. L. Alm, June 2, 1997 w/ enclosed Trip Report, "Review of Actions Taken to Verify Readiness to Operate the High Level Liquid Waste Evaporator (HLLWE) and the New Waste Calcining Facility (NWCF) at the Idaho National Engineering and Environmental Laboratory (INEEL)"

Attachment I provides the proposed response to the referenced DNFSB letter of June 2, 1997, transmitting a trip report documenting Defense Nuclear Facility Safety Board (Board) staff review of DOE actions taken through March 1997 to verify readiness to operate the High Level Liquid Waste Evaporator (HLLWE) and the New Waste Calcining Facility (NWCF) at the Idaho National Engineering and Environmental Laboratory (INEEL). The DNFSB letter of June 2, 1997, requested that DOE "provide a report that evaluates the current process used by DOE line management at the INEEL to verify readiness, in light of good practices developed elsewhere, and that documents any corrective actions for INEEL resulting from these evaluations." The DNFSB further requested that this DOE report be submitted within 90 days of receipt of the Board letter.

After critical selfevaluation and discussion with external groups, DOEID implemented a more thorough and documented readiness assessment process for the NWCF commencing in February 1997. This enhanced process achieved a demonstrable level of readiness which was independently confirmed by the final DOE Operational Readiness Review, completed in May 1997. In June the NWCF was successfully restarted with high level waste calcination now well underway in support of the Idaho Settlement Agreement.

DOE institutional corrective actions supporting improvement of readiness processes at the INEEL are ongoing. Specifically, process improvement is underway as part of the DOEID Corrective Action Plan to implement more definitive and effective DOEID guidance for line management assessment of operational readiness. Experience from HQ and other field elements (i.e. Savannah River Operations Office, Amarillo Area Office, Richland Operations Office) is being utilized in this endeavor. Also a workshop was conducted in June 1997 with participants from DOE HQ & ID, the M&O contractor and DNFSB staff to broadly capture operational readiness lessons learned. A draft of the Lessons Learned Report has been shared with DNFSB staff. It is intended that the forthcoming DOEID guidance for DOE Order 425.1 "Startup and Restart of Nuclear Facilities" and subsequent training in this area will institutionalize the lessons learned from the NWCF and good practices from other DOE sites. This corrective action is designed to avoid the recurrence of similar difficulties with future facility readiness activities.

Attachment 2 "Line Management Assessment of Operational Readiness at the Idaho National Engineering and Environmental Laboratory (INEEL) Evaluation and Corrective Actions, (8/97)," provides additional information on institutional actions which are underway.

Implementation of corrective actions at DOEID will be completed in February 1998. The Board staff will continue to be kept apprised by DOEID of progress in this area.

If you have any questions, please contact me or have your staff contact Brian Edgerton (208) 5261081.

J. M. Wilcynski

Attachment 1: Proposed response letter, A. L. Alm, DOE to J. T. Conway, DNFSB

Attachment 2: Report, "Line Management Assessment of Operational Readiness at the INEEL Evaluation and Corrective Actions, (8/97)"

cc: Tara O'Toole, EH1
Franklin G. Peters, FM1
Mark B. Whitaker, Jr., EH9
Mark W. Frei, EM30
James A. Turi, EM36
Jeffrey Roberson, DP5
W. John Denson, LMITCO President

Line Management Assessment of Operational Readiness at the Idaho National Engineering
and Environmental Laboratory (INEEL)
Evaluation and Corrective Actions
August 1997

1.0 Background

Recent plant turnaround and readiness preparations for nuclear operations at the Idaho National Engineering and Environmental Laboratory (INEEL) have provided an opportunity for critical evaluation and improvement of the process used for line management assessment of readiness. Startup of both the New High Level Liquid Waste Evaporator (HLLWE) and Dry Canning Station and restart of the New Waste Calcining Facility (NWCF) at the Idaho Chemical Processing Plant (ICPP) all encountered difficulties and, to varying degrees, "false starts" in declaring operational readiness. DOEID assessments, oversight by DOE HQ/EH and the Defense Nuclear Facility Safety Board (DNFSB) all confirmed a need to improve management effectiveness in the certification of operational readiness by DOE line management.

The basis of this report is derived from a multitude of sources including internal discussion and evaluation by management and staff at DOEID; discussion with DOEHQ/DP staff experienced with the requirements and practice of DOE Order 425.1 "Startup and Restart of Nuclear Facilities"; discussions with operations management personnel at Savannah River

Operations Office, Amarillo Area Office, and the Richland Operations Office; review of external practice and readiness procedures at the Savannah River Operations Office and the Amarillo Area Office; and an Operational Readiness Lessons Learned Workshop conducted at the INEEL on June 25-26, 1997. Participants and observers from DOE Idaho, Headquarters, and Lockheed Martin Idaho Technologies, Co. (LMITCO, Management and Operations Contractor) contributed to the lessons captured during the latter workshop. Representatives from the DNFSB staff also participated in the workshop, offering where appropriate, their views and experiences on this subject.

2.0 Focus of Report

The focus of this report is the identification of weaknesses in past practice at the INEEL for DOEID line management assessment of operational readiness of nuclear facilities and the development of key elements of corrective action to improve management effectiveness in this area.

3.0 Lessons Learned from Past Practice

3.1 Management Involvement

Management at all levels must be actively engaged in the ownership and oversight of facility operations to reinforce compliance with expectations. This commitment to excellence must be demonstrated and continuously reinforced to ensure the operational attitude and resultant performance remain consistently above expectations. This communication and commitment to appropriately high operations standards cannot be delegated.

3.2 Setting Performance Expectations

Line management within DOE must communicate in word and action, the expectation for operational excellence. It is particularly important that DOE, as the program execution customer, communicate and reinforce, through effective oversight, the high standard of performance for nuclear operations. Recent experience at the INEEL, as brought out in the Lessons Learned Workshop, indicated that line management for both DOE (and the contractor) were less than adequately engaged with setting and reinforcing acceptable standards of operational performance.

3.3 Oversight of Contractor Operational Readiness

The DOEID oversight of contractor preparations for operational readiness must be an active, ongoing process building from routine, "onthefloor" involvement by federal personnel including qualified facility representatives, facility engineers, facility-managers, and subject matter experts of various disciplines. Contractor oversight must, over time, be comprehensive, assessing all areas of operational performance, including institutional programs supporting facility operations. Operational oversight by DOEID must be of increased breadth and depth, particularly for start or restart of nuclear facilities.

3.4 Allocation of DOEID Personnel Resources

Increasingly limited personnel resources must be more effectively engaged in the ongoing oversight of contractor operations. Although well qualified, the use of dedicated DOEID facility personnel for the oversight of plant operations must be supplemented by subject matter experts, whether from within the DOEID office or borrowed from external organizations such as other field offices or the DOE Core Technical Group. Opportunities for bringing in "fresh eyes" and "crossfertilizing" facility and operations expertise throughout the DOEID organization and from around the DOE Complex need to be pursued.

3.5 Use of an Operational Systems Approach

The DOEID assessment of readiness and subsequent management response must focus beyond individual findings, seeking instead to resolve the underlying management system weaknesses in preparation for operational readiness. Initial readiness preparation efforts at the ICPP were often activity or finding based, rather than addressing underlying management systems as was later typified during the final, followon phase of achieving readiness for the NWCF (subsequent to February 1997).

4.0 Key Elements for DOE-ID Corrective Action

A Process Improvement Team was formed in June 1997, led by the DOEID Sitewide Programs organization. The purpose of this initiative is to define and implement a corrective action plan addressing weaknesses in the DOE line management certification process for operational readiness. Key elements for the DOEID Corrective Action Plan are as follows:

4.1 Planning for DOEID Line Management Assessment

Planning for DOEID line management assessment will begin earlier in the readiness preparation process. An Assessment Plan will be prepared by DOEID, tailored to the facility category and complexity of the startup/restart. Elements of this planning will encompass the assignment of personnel resources including supplemental subject matter experts, criteria and prerequisites for operational readiness, assessment of DOEID oversight readiness, critical assessment and active closure verification of any prestart management issues, cumulative analysis and trending from previous operational assessments, firsthand observation and critical assessment of all operational elements (plant, personnel, documentation), and enhanced focus on the readiness of institutional processes supporting comprehensive readiness. This plan will be approved by the assigned DOEID Facility Director.

4.2 Use of Supplemental, Qualified Personnel Resources

A qualified (educational background, operations knowledge and experience) Team Leader will be designated by the DOEID Facility Director to lead the line management assessment of readiness. In addition to assigned facility representative(s) or engineer(s), topical subject matter experts will be identified to supplement and ensure an appropriately comprehensive DOE assessment of readiness. Where appropriate, a "fresh perspective" will be obtained by use of external expertise, from other field elements and/or the DOE Core Technical Group. Where available, opportunities for sharing DOEID personnel in support of external operational assessments (e.g. Line Management Assessments, ORRs at other Field Elements) will be encouraged.

4.3 Achieving "Imminent Operability"

A critical assessment and closure verification of any prestart issues and actions will be conducted as part of each Line Management Assessment conducted by DOEID. Use of a "manageable list" as defined by the DOE Order 425.1 "Startup and Restart of Nuclear Facilities" will be minimized. Every effort will be made to ensure that a posture of "imminent operability" is achieved to confidently support line management's certification of readiness prior to the Authorization Authority's initiation of the independent ORR.

The above key actions, defining a more rigorous line management assessment process, are being institutionalized by revision of ID Notice 425.1 which will establish DOEID's expectations and requirements for managing startup and restart actions of nuclear facilities at the INEEL.

4.4 Facility Management Organizational Alignment

In addition to the previous process improvements, action has been taken to strengthen operations line management at DOEID. Facility staff assignments have been filled; facility staff (i.e. facility representatives, engineers, subject matter experts, and newly assigned Deputy Facility Directors) are either qualified or completing requisite 933 technical qualification where necessary. Furthermore, line supervisory authority has been recently reassigned to Facility Directors.

4.5 Issues Management

In accordance with the recently released ID Notice N 450.A "Environment, Safety, Health and Quality Assurance Oversight" (5/97), DOEID is adopting an improved INEEL issues management system (Issue Communication and Resolution Environment, ICARE). All issues and concerns will be actively tracked and verified for closure. Similarly, a representative sampling of findings closure will be over viewed by DOEID personnel. Issues management performance criteria applied in the DOEID evaluation include effectiveness of root cause analyses, completion of action milestones, review of objective evidence of action closure, and the effectiveness of action closure in order to preclude recurrence of an issue.