

September 21, 1998

Mr. W. J. Denson  
[ ]  
Lockheed Martin Idaho Technologies Company  
P. O. Box 1625, MS 3898  
Idaho Falls, ID 83415-3898

EA 98-11

Subject: Preliminary Notice of Violation and Proposed Imposition of Civil Penalty of  
\$55,000 (NTS-ID--LITC-ATR-1997-0005 and NTS-ID--LITC-ATR-1998-0001)

Dear Mr. Denson:

This letter refers to the Department of Energy's (DOE) evaluation of the facts and circumstances concerning the unauthorized disabling of the seismic scram subsystem discovered in October 1997 and surveillance deficiencies occurring in October 1997 at the Advanced Test Reactor Critical (ATRC) Facility. DOE initiated an investigation of the two occurrences and issued an Investigation Summary Report. A copy of the report was transmitted to Lockheed Martin Idaho Technologies Corporation (LMITCO) on July 7, 1998.

The investigation conducted by DOE concluded that potential violations of DOE's nuclear safety requirements likely occurred. On August 12, 1998, a conference was held with members of your staff to discuss the facts and circumstances surrounding these violations, their safety significance, and the status of corrective actions. The Conference Summary Report is enclosed.

Section I of the enclosed Preliminary Notice of Violation (PNOV) describes the violation associated with the disabled seismic scram subsystem. This occurrence came to the attention of upper LMITCO management through a self-assessment activity on October 31, 1997, when a LMITCO evaluator asked to see the equipment. The subsystem is required by the facility Technical Specifications to be functional during reactor operation. Your staff promptly initiated an investigation to determine the reason that the subsystem was rendered inoperable, reviewed the matter for Price-Anderson applicability and reported it into DOE's Noncompliance Tracking System (NTS).

Information provided by LMITCO suggests that the subsystem was most likely disabled after performance of a surveillance procedure on October 22, 1997. Between October 22, 1997, and October 31, 1997, the reactor was operated on three occasions.

LMITCO was unable to provide any evidence that the subsystem was functioning on these three occasions. As described in the PNOV the disabling of the seismic scram subsystem and the subsequent operation of the reactor without the subsystem shown to be operable is a violation of the Quality Assurance Rule (10 CFR Part 830.120).

The seismic scram subsystem is designed to actuate an automatic shutdown of the reactor if a seismic movement is detected. The potential was low for such a seismic movement to have occurred between October 22 and 31, 1997, when the reactor was operated. However, the violation has regulatory significance because the subsystem is classified in the ATRC Safety Analysis Report as a safety system and the contractor could not establish that the reactor was operated within the required technical specifications. In accordance with the "General Statement of Enforcement Policy (Enforcement Policy)," 10 CFR Part 820, Appendix A, this violation has been classified as a Severity Level II problem.

A civil penalty would normally be considered for a Severity Level II matter. In this case, the base civil penalty would have been \$55,000. However, I have considered the discretionary adjustment factors set forth in the Enforcement Policy, and I have concluded that full 100% mitigation of the civil penalty is warranted based upon the contractor's timely identification and reporting of the violation and its comprehensive corrective actions.

Section II of the enclosed PNOV describes violations pertaining to the ATRC Facility's surveillance deficiencies associated with reactor critical operations. These violations include (1) failure to properly conduct pre-start up surveillance activities designed to ensure safe shutdown capability of the facility, (2) preparation of false records, and (3) failure to promptly initiate corrective action documentation. During LMITCO's investigation of the disconnected seismic switch, your evaluator found that three surveillances could not have been completed on the dates and times recorded on the procedures. These surveillances require that the steps be performed jointly by two operators. The LMITCO investigation determined that the three surveillances were not completed in their entirety by two operators as documented. However, unlike the disabled seismic scram subsystem matter, LMITCO did not promptly report these surveillance deficiencies and the potential falsification of surveillance records into DOE's NTS. Additionally, even though subsequent self-assessment uncovered the problem, substantial prior opportunity to identify and resolve the problem existed. When the ATRC Facility's reactor manager became aware of these deficiencies, he failed to initiate required corrective action documentation.

Because the two operators and the ATRC Facility's reactor manager did not provide complete and truthful information, LMITCO incorrectly concluded that the two operators jointly performed the surveillances at a date later than documented on the procedures. However, DOE's investigation established that contrary to the documentation, these

surveillances were never correctly performed, either on the recorded date or later on October 27, 1997, as initially thought by LMITCO officials.

DOE has concluded that violations of the Quality Assurance Rule also occurred in this second matter. These violations are of significant regulatory concern to DOE because the ATRC Facility reactor manager responsible for the two operators knew that the surveillances had not been performed at the dates and times recorded and failed to initiate appropriate actions to correct the problems. The investigation further found that this manager, an experienced supervisor and veteran ATRC staff member, doubted that his subordinates properly completed the procedures at all (i.e., either at the dates and times recorded or later) and withheld this information. Only after DOE began its investigation, did the ATRC Facility reactor manager finally disclose his suspicion about the performance of the surveillances.

Given the regulatory significance associated with the failure to completely and accurately document important safety activities related to nuclear operations, these violations have been categorized in accordance with the Enforcement Policy as Severity Level II. To emphasize the need to ensure that surveillance deficiencies are properly identified, controlled, and corrected (in this case, through the process deficiency system) and to underscore the importance of DOE's ability to rely on documentation provided by its contractors, I have concluded that it is appropriate to assess a civil penalty for these violations in the amount of \$55,000. The penalty adjustment factors set forth in the Enforcement Policy were considered, and no adjustments were considered appropriate.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. Your response should document any additional specific actions taken to date and any additional actions to prevent recurrence. After reviewing your response to this Notice, DOE will determine whether further action is necessary to ensure compliance with applicable nuclear safety requirements.

Sincerely,

A black and white image of a handwritten signature, likely of Peter N. Brush, written in cursive script.

Peter N. Brush  
Acting Assistant Secretary  
Environment, Safety and Health

**PRELIMINARY NOTICE OF VIOLATION  
and  
PROPOSED IMPOSITION OF CIVIL PENALTY**

Lockheed Martin Idaho Technologies Company  
Idaho National Engineering and Environmental Laboratory  
Advanced Test Reactor Critical Facility

EA 98-11

As a result of a Department of Energy's (DOE) evaluation of events involving the unauthorized disabling of a seismic scram subsystem and falsification of procedures that occurred between October 22, 1997 and October 31, 1997 at the Advanced Test Reactor Critical (ATRC) Facility, violations of DOE requirements were identified. In accordance with the "General Statement of Enforcement Policy," 10 CFR 820, Appendix A (effective November 7, 1997), DOE proposes to impose civil penalties pursuant to Section 234A of the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2282a, and 10 CFR 820. The particular violations and associated civil penalties are set

forth below.

I. Violations Related to the Disabled Seismic Scram Subsystem

10 CFR Part 830.120(c)(2)(i) requires that "work shall be performed to established technical standards and administrative controls using approved instructions, procedures, or other appropriate means."

Contrary to the above, Lockheed Martin Idaho Technology Corporation (LMITCO) personnel did not perform work to established technical standards and administrative controls using approved instructions, procedures, or other appropriate means in that

- A. On October 31, 1997, an electrical lead on the seismic scram subsystem detector in the ATRC Facility was found disconnected, thus rendering the equipment inoperable. The seismic scram subsystem is defined in the ATRC Safety Analysis Report as a safety system designed to actuate an automatic shutdown of the reactor if a seismic movement is detected. The disconnection of the electrical lead was not authorized by procedure, instruction or any other appropriate means.
- B. LMITCO [safety documentation] requires that the seismic scram subsystem "shall be operable during reactor operation." This requirement is also stated in Procedure SD 17.4.2 "Instrument Requirements," Rev. 1. However,

the ATRC was operated on three occasions between October 22 and October 31, 1997, without the seismic scram subsystem shown to be in an operable condition.

Collectively the above work controls violations constitute a Severity Level II problem.

## II. Violations Related to Completion and Accuracy of Records

- A. 10 CFR Part 830.120(c)(2)(i) requires that "work shall be performed to established technical standards and administrative controls using approved instructions, procedures, or other appropriate means."

Contrary to the above, LMITCO personnel did not perform work to established technical standards and administrative controls using approved instructions, procedures, or other appropriate means in that LMITCO maintenance procedures MP 11.5, 11.13 and 11.15 require that the procedure steps be performed jointly by two operators. However, on October 23, 1997, procedure 11.13, *Automatic Power Reduction Checks*, was completed by one individual without the second operator present. On October 24, 1997, procedures 11.5, *Safety Rod Magnet Resistance Checks*, and 11.15, *Manual Scram Subsystem Function Test*, were performed by one individual without the second operator present.

- B. 10 CFR 830.120(c)(1)(iv) requires that "records shall be specified, prepared, reviewed, approved and maintained."

10 CFR 820.11(a) requires that "any information pertaining to a nuclear activity provided to DOE by any person or maintained by any person for inspection by DOE shall be complete and accurate in all material respects."

Contrary to the above, specified records were not complete and accurate in all material respects that

1. On October 23, 1997, Maintenance Procedure 11.13 was documented as being completed jointly by two operators with one operator completing the surveillance and the second operator functioning as the verification person. However, the document was false in that the operator designated on the document as completing the surveillance was not in the ATRC Facility on October 23, 1997, and could not have completed the surveillance.
2. On October 24, 1997, Maintenance Procedure 11.5 was falsely documented as being completed jointly by two operators with one operator completing the surveillance and the second operator functioning as the verification person. However, the document was false in that the operator functioning as the

verification person was not in the ATRC Facility when the surveillance was allegedly performed and could not have performed the documented function.

3. On October 24, 1997, Maintenance Procedure 11.15 was falsely documented as being jointly completed by two operators with one operator completing the surveillance and the second operator functioning as the verification person. However, the document was false in that the operator functioning as the verification person was not in the ATRC Facility when the surveillance was allegedly performed and could not have performed the documented function.

These three records were material in that DOE relies upon the accuracy of the records to verify that surveillances associated with reactor critical operations have been performed as documented.

- C. 10 CFR Part 830.120(c)(1)(iii) requires that "processes to detect and prevent quality problems shall be established and implemented. Items, services, and processes that do not meet established requirements shall be identified, controlled, and corrected according to the importance of the problem and the work affected. Correction shall include identifying the causes of problems and working to prevent recurrence."

Procedure MCP-598, *Process Deficiency Resolution*, requires that an individual who identifies a process deficiency shall initiate a process deficiency report (PDR), forward it to their cognizant manager, and institute other steps to evaluate, notify management, and correct the problem.

Contrary to the above, when the failure to have two operators present was found by the ATRC reactor manager for the October 24, 1997, performance of procedures MP 11.5 and 11.15, the manager failed to initiate PDRs for these deficient tests and did not institute comprehensive corrective actions. Without the initiation of PDRs, the subsequent evaluation, notification, and resolution steps of this procedure were also not implemented. PDR's for these deficiencies were not initiated until January and February 1998.

Collectively the above work controls, documents and records, and quality improvement violations associated with the records falsification issue constitute a Severity Level II problem, with a \$55,000 civil penalty.

Pursuant to the provisions of 10 CFR Part 820.24, LMITCO is hereby required within 30 days of this Notice and Proposed Imposition of Civil Penalty to submit a written statement or explanation to the Director, Office of Enforcement and Investigation, U. S. Department of Energy, Attention: Office of the Docketing Clerk, EH-10, P. O. Box 2225, Germantown, MD 20875-2225, with copies to the Manager, DOE Idaho Operations

Office and to the Cognizant DOE Secretarial Office for the facility that is the subject of this Notice. This reply should be clearly marked as a "Reply to a Preliminary Notice of Violation" and should include the following for each violation: (1) admission or denial of the alleged violation; (2) the facts admitted, and if denied, the reasons they are not correct; (3) the corrective steps that have been taken and the results achieved; (4) the corrective steps that will be taken to avoid further violations; and (5) the date when full compliance will be achieved.

Any request for remission or mitigation of the civil penalty must be accompanied by a substantive justification demonstrating extenuating circumstances or other reasons why the assessed penalty should not be imposed in full. Unless the violations are denied, or remission or mitigation is requested within the 30 days after issuance of the Preliminary Notice of Violation and Proposed Imposition of Civil Penalty, LMITCO shall pay the civil penalty of \$55,000 (imposed under Section 234A of the Act) by check, draft or money order payable to the Treasurer of the United States (Account Number 891099) mailed to the Director, Office of Enforcement and Investigation, at the above address. Should the contractor fail to answer within the time specified, an order imposing the civil penalty will be issue.

If requesting mitigation of the proposed civil penalty, LMITCO should address the adjustment factors described in Section VIII of 10 CFR 820, Appendix A.

A black rectangular box containing a white, handwritten signature in cursive script, which appears to be "Peter Brush".

Peter Brush  
Acting Assistant Secretary  
Office of Environment, Safety and Health

Date at Washington, D.C.  
this 21st day of September 1998