

Department of Energy  
Washington, DC 20585

August 12, 2002

Dr. John Browne  
[                    ]  
Los Alamos National Laboratory  
P. O. Box 1663  
Los Alamos, NM 87545

Subject: LANL Price-Anderson Amendments Act Program Review

Dear Dr. Browne:

The Department of Energy's (DOE) Office of Price-Anderson Enforcement (OE) conducted a review of the Price-Anderson Amendments Act (PAAA) program implemented at Los Alamos National Laboratory (LANL). The OE review included interviews with LANL personnel on July 16-17, 2002. As part of this review, your processes for screening nuclear safety noncompliances for applicability under the PAAA, for reporting and tracking noncompliances in DOE's Noncompliance Tracking System (NTS) and internal systems, and for correcting deficiencies in a timely manner were evaluated. OE's activities included a review of applicable documentation and onsite discussions with cognizant personnel.

Overall, our review concluded that your PAAA program generally meets DOE expectations and guidance. However, OE observed that a large number of event-related issues from the Occurrence Reporting and Processing System (ORPS) are being tracked by LANL's PAAA program in comparison to self-identified issues from assessments and other sources. This observation might be an indicator that precursors to events are not being identified and corrected. Additionally, the review identified strengths and weakness in your program, which are summarized below. Both of these areas are described in more detail in the attached report.

#### PAAA Program Strengths

- The LANL PAAA Program is formally established with implementing procedures.
- Roles and responsibilities for Facility and LANL PAAA Coordinators are established and identified in LANL PAAA procedures.
- Subject matter experts are available to support screenings for PAAA noncompliances.
- Training for PAAA personnel is formally established and required for designated PAAA Coordinators.
- Site PAAA procedures require that applicable subcontractors and suppliers designate a PAAA Coordinator.

- Decisions related to PAAA noncompliance identification and reporting into the NTS are generally consistent with DOE guidance.
- Causal analyses for PAAA noncompliances involving ORPS reports are consistently performed using a formal process.
- Tracking, Verification and validation of corrective actions closure are being performed.

#### PAAA Program Weaknesses

- The procedure relating to training of Facility PAAA Coordinators could permit an untrained Coordinator to make facility-specific PAAA decisions for up to three years while completing training requirements.
- OE is not confident that all Facility PAAA Coordinators are screening all available sources of information for PAAA noncompliances, as required by LANL PAAA procedures.
- The LANL PAAA Coordinator has not documented all screenings of issues that were performed for PAAA applicability.
- The LANL PAAA Coordinator/staff are not performing all reviews and trend analysis required by site procedures.
- Screening and reporting of noncompliances are not consistently performed within timeframes established in site procedures or DOE guidance. In some cases information from assessments has not been reviewed for potential PAAA issues for years.
- Causal analyses for PAAA noncompliances that are not associated with an ORPS report are not being performed on a consistent basis as required by LANL PAAA procedures. Causal analyses for NTS reports in which subsequent noncompliances are added are not updated to ensure that the corrective actions are still valid and complete.
- Timely completion of corrective actions might not be consistently achieved.

No reply to this letter is required. However, a failure to correct the weaknesses noted above could impact the application of enforcement discretion in any future enforcement actions. If you have any questions, please contact Sharon Hurley of my staff at (301) 903-0110.

Sincerely,



Stephen M. Sohinki  
Director  
Office of Price-Anderson Enforcement

Enclosure: PAAA Program Review

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## **Price-Anderson Amendments Act Program Review Los Alamos National Laboratory**

### **I. Introduction**

The Department of Energy (DOE) Office of Price-Anderson Enforcement (OE) conducted a review of the Price-Anderson Amendments Act (PAAA) Program implemented by the University of California for DOE at Los Alamos National Laboratory (LANL). The OE review included interviews with LANL personnel on July 16-17, 2002. OE performed the review in accordance with guidance provided in the DOE Enforcement Guidance Supplement (EGS) 00-02, *Price-Anderson Amendment Act (PAAA) Program Reviews*. The review evaluated LANL's PAAA Program pertaining to the identification and screening of nuclear safety noncompliances, the determinations of reportability to the DOE Noncompliance Tracking System (NTS), causal determinations for noncompliances reported either to the NTS or the onsite tracking system, and corrective action implementation and closure. In conducting this activity, OE reviewed LANL procedures and other documents, and conducted interviews of key site personnel. The results of this review are summarized in this report.

### **II. General PAAA Program Implementation**

The PAAA program at LANL is formally established and described in the following LANL Administrative Procedures:

- PAAA Admin-1, *LANL PAAA Office Administrative Procedures*, effective April 17, 2001
- PAAA Admin-3, *Training*, effective April 17, 2001
- PAAA Admin-4, *LANL Participation in the DOE P-A Enforcement Program*, effective April 17, 2001
- PAAA Admin-5, *Identifying PAAA Nuclear Safety Noncompliances*, effective April 17, 2001
- PAAA Admin-6, *Investigation, Critiquing, and Causal Analysis of PAAA*, effective April 17, 2001

- PAAA Admin-7, *Documentation of PAAA Noncompliance*, effective April 17, 2001

*LANL PAAA Office Administrative Procedures* outlines the administrative requirements for the program and establishes a site requirement for the LANL PAAA Coordinator to maintain a system to ensure that LANL participation in the PAAA program is documented.

The procedure titled *Training* establishes the training expectations for the LANL PAAA Coordinator, Subject Matter Experts, Facility PAAA Coordinators, and the general workforce.

*LANL Participation in the DOE P-A Enforcement Program* identifies key personnel and their responsibilities for the LANL PAAA Program. This procedure identifies the LANL PAAA Coordinator as having responsibility for administering the PAAA Program and serving as the point of contact on all LANL Price-Anderson issues. This position is organizationally located in the Performance Surety Division (formerly the Integrated Performance Management Division) under the Associate Director for Operations. The LANL PAAA Coordinator has a staff of one full-time quality assurance subject matter expert. One radiation protection subject matter expert is available to the LANL PAAA Coordinator on a part-time basis and Legal Counsel is available, as needed. Additionally, certain Divisions are required to designate Facility PAAA Coordinators. These personnel report to Division management and have responsibility for the prompt identification, reporting, and development of corrective actions for noncompliances related to their respective facilities. The procedures also require that applicable Subcontractors and Suppliers designate a Facility PAAA Coordinator, develop written procedures and participate in the LANL PAAA Program.

*Identifying PAAA Nuclear Safety Noncompliances* further defines the roles and responsibilities for identifying PAAA noncompliances. It establishes the criteria that will be used to determine a noncompliance, and establishes the criteria for reporting a noncompliance into the NTS or into the LANL PAAA self-tracking system. Sources screened are to include employee concerns, initial Occurrence Reporting and Processing System Reports (ORPS), reports on external audits or appraisals, audits or assessment reports, reports on quality assurance assessments, DOE Office of Facility Operational Reports and the management concerns database and other sources of information for indicators of PAAA noncompliance. Final determinations for PAAA noncompliance issues and reportability are made by the Facility PAAA Coordinator for any report from his/her respective facility, with assistance from the LANL PAAA Coordinator. By procedure, trend analysis is to be performed annually as a minimum by the subject matter experts. The results are provided to the LANL PAAA Coordinator for review and appropriate action.

*Investigation, Critiquing, and Causal Analysis of PAAA* establishes requirements for conducting investigation, critiques, and determining causal factors for PAAA

noncompliances. This procedure requires that the LANL PAAA Coordinator ensure a causal analysis is prepared and documented for every noncompliance.

*Documentation of PAAA Noncompliance* establishes requirements for documenting PAAA noncompliances. This procedure requires that the LANL PAAA Coordinator enter non-NTS noncompliances into a PAAA tracking system. This system is a stand-alone tracking system maintained by the LANL PAAA Coordinator. This procedure also requires that corrective actions be tracked to completion, and requires that they be verified and validated as complete.

Regarding the structure and general implementation of the LANL PAAA Program, OE found that the LANL PAAA Program is established through a set of detailed procedures that describe a formal and comprehensive structure for implementing the PAAA Program, including assignment of responsibilities and use of subject matter experts to provide support. However, OE found significant weaknesses with LANL's implementation of its procedures. These weaknesses are described in the sections III-V of this report.

Regarding staffing for the LANL PAAA Program, OE found that the LANL PAAA Coordinator and his staff are knowledgeable and experienced. OE interviewed Facility PAAA Coordinators and also found them to be knowledgeable of the program and DOE expectations. However, OE had two observations in the area of staffing:

1. The OE review identified indicators that staff resources for the LANL PAAA Coordinator may not be adequate. Specifically, the LANL PAAA Coordinator/staff are not performing all reviews and trend analyses required by site procedures and screening and reporting of noncompliances are not consistently performed within timeframes established in site procedures or DOE guidance. In some cases information from assessments has not been reviewed for potential PAAA issues for years.
2. OE also identified a weakness with the LANL procedure on PAAA training. The procedure allows personnel who are assigned PAAA responsibilities a three-year period to complete the required training, or for current staff a deadline of September 30, 2004. Although no problems related to training were identified by OE, this procedure could allow a person who had not completed the required training to be responsible for PAAA decisions for up to three years.

### **III. Evaluation of Noncompliances Identification and Screening Process**

LANL procedure *Identifying PAAA Nuclear Safety Noncompliances* requires that the Facility and LANL PAAA Coordinators screen a variety of information sources from which potential facility-specific PAAA noncompliances are identified. Facility PAAA Coordinators are to notify the LANL PAAA Coordinator, who initiates a "PAAA Potential Noncompliance Review" form whenever an actual or potential PAAA issue is identified. This approach relies on the Facility PAAA Coordinators to assure that

events and conditions occurring at their respective facilities are, in fact, reviewed and that pertinent issues are brought to the attention of the LANL PAAA Coordinator for evaluation and documentation of the review. Additional responsibilities are assigned to the LANL PAAA Coordinator and his staff to perform trend analyses for programmatic issues on (1) non-NTS reportable noncompliances, (2) final ORPS reports, (3) radiological incident reports, (4) fire protection database, (5) AA assessment database, and (5) facility non-conformance reports.

The OE review found that the LANL and Facility PAAA Coordinators are consistently screening ORPS reports for potential PAAA issues. Other sources of potential PAAA noncompliance such as Assessments, Noncompliance Reports, and Radiological Incident Reports are not being consistently reviewed. Our review also found, where an issue was reviewed, the identification of PAAA noncompliance was adequate. The following observations or areas for improvement were noted in association with the identification and screening process:

- The majority of documented screenings conducted between January 2001 through May 2002 involved events-related (ORPS) issues.
- OE is not confident that all Facility PAAA Coordinators are screening all available sources of information for noncompliances. This concern is supported by an acknowledgement from one of the Facility PAAA Coordinators that the screening of Facility Non-Conformance Reports is weak because of a lack of documentation to substantiate rigorous screenings by the Facility PAAA Coordinators.
- The LANL PAAA Coordinator had not documented all screenings per procedure requirements.
- Annual trending as required by procedure is not being performed and documented per procedure.
- NTS-reportable PAAA nuclear safety noncompliances were not consistently being identified within 15 days of an event or condition in accordance with the guidance provided in *Identifying PAAA Nuclear Safety Noncompliances*. In fact, of the 14 NTS reports input into the NTS from 2001 through July 2, 2002, six exceeded the 15-day timeframe. In one case, over six months lapsed between the event discovery date and the PAAA determination date.
- Subcontractor/vendor issues are not being consistently screened for PAAA noncompliance.

#### **IV. Evaluation of NTS Reportability Process**

After a noncompliance is identified, the Facility PAAA Coordinator and the LANL PAAA Coordinator determine whether the matter is NTS-reportable or non-NTS-reportable. If

the Facility and LANL PAAA Coordinators cannot agree on the level of reportability, the matter is referred to the respective division director or senior management for resolution. Once the level of reportability is determined, the LANL PAAA Coordinator is responsible for preparing the appropriate documentation. The LANL PAAA Coordinator prepares and transmits NTS-reportable matters to DOE's NTS or enters non-NTS reportable noncompliances into the LANL PAAA tracking system.

In general the OE review determined that LANL was making appropriate reportability determinations regarding ORPS related issues. In a couple of cases, OE questioned the decision on TSR violations. In these cases the LANL review determined that a TSR violation was administrative and therefore excluded from reporting into NTS. The OE guidance, *Identifying, Reporting, and Tracking Nuclear Safety Noncompliances under Price-Anderson Amendments Act of 1988*, provides that TSR violations of safety limits, limiting conditions of operation, and action statements are NTS reportable. Our review questioned whether these TSR violations were violations of action statements or safety limits. However, our sample review did agree with most of the LANL TSR screening decisions. The following observations or areas for improvement were noted in association with reporting noncompliances.

1. In the majority of instances since January 2001, LANL is exceeding the 20-day guideline established by DOE in *Identifying, Reporting, and Tracking Nuclear Safety Noncompliances under Price-Anderson Amendments Act of 1988*, for prompt reporting.
2. Although several recurring and programmatic issues had been identified and reported into NTS, no consistent trend analyses of PAAA noncompliances was being performed and documented as required by site procedure. Several programs have been established to develop and monitor performance measures and some of the information from those programs could be used to support PAAA noncompliance trending analysis.

## V. Evaluation of Root Cause Analysis and Corrective Action Process

LANL procedure *Investigation, Critiquing, and Causal Analysis of PAAA Noncompliances*, requires that the LANL PAAA Coordinator ensure that a causal analysis is prepared and documented for every noncompliance. OE found that causal determinations are being performed and documented for PAAA noncompliances that are also ORPS reports. These causal analyses are performed by a separate group at LANL and documented in the ORPS report.

LANL procedure *Documenting of PAAA Noncompliances*, requires that the LANL PAAA Coordinator track corrective actions and work with the Facility PAAA Coordinators to ensure completion of corrective actions. All principal corrective actions for NTS-reportable and non-NTS-reportable issues are required to be documented. This procedure also requires that corrective actions be verified and validated as being complete prior to closing the PAAA report. The majority of PAAA issues, about



75 percent, tracked at LANL are also ORPS reports and the corrective actions are tracked in either NTS or OPRS. As additional program strengths, OE found that verification/validation of corrective action closure is performed, a lessons-learned process exists, and PAAA issues provide input to this process. However, the following observations or areas for improvement were noted in association with the root cause analysis and corrective action process:

- The OE review found that causal analysis for PAAA noncompliances that are not ORPS reports are not being performed on a consistent basis. As part of its review, OE analyzed two NTS reports pertaining to programmatic noncompliances. In one case, NTS-ALO-LA-LANL-LANL-2000-0014, causal factors were identified during the initial report in October 2000, but the report was not updated for subsequent additional events that were added to the NTS report 2001 and 2002. This NTS report contained no information to identify whether the original causal factors were still valid for five additional events that were added to the NTS report. This observation also raised questions regarding whether the corrective actions listed in the NTS report were appropriate and comprehensive. The second NTS report, NTS-ALO-LA-LANL-LANL-2001-0010, identified a programmatic noncompliance with AB/Technical Specification administrative requirements that did not include any causal factor information in the NTS report. During discussions with site personnel, OE found that no causal analysis was performed.
- Timely completion of corrective actions for NTS reports might not be consistently achieved. This observation is based upon an analysis of NTS reports generated in 2001, which found that only 40 percent of NTS reports generated in 2001 had corrective actions completed in five months or less.

## **VI. Conclusion**

The OE review determined that the LANL PAAA program generally met DOE expectations and guidance. Specific strengths and weaknesses identified by the OE review are described in Sections II-V of this report. The DOE Enforcement Policy (10 CFR 820, Appendix A) provides positive incentives for contractors who identify, report and promptly and comprehensively correct nuclear safety noncompliances. The deficiencies identified in this report, if not corrected, could impact the application of enforcement discretion in any future enforcement action.