



**Department of Energy**  
Washington, DC 20585

August 12, 2004

Dr. John Sackett  
[                    ]  
Argonne National Laboratory-West  
P.O. Box 2528  
Idaho Falls, ID 83403-6000

Subject: Argonne National Laboratory- West Price-Anderson Amendments Act  
Program Review Report

Dear Dr. Sackett:

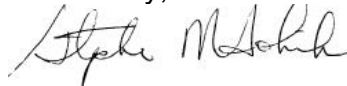
In May and June 2004, the Department of Energy's (DOE) Office of Price-Anderson Enforcement (OE) conducted a Price-Anderson Amendments Act (PAAA) program review of Argonne National Laboratory-West (ANL-W/Laboratory). The review included a site visit on June 15-16, 2004. The review was intended to follow up a similar October 2000 review of ANL-W's PAAA program. The review focused on processes in place for the identification, reporting, and correction of nuclear safety noncompliances as well as actions taken to correct weaknesses identified in the October 2000 report. Our ANL-W Program Review Report is enclosed.

In general, our review identified significant improvements in the ANL-W PAAA program since October 2000 with respect to noncompliance identification, screening and reporting. The Laboratory has implemented formal procedures and the Price-Anderson coordinator and support staff are qualified and knowledgeable. Further, the coordinator has been given adequate authority and independence. He reports directly to the Deputy Associate Laboratory Director, who is responsible for the day to day operation of the Laboratory. A process is in place to track and trend quality problems and the process to identify the root cause of problems has been improved significantly. Nevertheless, there continue to be some weaknesses in the PAAA program, primarily in the areas of (1) training, (2) identification and reporting of programmatic issues, and (3) trending and assuring the timely completion of corrective actions. These issues are discussed in the enclosed report. They are areas for which improvements need to be made in order to fully meet DOE expectations. We encourage the Laboratory to pursue these opportunities.

No reply to this correspondence is required. DOE will continue to monitor your performance and appreciates your continuing cooperation in our efforts to improve nuclear safety performance in the DOE complex.

If you have any questions, please contact me at (301) 903-0100 or have your staff contact Howard Wilchins at (301) 903-0107.

Sincerely,



Stephen M. Sohinki  
Director  
Office of Price-Anderson Enforcement

Enclosure: Program Review Report

cc: M. Gunn, DOE CHO  
J. Drago, DOE CH PAAA Coordinator  
M. Holzmer, DOE AAO  
J. Geringer, DOE AAO PAAA Coordinator  
B. Phipps, ANL-W PAAA Coordinator  
J. Shaw, EH-1  
A. Patterson, EH-1  
W. Magwood, NE-1  
J. Boda, NE PAAA Coordinator  
H. Wilchins, EH-6  
Docket Clerk, EH-6

## **Price-Anderson Amendments Act Program Review Argonne National Laboratory-West**

### **I. Introduction**

During May and June 2004, including an onsite visit June 15-16, the Department of Energy's (DOE) Office of Price-Anderson Enforcement (OE) conducted a review of the Price-Anderson Amendments Act (PAAA) program for screening, reporting and resolution of PAAA noncompliances at Argonne National Laboratory-West (ANL-W/ Laboratory). ANL-W is operated for DOE by the University of Chicago. This review is a follow-up to a PAAA program assessment conducted by OE in October 2000 on these subjects. In addition, a limited review was conducted in the areas of performance assessment and the corrective action management process for noncompliances.

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

ANL-W has implemented formal procedures that describe the key elements of its PAAA program. The procedures assign responsibilities, and establish appropriate authority and independence for the PAAA Coordinator. The applicable ANL-W procedures are:

AWP 3.4 "Quality Improvement and Price-Anderson Amendments Act Compliance"  
AWS 3.5 "Minor Event Reporting"  
AWP 4.7 "Nonconformance Reporting System."

Procedure AWP 3.4 adequately describes the processes for issue identification, Noncompliance Tracking System (NTS) reporting, causal analysis and the tracking of PAAA noncompliances. The PAAA coordinator is assigned at the Director level in the organization and is a direct report to the Deputy Associate Laboratory Director, the individual responsible for the day-to-day operation of ANL-W. The position has been given adequate independence and authority to properly implement PAAA program responsibilities at the site.

AWP 3.4 also requires training for personnel that are assigned to perform reviews to identify PAAA noncompliances with the requirements in this procedure. Our review found that this training is not formally documented or implemented. Newly assigned PAAA reviewers were not provided with the formal PAAA training contemplated by AWP 3.4 prior to undertaking their new responsibility. Further, no specific training is provided to personnel on the intricacies of nuclear safety rule requirements. These problems are partially mitigated by an informal mentoring process in which experienced personnel

make themselves available to answer questions and assist with reviews. A detailed checklist with specific references to rule requirements is also available to assist reviewers. (Our comments on the checklist are set forth below in the section addressing identification and screening of noncompliances.) Finally, we have noted that the following major issues identified in our last program review in this area have all been satisfactorily resolved: inadequate proceduralization of the PAAA process, failure to develop an appropriate database, and general poor attitude toward the PAAA nuclear safety program.

ANL-W maintains multiple databases in its issues resolution system. Procedure AWP 3.5 describes the process for the review of minor events at the site. The minor events are tracked in a separate database. Division designees review these events for PAAA implications and if they are determined to be PAAA noncompliances, they are entered into the Database for Improvement Opportunity Tracking (DIOT). DIOT is the database which tracks all PAAA noncompliances. Procedure AWP 4.7 describes the Nonconformance Reporting (NCR) process. The NCR deficiencies are also tracked in a separate database as well and all items are reviewed for PAAA implications. If these items are determined to have PAAA implications, they are entered in the DIOT system. The DIOT system receives issues from other sources as well, including issues not related to events. These are described below in this report.

In sum, OE's follow-up review found the following positive elements in ANL-W's PAAA program implementation:

- A. Formally approved procedures have been implemented that adequately describe key ANL-W PAAA program elements and identify key roles and responsibilities.
- B. The PAAA coordinator position reports at an appropriate level in the management chain, has adequate authority and is independent from line organizations. The coordinator directly reports to the individual with day-to-day management responsibility for the site.
- C. PAAA weaknesses identified in our last review in this area have been resolved.

The following weaknesses were identified in the ANL-W PAAA program:

- A. Although formal training for individuals working in the PAAA area is required by Procedure 3.4, such training is in fact conducted informally. No training records are being maintained.
- B. The screening questions and criteria incorporated into the DIOT screening forms do not include questions relating to Subpart B in 10 CFR 830 or the latest revisions in 10 CFR 835.

### III. Noncompliance Identification and Screening

The initial review and identification screening at ANL-W is performed at the division level. Each Division Director is responsible for designating a PAAA reviewer who is assigned the task of reviewing all sources for potential PAAA matters and entering those deficiencies into the DIOT system. Typically, a single individual in each division is assigned this responsibility which, in the view of the Laboratory, promotes consistency and historical knowledge.

Our survey of the scope of the sources reviewed for this purpose indicated an appropriate breadth of material. They include Nonconformance Reports, Minor Event Reports, ORPS reports and both internal and external assessments. The reviewer is assisted in the screening process by the DIOT checklist. Procedure AWP 3.4 requires the reviewer to provide a justification for each checklist item that is designated as a potential PAAA issue. A record of the screening decisions included on the checklist is generated and maintained in the DIOT system and is available for review by the site PAAA coordinator.

The OE review of screening records confirmed that PAAA issues were being identified in a broad range of sources. The issues identified in the DIOT summary report for 2003 were consistent with DOE expectations and nothing was identified that should have been placed on the system but was omitted. Further, we concluded that items were being screened and identified in a timely manner. In our site visit, screeners from several divisions were interviewed and, for the most part, they were knowledgeable about ANL-W review procedures and nuclear safety rules. One exception was a newly assigned reviewer who had been serving in this role for about a month, but had received no training. The site PAAA coordinator agreed that the employee needed to be mentored in a timely manner. This problem will be mitigated in the future when there is a greater formality in the training process of all reviewers.

This review identified the following strengths in this area:

- A. A broad range of source documents are being screened for PAAA deficiencies.
- B. The screening and PAAA determinations are being performed in a timely manner and no significant backlog of unreviewed issues was found.
- C. The Division designees for the most part are knowledgeable about the procedures and subject matters experts and mentors are available to assist in reviews.

### IV. Noncompliance Reporting

We reviewed noncompliance reporting for two purposes. Initially, we reviewed whether decisions to report matters into the NTS were in accordance with DOE guidance. Second, we determined whether noncompliances were reported in a timely manner in accord with such guidance.

The ANL-W PAAA coordinator has ultimate responsibility for reviewing items placed on the DIOT and deciding which items should be tracked internally and which items should be reported on the NTS system. Reviewers in each division notify the coordinator when candidate items are placed in the DIOT system.

ANL-W site procedures provide for trending reviews at both the division level and the PAAA coordinator level. In addition, each division performs an annual review of deficiencies and events and issues a report documenting the trends. Procedure AWP 3.4 requires the PAAA coordinator to review PAAA deficiencies on a monthly basis for trends and report those trends on a quarterly basis. Our interviews found that no documentation was generated in connection with these reviews, although it was noted that an adverse trend in procedural compliance was identified and reported in NTS-CH-AA-ANLW-ANLW-2003-0001.

NTS reports dropped from six in 2001 to only one in 2003. Our review of 2003 ORPS reports determined that several matters that met NTS reporting criteria for programmatic and/or recurring quality problems were not reported into the system. Two examples are CH-AA-ANLW-ANLW-2003-0001 and CH-AA-ANLW-ZPPR-2003-0001. Both of these ORPS reports identified programmatic weaknesses in several quality processes. During our interviews, it was stated that these deficiencies were rolled up into the 2003 NTS report, NTS-CH-AA-ANLW-2003-0001. A reading of the plain language of that report suggests that neither ORPS report was adequately identified nor addressed. Each of these ORPS reports should have been separately reported. Subsequent to the PAAA program review site visit, these matters were placed into the NTS. Our review of the remaining criteria for reporting indicated that ANL-W decisions were in conformance with guidance. We also found that, in the context of the limited reporting placed in the NTS, such matters were reported in conformance with DOE timeliness guidelines.

The OE review of ORPS events in 2003 identified another area that should have been evaluated for a programmatic or recurring trend and NTS reporting. Training deficiencies were identified in several 2003 ORPS reports as a primary or contributing root cause. Similar site-wide training deficiencies were identified and reported into the NTS in 2000. This issue is a candidate for reporting into the NTS at this time. It is recurring and apparently has not been resolved in a satisfactory manner since it was first reported in 2000.

This review found the following strengths in the noncompliance reporting program:

- A. With the exception of programmatic problems, PAAA deficiencies are generally being reported consistent with DOE guidance.
- B. Trending reviews of PAAA deficiencies are being performed at the Division level and reported annually.

PAAA program weaknesses identified in this subject area are:

- A. Prior to this site visit and program review, programmatic issues that met the threshold for reporting into the NTS system were inappropriately rolled up into an existing NTS report that did not address the full scope of quality deficiencies.
- B. Trending reviews for cross-cutting problems are not being effectively performed, documented and reported.

## **V. Cause Determination and Corrective Action Management**

AWP 3.4 requires a causal determination and documentation for every PAAA noncompliance identified, using the graded approach. Significant PAAA deficiencies receive a formal causal analysis using TapRoot methodology. During our review, it was confirmed that a number of personnel at ANL-W had been trained in TapRoot causal analysis methods. Our review of causal analyses, in selected ORPS reports, found them to be rigorous and comprehensive. This is a significant contrast with the findings in our program review conducted in 2000.

Corrective action management is accomplished using the DIOT system and through management reviews. All PAAA corrective actions and completion dates, including those tracked on site and those tracked in the NTS, are placed in the DIOT system. A monthly report is generated and sent to each division identifying overdue corrective actions. There is a significant difference, however, in the way NTS-related PAAA matters are tracked and the way locally tracked PAAA matters are handled. NTS corrective actions are tracked for timeliness of completion of corrective actions by the PAAA coordinator who then verifies completion of corrective actions. Changes in completion dates cannot be made without the knowledge of the site PAAA coordinator, who is responsible for placing such changes in the NTS system.

PAAA matters that are tracked locally are handled in a more informal manner. Division managers are authorized to independently change corrective action completion dates and no formal tracking is performed to monitor the timeliness of completion of corrective actions. The division reviewer is responsible for independent verification of closeouts.

In sum, there has been significant improvement in both causal determination and corrective action management of NTS reports since the last OE program review. There continue to be weaknesses in this area, however, with respect to DOE expectations. First, the responsible PAAA reviewers should monitor the timeliness of completion of corrective actions for matters that are tracked internally. Second, the ability to perform this function will be enhanced if the DIOT system is modified to permit tracking and timeliness of all PAAA- related corrective actions.

This review found the following strengths in this area:

- A. All PAAA noncompliances receive a causal determination using a graded approach.
- B. All PAAA noncompliances are entered and tracked in the DIOT.
- C. Independent verification of corrective action closure is performed.
- D. Effectiveness assessments of corrective actions are performed for matters placed in the NTS.

The following weakness was found in this area:

The timeliness of completion of individual corrective actions is not being tracked or routinely reviewed for noncompliances that are not placed on the NTS.

## **VI. Independent and Management Assessments**

ALW-W has established formal management and independent assessment processes. The procedures that govern these assessment processes are: AWP 5.6 "Periodic Management Assessments," and AWP 5.4 "Independent Assessments."

A written assessment plan for formal assessments was developed and is updated annually. The assessment schedule includes a complete assessment of each Quality Assurance Plan (QAP) area at least every three years. The Radiation Protection Program (RPP) is also assessed on a three year basis, as required by 10 CFR 835. Each formal assessment team includes a member who is a trained and certified as a lead auditor. Minimum training and qualification requirements have been established for the team leader, as well as for subject matter experts who are assigned to the team. Management assessments include formal self-assessments conducted within the organizations as well as management walk-through evaluations. The teams assigned to perform independent assessments are staffed with individuals who are independent of the organization being assessed. All findings identified during the assessments are required to be entered into the DIOT tracking system where they are screened for PAAA applicability.

OE reviewed the 2003 assessment schedule results and found most assessments were performed and completed on schedule. Selected management and independent assessment reports were also reviewed and found to be adequate. Our review did not identify any weaknesses in the assessment program.

## **VII. Conclusion**

The Price-Anderson enforcement program at ANL-W has shown dramatic improvement since our review in 2000. In particular, weaknesses in the formal procedures developed for this program have been corrected and the process implemented for noncompliance



identification and screening is generally consistent with OE's expectations. The site is screening the appropriate sources for potential PAAA issues and causal analysis of issues has been greatly improved.

However, there continue to be opportunities to improve the program. In particular, we encourage the contractor to address the training issues identified above and to enhance the corrective action management system. Trending reviews need to be performed and documented to identify potential cross-cutting problems. Finally, ANL-W needs to report all noncompliances into the NTS if they meet reporting criteria.