



Department of Energy

Washington, DC 20585

January 14, 2003

Mr. E. Keith Thomson

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Fluor Hanford, Inc.

P.O. Box 1000

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Richland, WA 99352

Subject: Price-Anderson Amendment Act (PAAA) Program Review

Dear Mr. Thomson:

During the period of November 4-5, 2002, the Office of Price-Anderson Enforcement (OE) conducted a review of the Fluor Hanford, Inc. (FHI) PAAA Program implemented at the Hanford Site. Our review included an evaluation of site processes to screen noncompliances for applicability under the PAAA, reporting and tracking in the Department of Energy's (DOE) Noncompliance Tracking System (NTS) and local internal tracking systems, and correcting deficiencies in a timely manner.

Overall, we found your program to be effective, with necessary program elements in place. The review identified several program strengths and weaknesses in your program, which are summarized below and are described in more detail in the enclosed report.

PAAA Program Strengths

- Strong senior management program ownership and involvement.
- Formal procedures that adequately address all PAAA Program areas.
- Sufficient staffing of PAAA personnel who are knowledgeable and well qualified by way of an established training program.
- Extensive screening of numerous performance data sources for potential PAAA issues by the Nuclear Safety Regulatory Compliance Officers (NSRCO).
- Effective tracking and closure of PAAA noncompliances through integration with the site-wide corrective action management (CAM) process.
- Independent verification closure package reviews by the NSRCOs.

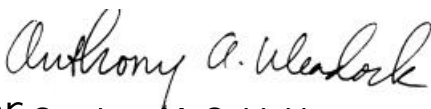
PAAA Program Weaknesses

- FHI subcontractor performance information is not consistently being reviewed for PAAA compliance issues.

- No formal site trending process exists that facilitates the identification of repetitive or programmatic PAAA issues.
- Causal determinations for NTS PAAA reports with multiple occurrences do not consistently evaluate all of the events, their causes, and/or programmatic issues. A contributing factor is that FHI procedures provide only limited guidance and requirements for causal determinations.
- The Waste Management Project is not always timely in completing corrective actions when compared to other FHI projects.

Failure to correct the improvement items noted above may result in a potential reduction or loss of mitigation as described in the DOE Enforcement Policy, 10 CFR 820 Appendix A, for any future FHI enforcement actions. Details of the OE review are provided in the enclosure. No reply to this letter is required. If you have any questions, please contact Peter Rodrik of my staff at (301) 903-5092.

Sincerely,


for Stephen M. Sohinki
Director
Office of Price-Anderson Enforcement

Enclosure: FHI PAAA Program Review

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Price-Anderson Amendments Act Program Review Fluor Hanford Incorporated (FHI)

I. INTRODUCTION

The Department of Energy (DOE) Office of Price-Anderson Enforcement (OE) has evaluated the Price-Anderson Amendments Act (PAAA) Program implemented by Fluor Hanford, Inc. (FHI) at the Hanford Site. OE performed this evaluation in accordance with DOE Enforcement Guidance Supplement (EGS) 00-02, *Price-Anderson Amendments Act (PAAA) Program Reviews*. Specifically, OE evaluated FHI's processes for nuclear safety noncompliance screening and identification, reporting either internally or to the DOE's Noncompliance Tracking System (NTS), cause determinations, and corrective action implementation and closure.

Evaluation activities included a review of pertinent contractor procedures, assessment reports, and other records. Additionally, OE selected the Spent Nuclear Fuels Project (SNFP), the Waste Management Project (WMP), and the Plutonium Finishing Plant (PFP) for a review of specific deficiency reports and noncompliance screenings based upon the types and volume of activities performed for each of these projects. OE conducted interviews of FHI personnel responsible for the contractor's PAAA program implementation and reviewed additional documents during an onsite visit conducted November 4-5, 2002. The results of this evaluation, including the PAAA Program strengths and weaknesses, are provided below.

II. GENERAL PAAA PROGRAM IMPLEMENTATION

FHI has established a PAAA Program with formal implementing procedures, assigned staff, and required training. The procedures adequately describe the PAAA Program elements and establish requirements and personnel responsibilities sufficiently for implementation. The FHI PAAA Program Procedures are listed below:

Identification, Reporting, and Tracking Nuclear Safety Noncompliances, HNF-PRO-2243 - Establishes FHI requirements and guidance for the identification, evaluation, reporting, tracking and closing of potential nuclear safety noncompliances.

Corrective Action Management, HNF-PRO-052, - Provides direction to management and employees in meeting quality improvement requirements through performance of corrective action management.

A PAAA Coordinator has been assigned with adequate authority and independence to make necessary decisions. Each Facility or Project Manager is responsible to assign a Nuclear Safety Regulatory Compliance Officer (NSRCO) who is responsible for the identification and screening of potential PAAA noncompliances. The Facility or Project Managers are also responsible to ensure adequate resources are assigned to effectively implement the NSRCO responsibilities.

The PAAA Program procedures require each NSRCO to complete PAAA training prior to their job assignment. Facility and Project Managers are required to complete a PAAA Overview training course. The PAAA training is formally established, comprehensive in scope, and well documented with training certifications maintained for the NSRCOs. Our interviews with NSRCOs concluded they were knowledgeable of the PAAA Program noncompliance identification and screening process and reporting thresholds.

FHI is performing periodic Management Assessment of the PAAA Program implementation. OE considers these self-assessments and, when necessary, performance enhancements, to be an important part of maintaining an effective program. The OE team also noted that FHI had not recently performed any independent PAAA Program assessments prior to notification by OE of this review.

Strengths:

- Formal procedures that adequately address all PAAA Program areas
- Sufficient staffing who are knowledgeable and qualified
- An effective and comprehensive training program with courses tailored to both the NSRCOs and Facility/Project Managers
- Management Assessments are performed of the PAAA Program implementation

III. IDENTIFICATION AND SCREENING OF NONCOMPLIANCES

FHI procedure *Identification, Reporting, and Tracking of Nuclear Safety Requirement Noncompliances*, HNF-PRO-2243, Revision 3, establishes FHI requirements for the identification, evaluation, reporting, tracking and closing of potential nuclear safety noncompliances. The procedure requires that NSRCOs screen a variety of source documents to determine if potential nuclear safety noncompliances exist. The source documents include the following: (1) incoming correspondence documenting potential problems, (2) deficiencies, or noncompliances, (3) Corrective Action Requests, (4) Assessment Reports, (5) Deficiency Reports, (6) Nonconformance Reports, (7) Occurrence Reports, (8) Radiological Problem Reports, and (9) negative trending information specified by management.

By procedure, NSCROs must document the results of their PAAA screenings. The NSCROs may document the screening by completing a Compliance Officer Report or

by direct input in the FHI PAAA internal contractor database. Non-NTS reportable PAAA noncompliances are locally tracked in the FHI Deficiency Tracking System.

HNF-PRO-2243 does not specify timeframes for the NSRCOs in conducting their screening reviews. However, the procedure references and the contractor's PAAA program integrates its Corrective Action Management System (*Corrective Action Management*, HNF-PRO-052), which establishes timeframes for reporting deficiencies into the FHI Corrective Action Management System.

The OE evaluation found that the NSRCOs are screening a wide variety of source documents for noncompliances and are documenting these screenings as required by HNF-PRO-2243. The OE evaluation noted that HNF-PRO-2243 does not provide specific criteria for the NSRCOs in making decisions regarding PAAA applicability for the deficiencies described in the source documents. Rather, the NSRCOs are expected to apply their knowledge from their formal training and use the PAAA rules directly in making decisions associated with the identification of PAAA noncompliances. OE found that in practice the NSRCOs were adequately identifying PAAA noncompliances from the source documents. Nonetheless, FHI should periodically assess the NSRCOs performance to ensure they are consistently meeting FHI's PAAA Program requirements and expectations.

One area of PAAA noncompliance identification that OE found to be less than adequate was the review of potential subcontractor/vendor noncompliances. FHI personnel told the OE team that FHI quality audits of subcontractors/vendors and other potential sources of quality problems were not being reviewed to identify PAAA issues. The one exception was that Nonconformance Reports generated at receipt inspections were routinely being reviewed for PAAA noncompliance.

Strengths:

- NSRCOs are screening a wide variety of source documents
- PAAA Noncompliance screening decisions are being documented
- Screening decisions are consistent with OE expectations
- PAAA Noncompliances are tracked in the FHI Deficiency Tracking System

Weaknesses:

- FHI subcontractor/vendor issues are not consistently being reviewed for nuclear safety noncompliances.

IV. EVALUATION FOR REPORTABILITY

The FHI PAAA program procedure, HNF-PRO-2243, requires the NSRCOs to make the initial review and determination of NTS reportability. The training provided to the NSRCOs includes the threshold criteria for NTS reporting. When the NSRCO determines a noncompliance meets the NTS reporting threshold, he/she prepares an

NTS report and verification package and submits these to the Facility or Project Manager for review. The Facility or Project Manager is responsible for approving the NTS report and verification package. This approval verifies that information in the NTS report and verification package are true and accurate in all material respects.

During our discussion with representative NSRCOs, OE inquired about the resolution process should a Facility or Project Manager decline to approve the NTS report. The OE team was informed that there had been no instances where approval of an NTS report was declined. However, should a Facility or Project Manager decline to approve the NTS report, the process provides that the NSRCO would inform the PAAA Coordinator who would then facilitate a senior management review and decision on NTS reportability.

A number of PAAA noncompliances from the FHI internally tracked database of screened issues were reviewed to determine if the decision process was consistent for NTS reporting. In addition, several other sources of potential PAAA noncompliances were reviewed including occurrence reports (ORPS) and assessment reports to identify potential NTS issues. Our review concluded that the screening process for NTS reporting was generally consistent with DOE expectations with one exception as noted below.

OE identified a weakness with the lack of a process to evaluate non-NTS reportable noncompliances for repetitiveness and/or programmatic implications from a site-wide perspective. NSRCOs evaluate noncompliances for repetitiveness as part of the screening process; however, this is limited to a single facility or division project perspective. The FHI corrective action management (CAM) database includes noncompliances for the entire site; however, the data is not queried at an established periodicity to determine if site-wide trends are developing. Additional mechanisms are in place (Facility Managers Forum and CAM trending program); however, OE's review and discussion with FHI personnel indicate they do not provide an effective site-wide trending perspective.

OE identified two examples of repetitive and/or programmatic nuclear safety noncompliances that had not been screened or reported in the NTS. One example involved repeated failures to establish or maintain control of airborne radioactivity areas (ARA) at PFP. DOE RL issued a letter to FHI in July 2002 that identified concerns over several ARA posting violations. In addition, our review identified multiple ORPS reports in 2002 involving ARA control and posting violations in PFP. No evidence was provided that demonstrated the issues were screened for recurring or programmatic NTS reportability.

The second example involved a common issue identified in two separate FHI Facility Evaluation Board (FEB) assessments performed at the SNFP in 2001 and at the WMP in 2002. The FEB reviewed 18 operating and maintenance procedures at the SNFP and found that 14 procedures did not have a documented Job Hazard Analysis. The FEB also found that only 45 of 500 operating procedures had received the required

hazards analysis at the WMP. The FEB also noted a similar finding at the WMP in a DOE surveillance issued in October 2001. Both of the related FEB findings were screened individually and found to be minor. No evidence of a review of these issues for recurring or programmatic NTS reportability was available.

In addition, OE looked at the number of NTS reports that were based upon an event (i.e. an ORPS report) rather than proactively self-identified. A high percentage of NTS reports originating from events may reflect a weakness in management assessments and/or other processes to self identify quality problems before the event occurs. FHI estimated during the past year approximately 80% of its NTS reports were based upon ORPS reports. This statistic represents a significant increase from previous years.

OE reviewed the timeliness of reporting into NTS and in general found no timeliness concerns. One exception was identified involving NTS reports that were used to incorporate two or more ORPS reports. During the past year a number of roll-up NTS reports were issued. In some cases, ORPS reports continued to be added to the NTS, as updates, many months after the initial generation of the NTS. In one particular roll-up NTS report, the NTS updates were three to five months after the issue of the ORPS report.

Strengths:

- FHI NTS reporting decisions for event-related noncompliances are generally consistent with OE guidance
- FHI NTS reporting is generally timely

Weaknesses:

- There is no formal process for FHI to periodically perform trending reviews to identify potential repetitive or programmatic PAAA noncompliances.
- A high percentage of FHI NTS reports during the past year were event related when compared to prior years, indicating a negative trend.

V. ROOT CAUSE DETERMINATION/CORRECTIVE ACTION CLOSURE

The FHI PAAA program procedure, HNF-PRO-2243, requires the contractor to complete a formal root cause and corrective action plan for noncompliances that are NTS reported. The NTS corrective action plan must include closure deliverable requirements including a schedule for each proposed action. Once corrective actions have been completed, a corrective action verification package containing objective evidence of implementation is submitted to the NSRCO for a required validation review. In some cases, the NSRCOs have sampled implemented correction actions within their assigned facilities or projects to determine corrective action effectiveness. These effectiveness reviews are not required or conducted in all cases. The NTS noncompliances and corrective action plans are tracked formally in the FHI site-wide

CAM database. OE has recently noted a few DOE sites are conducting these types of reviews, which are considered a good feedback improvement practice. FHI should consider institutionalizing the reviews.

Non-NTS reportable PAAA noncompliances are also tracked and dispositioned by way of the contractor's CAM process. A graded approach is used, based on safety significance, in determining the type (formal or informal) of root cause analysis and corrective action process. As a minimum, all non-NTS noncompliances require a documented root cause determination, corrective action(s), closure statement, and tracking within the FHI CAM database.

During the review OE sampled selective NTS closure packages. The packages contained completed root cause analyses and objective evidence for the completion of required corrective actions. One problem area was noted as follows.

OE reviewed the closure packages for FHI NTS Reports NTS-RL-PHMC-PFP-2001-0003 and 2002-0002. These NTS reports contained a roll-up of several distinct but similar occurrences over a set period of time. Some of the additional occurrences were added subsequent to the completion of the NTS report root cause analysis. No documented evidence existed demonstrating the contractor evaluated or identified all of the common or programmatic causes for these similar occurrences and noncompliances. Consequently, it is also unclear whether or not the corrective action plans would be sufficient in addressing the additional occurrences.

OE also noted that both the PAAA and CAM program procedures contained only limited requirements and guidance for conducting root cause analysis. Although PAAA noncompliances are required to have documented cause determinations the following items are not addressed; extent of condition reviews, when an investigating team is needed, application of specific techniques or methods, limits on scope of analysis (i.e. see roll-up issue discussed above), and for event reviews, critical analysis of contractor self-assessment process failures. OE did not identify any specific examples of deficient root cause determinations other than the roll-up examples noted above.

OE reviewed corrective action closure timeliness for the PFP, SNFP, and the WMP. With the exception of the WMP, corrective actions appeared to be completed in a timely matter. FHI supplied FY 2002 data showing the percentage of assigned corrective actions completed by their scheduled due date was 86% for PFP, 93% for SNFP, and only 58% for Waste Management.

Strengths:

- FHI has developed a single site-wide CAM process that integrates the tracking and closure of PAAA noncompliances
- NSRCOs review verification closure packages for NTS corrective actions

Weaknesses:

- Only limited requirements and guidance is provided for the conduct of root cause determinations
- Documented causal determinations for NTS reports with multiple occurrences do not evaluate all of the events, their causes, and/or potential programmatic issues
- The WMP is not always timely in completing assigned corrective actions when compared against other site projects

VI. CONCLUSIONS

Overall, FHI has implemented an effective PAAA Program that adequately addresses the voluntary self-regulatory program goals. Many notable strengths were observed as discussed in the previous report sections. No formal response to this review is required. However, the contractor should evaluate and address, as necessary, the observed weaknesses since these weaknesses have the potential to lead to additional noncompliances or limit mitigation for prompt identification and corrective action in future enforcement actions.