June 7, 2006

MEMORANDUM TO: James E. Dyer, Director
Office of Nuclear Reactor Regulation

THRU: Michael E. Mayfield, Director
Division of Engineering
Office of Nuclear Reactor Regulation

FROM: Paul F. Prescott, Senior Operations Engineer **/RA/**
Quality and Vendor Branch A
Division of Engineering
Office of Nuclear Reactor Regulation

SUBJECT: TRIP REPORT BY DIVISION OF ENGINEERING STAFF OF THE NUCLEAR PROCUREMENT ISSUES COMMITTEE AUDIT AT AREVA NP PLANTS SECTOR (PARIS) AND AREVA NP CHALON/SAINT MARCEL MANUFACTURING FACILITY

On May 9-19, 2006, Paul Prescott, Kerri Kavanagh, and Victor Hall of the Division of Engineering (DE) observed the performance of a Nuclear Procurement Issues Committee (NUPIC) audit conducted at Areva NP Plants Sector located in Paris, France, and Areva NP Chalon/Saint Marcel, located in Saint Marcel, France. The purpose of the observation was to assess the NUPIC quality assurance audit process used for suppliers of components to the nuclear industry. The DE staff also provided clarification on issues related to NRC regulations, including input for several findings regarding inadequacies in the 10 CFR Part 21, "Reporting of Defects and Noncompliance" program for both Areva facilities. Attached is the trip report of the NRC staff's observations and a list of the persons contacted during the trip. The content of this report may be of interest to the Commission and it is recommended that it be forwarded to the Commission.

Enclosure: As stated

CONTACT: Paul Prescott, DE/EQVA
301-415-3026

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DATE	6/6/2006	6/6/2006	6/6/2006	6/6/2006	6/7/2006

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NRC FOREIGN TRIP REPORT

Subject

This trip report documents observations by members of the Nuclear Regulatory Commission (NRC) Office of Nuclear Reactor Regulation (NRR), Division of Engineering (DE) of a Nuclear Procurement Issues Committee (NUPIC) audit conducted on May 9-19, 2006, at Areva NP's facilities in Paris and Saint Marcel, France. In addition, the report documents observations of their 10 CFR Part 21 process.

Dates of Travel and Countries/Organization Visited

May 9-12, 2006: Areva NP Plants Sector, Paris, France
May 15-19, 2006: Areva NP Chalon/Saint Marcel, Saint Marcel, France

Author, Title and Agency Affiliation

Paul F. Prescott, Team Leader
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Quality and Vendor Branch A
Division of Engineering
Office of Nuclear Reactor Regulation

Sensitivity

There were no documents removed from the facility during the conduct of the audit. This document is available to the public (ADAMS Accession # ML061510646).

Background/Purpose

This trip report documents the staff assessment of a NUPIC audit conducted at Areva NP Plants Sector (Paris) and Areva NP Chalon/Saint Marcel on May 9-19, 2006. Areva NP Plants Sector performs engineering services to U.S. nuclear utilities in accordance with ASME Section III and/or Appendix B to 10 CFR Part 50 requirements. Areva NP Chalon/Saint Marcel facility manufactures safety-related and ASME code items and components. The eight-person NUPIC audit team included representatives from Exelon, Public Service Electric and Gas (PSEG), Florida Power and Light (FP&L), Ringhals AB (Sweden), and Nuclear Power Plant Krsko (NEK - Slovenia).

At the request of NUPIC, representatives of the NRR Division of Engineering (DE) observed the NUPIC audit at the Areva NP facilities. The NUPIC Chairman requested NRC participation to help foster a more comprehensive audit and to allow Areva NP to experience first hand input from the U.S. nuclear regulator.

NRC/NUPIC Interface

NUPIC was formed in 1989, by a partnership involving all domestic and several international nuclear utilities. The NUPIC program evaluates suppliers furnishing safety-related components and services and commercial grade items to nuclear utilities.

The purpose of the staff's observation of this NUPIC audit was to ensure the audit process remains an acceptable alternative to the NRC vendor inspection/audit program. The NRC staff continues to rely on the effectiveness of the NUPIC audit process for evaluating the implementation of quality assurance (QA) programs of suppliers to the nuclear industry.

Abstract: Summary of Pertinent Points/Issues

Oversight of the NUPIC audit process is viewed by the staff as particularly relevant for two reasons: (1) Licensees and the NRC continue to rely on NUPIC for oversight of current suppliers to the nuclear industry and; (2) NRC may rely on NUPIC for oversight of suppliers during construction of future generation reactors. The staff anticipates that new suppliers, both domestic and international, may enter the nuclear supplier business due to an expanded nuclear marketplace. The staff has had ongoing discussions with the NUPIC Steering Committee on the role NUPIC may take in evaluating these new suppliers during new plant construction. The staff will need to evaluate NUPIC's capabilities and plans for oversight of the potential expanding supplier base for the next generation of nuclear plants.

Discussion

The NUPIC audit scope was to determine the acceptability and verify the effective implementation of Areva NP's quality assurance programs in accordance with the requirements of Appendix B to 10 CFR Part 50. The NUPIC audit team utilized the NUPIC audit checklist, that is essentially divided into the 18 criteria of Appendix B for this audit. This checklist was supplemented by ASME, ANSI and other recognized consensus standards relevant to the supplier being audited. The NUPIC audit checklist can be downloaded from the NUPIC web site (www.nupic.com).

The performance-based NUPIC checklist was used by the team to assess the adequacy and effectiveness of the Areva NP's quality programs. The audit checklist delineated the activities to be examined within each section and how to utilize the referenced data sheets to record the objective evidence reviewed for each section. The review included an analysis of Areva NP's order entry process, an examination of design, software QA, procurement and material controls associated with specific utility orders, and field (shop) observations of fabrication, assembly, special processes, tests, and inspection activities. Also, the NUPIC audit team completed a review of calibration of measuring and test equipment, handling, storage, and shipping activities.

The staff observed all aspects of the team's conduct of the audit at both Areva NP facilities. This started with the audit team meeting conducted the day before the audit commenced, to go over details of the audit and all audit expectations. For observance of the conduct of the audit, the staff divided the audit checklist review areas between the three staff members. The staff then observed performance of the auditors as they conducted a performance-based review of a

specific audit checklist section. The staff observed how documents were selected for review and the adequacy of the review, interviews conducted of Areva NP technical personnel, and observed on-going work and testing activities in Areva NP Chalon/Saint Marcel manufacturing facility. The staff observed the daily meetings the audit team conducted internally, the daily debrief with Areva NP personnel, and the formal exit meetings with Areva NP management at both locations.

The checklist sections were divided among the audit team members, with one of the four Exelon auditors acting in a managerial function as the audit team lead. One representative from PSEG, FP&L, Ringhals AB, and NEK completed the NUPIC audit team. In addition to the generic audit checklist, the NUPIC audit team focused on: design controls for software verification and validation; ensuring proper use of measuring and test equipment, and non-destructive examination (NDE); and welding activities.

The audit team reviewed the Areva NP Plants Sector and Areva NP Chalon/Saint Marcel QA manuals and other lower tier implementing documents such as procedures and work instructions. The audit was performed by reviewing the requirements of the QA programs and supporting implementing procedures, evaluating the documentation associated with the activities that had been performed, and discussing the activities with Areva NP personnel. Observations of ongoing work and inspection activities were also performed at the Areva NP Chalon/Saint Marcel manufacturing facility.

All NUPIC audit team members were observed by the staff in part or in whole on their portion of the audit conducted. Specific areas of the checklist that the staff focused on for review were adequately addressed by members of the audit team. In general, the audit team performed a sound, thorough, performance-based review of the audited areas.

In addition, the NUPIC audit team identified several preliminary findings and a recommendation with the implementation of the quality program and regulatory requirements. These preliminary findings and recommendation were discussed in detail with the Areva NP management during both exit meetings. The findings and recommendation represented the following areas: design control, instructions procedures and drawings, report of nonconforming materials, parts, or components (10 CFR Part 21), corrective action, and quality assurance records.

The staff reviewed implementation of 10 CFR Part 21, “Reporting of Defects and Noncompliance,” at the Areva NP facilities. The staff observed problems with Part 21 programs in the area of adequate procedure to evaluate a potential Part 21 reportable condition at other supplier facilities.

The staff provided three findings for inclusion in the NUPIC team audit report at the Areva NP Plants Sector facility in Paris. The first finding was for Areva NP’s failure to have an appropriate procedure to evaluate a potential Part 21 reportable condition. The second finding was for the lack of guidance in Areva NP’s Supplier Nonconformance Form to evaluate a nonconformance for a potential Part 21 concern. The third finding was inadequate 10 CFR Part 21 training. Specifically, the training incorrectly defined the point of delivery of a basic component as when the purchaser has taken control over the item. The training stated, “If purchaser performs receipt inspection, then delivery would not occur, and no notification to the

NRC by the purchaser would be required if the item is rejected." Due to the number of findings related to Areva NP Plant Sector's Part 21 program, the staff had in-depth discussions on the proper implementation of Part 21 with Areva NP management and personnel.

The staff provided one finding for inclusion in the NUPIC audit report at the Areva NP Chalon/Saint Marcel manufacturing facility. The finding was for Areva NP's failure to properly account for the time between discovery of the nonconformance and the forwarding of the nonconformance to the Quality Division NQ Plants Sector in Paris for evaluation in accordance with 10 CFR 21.21(a)(1). The Areva NP Plants Sector is responsible for the evaluations of a potential Part 21 for the Areva NP Chalon/Saint Marcel and Jeumont SA facilities. Additionally, the staff provided guidance to the NUPIC audit team on the Part 21 finding with multiple examples related to procedure implementation.

The staff discussed the findings at the exit meetings conducted in Paris and Saint Marcel. To ensure that the findings are adequately addressed by Areva NP at both facilities, the NUPIC Team Leader will forward their response to the staff for review of the proposed resolutions for closure.

Conclusions

The NUPIC audit team leader conducted effective daily briefings with the audit team and Areva NP on each day's issues and potential findings. These daily briefings enhanced the audit team's understanding of issues and findings and provided an effective feedback mechanism from experienced audit team members on the significance of individual team findings. The staff noted that the NUPIC team leader was effective at communicating findings to Areva NP's management. The auditors supported their findings with comprehensive objective evidence and went to sufficient depth in their respective areas of focus. Overall, the staff concluded, based on the review of the audit areas covered, that the NUPIC audit process was effectively implemented by the audit team and resulted in sound performance-based findings for failure to adequately implement QA program requirements.

Pending Actions/Planned Next Steps for NRC

This NRC assessment was one of at least two planned for 2006. The assessment process was outlined to NUPIC members in a March 2004 NUPIC meeting. Since that meeting, the NRC has planned and conducted two assessments a year of NUPIC audits or commercial grade surveys to ensure the adequacy of the NUPIC joint utility audit process. Depending on the adequacy of the response from Areva on the 10 CFR Part 21 findings, the staff may conduct a followup inspection.

Points for Commission Consideration/Items of Interest

Issues with 10 CFR Part 21 implementation have been noted during this audit observation and at other audit observations of foreign suppliers who are manufacturing components for the US nuclear industry. Similar 10 CFR Part 21 issues have also been found at recent inspections of domestic suppliers.

List of Meeting Participants

U.S. NRC	**Position**
Paul F. Prescott	Team Leader, Senior Operations Engineer
Kerri Kavanagh	Senior Reactor Engineer
Victor Hall	Electrical Engineer
NUPIC	
James Perry	Team Leader, Lead Auditor, Exelon
Mohammad Molaei	Corporate Design Engineering Manager, Exelon
Daniel Pasquale	Auditor, Exelon
Nagui Youssef	Senior Engineer, Exelon
Rick Weis	Resident Inspector, Florida Power and Light
Ingvar Kryh	Lead Auditor & Senior Engineer, Ringhals AB
Romeo Biscan	QA Engineer, Nuclear Power Plant Krsko (NEK)
Areva NP @ Paris	
Thierry Zumbihl	Vice President Quality Management, Plants Sector
Thierry Tampier	Quality Manager of the Quality & Environmental Management System Department, Plants Sector
Francis Muguet	Deputy Manager of the Quality & Environmental Management System Department, Plants Sector
Jean Dehoux	Quality Manager, EPR Projects, Plants Sector
Areva NP @ Chalon/Saint Marcel	
Pascal Van Dorsselaer	Plant Manager
Gilles Frontiere	Manager, Quality Division
Bernard Chapelle	Deputy Manager, Quality Division
Marc Deziz	Quality and Continuous Improvement
Michael Street	Liaison Project Manager