

August 25, 2006

Ms. Emily Mayhew  
Vice President, U.S. Region Quality  
Areva NP, INC.  
3315 Old Forest Road  
Lynchburg, VA 24506

SUBJECT: NRC INSPECTION REPORT 99901359/2006-201 AND NOTICE OF  
NONCONFORMANCE

Dear Ms. Mayhew:

On July 18-21, 2006, the U.S. Nuclear Regulatory Commission (NRC) conducted an inspection at the Areva NP Inc., facility in Lynchburg, Virginia. The purpose of this inspection was to verify that Areva NP Inc. has implemented a Part 21 program that meets NRC requirements and to review the Areva NP Inc. corrective action program and cross audit process. The NRC inspectors reviewed the status of an interim report of an evaluation of a deviation pursuant to 10 CFR Part 21, as part of this review. The enclosed report presents the details of that inspection. This was a limited scope inspection which focused on the areas of 10 CFR Part 21, the corrective action program, and the cross audit process. Additionally, this NRC inspection report is not intended to endorse or approve your overall quality assurance or 10 CFR Part 21 program.

During this inspection it was found that the implementation of your quality assurance program failed to meet certain NRC requirements. Specifically, as required by the corrective action program, various Areva NP Inc. user groups failed to complete the condition reports (CRs) by the assigned due date or complete the initial screening within seven days. Additionally, an Areva NP Inc. procedure did not require adequate justification to be documented for determining that a CR was not potentially reportable under 10 CFR Part 21. The specific findings and reference to the pertinent requirements are identified in the enclosure of this letter.

Two nonconformances are cited in the enclosed Notice of Nonconformance (NON) and described in detail in the enclosed report. You are requested to respond to the NON, and should follow the instructions specified in the enclosed NON when preparing your response.

In addition, the NRC inspectors identified examples where subcontractors to Areva NP Inc. are not implementing 10 CFR Part 21. The examples that were identified specifically demonstrated that certain foreign suppliers were not performing Part 21 evaluations of deviations and/or failures to comply for the determination of reporting of potential defects that could cause a substantial safety hazard. Issues with 10 CFR Part 21 implementation have been noted during NRC observations of Nuclear Procurement Issues Committee (NUPIC) audits of foreign suppliers who are manufacturing components for the US nuclear industry.

In accordance with §2.390, "Public inspections, exemptions, requests for withholding," of 10 CFR Part 2, "Rules of Practice for Domestic Licensing Proceedings and Issuance of

Orders," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room (PDR) or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

**/RA/**

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

Enclosures: As Stated

Orders," a copy of this letter, its enclosures, and your response will be made available electronically for public inspection in the NRC Public Document Room (PDR) or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the Public without redaction.

Sincerely,

**/RA/**

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

Enclosures: As Stated

DISTRIBUTION:

MMayfield  
GImbro  
NChokshi  
DFThatcher  
HHamzehee  
NRC Docket File #99901359  
BRogers (hard copy)  
MLintz  
RPMcIntyre  
KAKavanagh  
BDavis

ADAMS Accession No.: **ML062400092**

: Publicly Available      9 Non-Publicly Available      9 Sensitive      : Non-Sensitive

OFFICE	EQVA/DE	BC:EQVA/DE	D:DE
NAME	KKavanagh	DThatcher	MMayfield
DATE	8 / 25 /2006	8 / 24 /2006	8 / 25 /2006

**OFFICIAL RECORD COPY**

## NOTICE OF NONCONFORMANCE

Areva NP, INC.  
Lynchburg, Virginia

Docket Number 99901359  
Inspection Report Number 2006-201

Based on the results of a Nuclear Regulatory Commission (NRC) inspection conducted July 18-21, 2006, of activities performed at Areva NP, INC., Lynchburg facility, it appears that certain activities were not conducted in accordance with NRC requirements.

1. Criterion XVI, "Corrective Action," of Appendix B to 10 CFR Part 50, states, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken shall be documented and reported to appropriate levels of management.

Areva NP Plants Quality & Environment Management (QEM) Manual (QM DC 55) Revision F, dated March 05, 2005, Section 5.5.2, "Corrective Actions," states, in part, that the QEM Liaison Officer is responsible for monitoring the corrective action issued within the regional local unit and is responsible for ... making sure that corrective action requests are processed on schedule by organizations in charge.

Areva NP Inc. Administrative Procedure No. 1717-06, Revision 01, "Corrective Action Program (WebCAP)," dated October 7, 2005, Section 8.6, "Requesting CR Extensions," requires the assigned individual or Issue Owner to submit a request for extension before the scheduled completion date (due date) is exceeded. Also, Section 8.2, "Screening Section," requires that the Issue Owner complete the screening section of the condition report (CR) within 7 calendar days of the CR being submitted.

Contrary to the above, during the NRC inspectors review of the implementation of the CR process, specific CR documentation, and a July 19, 2006, computer WebCAP report of overdue CRs by various user groups, it was identified that 34 CRs had exceeded their required completion due date and 8 CRs had exceeded the initial 7-day screening time frame. This issue has been identified as Nonconformance 99901359/2006-201-01.

2. Criterion V, "Instructions, Procedures, and Drawings," of Appendix B to 10 CFR Part 50, states, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings.

The Areva NP Plants QEM Manual, Section 1.4 states, in part, that the quality and environment records are records which provide objective evidence of the activities carried out or the results of these activities.

Areva NP Inc. Administrative Procedure 1717-06, Revision1, establishes, in part, the process for determining if a nonconformance/problem/concern needs to be evaluated for reporting under 10 CFR Part 21. Specifically, Section 7 defines a Safety Significant issue as an issue (nonconformance) identified in a CR that is a potential deviation and requires evaluation using the discovery process outlined in Areva NP Inc. Administrative Procedure 1707-01.

**ENCLOSURE 1**

Areva NP Inc., "Records Management Program Manual (IEI)," Revision 20, dated May 22, 2006, states, in part, that all Part 21 documentation is considered a lifetime record, stored as a scanned image.

Contrary to the above, the NRC inspectors determined that Areva NP Inc. Administrative Procedure No. 1717-06, Revision 01, did not require adequate justification to be documented for determining a CR was not potentially reportable under 10 CFR Part 21.

Please provide a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Director, Division of Engineering, Office of Nuclear Reactor Regulation, within 30 days of the date of the letter transmitting this Notice of Nonconformance. This reply should be clearly marked as a "Reply to Notice of Nonconformance" and should include for each nonconformance: (1) the reason for the nonconformance, or if contested, the basis for disputing the nonconformance, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further noncompliances, and (4) the date when your corrective actions will be completed. Where good cause is shown, consideration will be given to extending the response time.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. Agency-wide Documents Access and Management System (ADAMS) is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection, described in 10 CFR 73.21.

Dated this 25<sup>th</sup> day of August 2006.

**U.S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION**

Report No: 99901359/2006-201

Organization: Areva NP, INC.  
3315 Old Forest Road  
Lynchburg, Virginia 24506

Vendor Contact: Ms. Tara Werner  
Quality Audits and Programs Manager  
(434) 832-2836

Nuclear Industry: Areva NP, Inc., supplies fuel, engineering services, and replacement components to U.S. nuclear utilities. Areva NP Inc. is one of the three major regions under Areva NP. The other major regions include France (Areva NP SAS) and Germany (Areva NP GmbH).

Inspection Dates: July 18 - 21, 2006

Inspectors: Kerri A. Kavanagh, Lead Inspector, EQVA/DE/NRR  
Richard P. McIntyre, EQVA/DE/NRR  
Mark P. Lintz, EQVB/DE/NRR

Approved by: Dale F. Thatcher, Chief  
Quality and Vendor Branch A  
Division of Engineering  
Office of Nuclear Reactor Regulation

**ENCLOSURE 2**

## **1.0 INSPECTION SUMMARY**

The purpose of this inspection at Areva NP Inc. was to verify that Areva NP Inc. has implemented a Part 21 program that meets NRC requirements and to review the Areva NP Inc. corrective action program and cross audit process. As part of this review, the NRC inspectors reviewed the status of an interim report of an evaluation of a deviation pursuant to 10 CFR Part 21.

The inspection was conducted at Areva NP Inc.'s facility in Lynchburg, Virginia. The inspection bases were:

- Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," to 10 CFR Part 50, and
- 10 CFR Part 21, "Reporting of Defects and Noncompliance."

### **1.1 NONCONFORMANCES**

- Nonconformance 99901359/2006-201-01 was identified and is discussed in Section 3.1 of this report.
- Nonconformance 99901359/2006-201-02 was identified and is discussed in Section 3.2 of this report.

### **1.2 OBSERVATIONS**

- Observation 99901359/2006-201-01 was identified and is discussed in Section 3.1 of this report.
- Observation 99901359/2006-201-02 was identified and is discussed in Section 3.2 of this report.
- Observation 99901359/2006-201-03 was identified and is discussed in Section 3.2 of this report.

## **2.0 STATUS OF PREVIOUS INSPECTION FINDINGS**

No previous NRC inspections findings were reviewed during this inspection.

## **3.0 INSPECTION FINDINGS AND OTHER COMMENTS**

The Areva NP quality manual, "Quality Management Manual," (QMM) 56-5015885-05, dated July 7, 2005, describes the overall quality program for the corporation in the three major regions of France, Germany, and the United States of America. The QMM is divided into two major sections: Plants Quality and Environmental Management Manual (QEM) and Services Quality Management Manual (SQM). Section 2.4.4 of the Plants QEM, states, in part, that the USA Quality organization performs activities for both Plants and Services. As such, the Plants QEM and the Areva NP Inc. implementing procedures were the focus of the limited scope inspection.

### 3.1 CORRECTIVE ACTION PROCESS

#### a. Inspection Scope

The NRC inspectors reviewed the implementation of the Areva NP Inc. corrective action process. Specifically, the NRC inspectors reviewed the procedures governing the implementation of the Areva NP Inc. corrective action process to assure that those procedures provided adequate description of the corrective action process and implementation requirements and that they were consistent with the requirements of Appendix B to 10 CFR Part 50, Criterion XVI, "Corrective Action."

#### b. Observations and Findings

Areva NP Inc. Administrative Procedure No. 1717-06, Revision 01, "Corrective Action Program (WebCAP)," dated October 7, 2005, establishes the process for reporting, tracking, correcting conditions adverse to quality and significant conditions adverse to quality, and those events/conditions as directed by management, determining root cause, generic impact, and preventing recurrence. Additionally, the procedure establishes the means for the identification of and resolution to near misses, customer identified problems, and complaints.

This procedure details the electronic process of identifying and documenting apparent conditions adverse to quality that fall under the scope of the Areva NP Inc. Quality Program, investigating and correcting those adverse conditions, and closing Condition Reports (CRs) upon completion of corrective action. The CR process is used for what was previously a combination of nonconformances and corrective action requests prior to the implementation of WebCAP.

Condition Reports are the documents used by Areva NP Inc. to identify an issue, report measures and actions taken to evaluate and resolve apparent conditions adverse to quality and track required actions through completion. CRs are initiated to document issues such as (not all inclusive): noncompliance with requirements, suggested process or product improvements, problems that may lead to noncompliance if not addressed, unusual incidents, business or technical process deficiencies, and customer complaints. The CR process includes, but is not limited to actions such as: description of the issue; screening assignment to determine significance level, initial 10 CFR Part 21 evaluation, investigation and evaluation documentation results, prescribed action(s) to be taken, impact on related internal or external work activities or processes, and identification when further Deviation Determinations are required as part of the Part 21 evaluation process.

Conditions Adverse to Quality is an all inclusive term used by Areva NP Inc. to reference any failures, malfunctions, deficiencies, defective items and nonconformances and are based on significance levels. From these conditions adverse to quality, the CR issue owner assigns a significance level for review activities based upon several determining criteria. Significance Level 1 conditions receive a Root Cause investigation, Significance Level 2 conditions receive an apparent cause analysis to validate that the condition is not a Significance Level 1 event, and Significance Level 3 conditions receive a probable cause investigation to address the immediate issue. A Root Cause is defined by Areva NP Inc. as "the fundamental or most basic causes that can be reasonably identified that if corrected by the associated prescribed action



will prevent recurrence of both the event being analyzed and similar events.

Areva NP Inc. Administrative Procedure No. 1717-06, Revision 01, includes requirements on how to handle situations where the CR completion date is not going to be met. Specifically, Section 8.6, "Requesting CR Extensions," requires the assigned individual or Issue Owner to submit a request for extension before the scheduled completion date (due date) is exceeded. Also, Section 8.2, "Screening Section," requires that the Issue Owner complete the screening section of the CR within 7 calendar days of the CR being submitted.

#### b.1 Review of Condition Reports

In order to identify a CR sample for NRC inspection team review, the NRC inspectors requested a printout list of all WebCAP CRs initiated during the 2004 - 2006 time frame that were screened as either Significance Level 1, 2, or 3. The current WebCAP CR system has been in place since July 2004. From the printout, the NRC inspection team identified thirty CR packages which to review. The following are examples of the CRs reviewed.

CR 2006-1601 – The NRC inspectors reviewed CR 2006-1601, dated April 5, 2006, related to a manual nondestructive ultrasonic test (UT) examination performed on a residual heat removal (RHR) component at DC Cook Unit 2. During the review of examination paperwork it was discovered that the examination did not meet the procedural requirements concerning the selection of examination angles and the improper selection of transducer sizes. The Deviation Determination (CR # 2006-1601) dated April 14, 2006, concluded that this issue was not a deviation per Part 21, since the examination was performed in accordance with the examination procedure requirements, the ASME code, and current industry practice for a single side examination of austenitic weld materials. However the discussion section of the CR identified that Areva NP Inc. Examination Procedure, 54-ISI-136-00, required clarification to prevent further occurrences regarding the use of improper transducer sizes.

The NRC inspectors noted that the "NDE Services Performance Issues Spring 2006, Root Cause Investigation Report," dated June 30, 2006, led by the Corrective Action Program Manager included a detailed investigation and root cause review of the DC Cook Unit 2 issues as part of the report. The report included a comprehensive corrective/preventive actions to address the nondestructive examination (NDE) services issues. This plan included many actions such as significant training activities at various working levels and revision of the procedure(s) to include how to perform coverage calculations and determine appropriate transducer size. The NRC inspectors identified that the procedural revisions were ongoing and not yet complete at the time of the exit of the inspection.

CR 2005-526 – The NRC inspectors reviewed CR 2005-526, dated February 8, 2005, related to a replacement reactor vessel closure head (RVCH) for Arkansas Nuclear One Unit 1 (ANO-1) that was shipped to ANO-1 in March 2004. The basic issue concerned the fact that the RVCH was delivered with parts such as: screws and pins for keyblocks; bolts and cap screws; screws, nuts, washers and dowel pins for support skirt; and support bracket locking tabs and screws; that were procured as non-safety related parts by Areva NP Chalon/Saint Marcel (Chalon) manufacturing facility, when they should have been procured as safety related.

The NRC inspectors reviewed documentation pertaining to this CR report, including the Deviation Determination (CR # 2005-526) dated May 4, 2005. The Results of the Investigation

and Evaluation Section of the CR identified that: (1) Areva NP Inc. specified in the purchase order (P.O.) to Areva SAS (Chalon) that all parts be procured as quality assurance (QA) classification safety related; (2) Chalon elected to reclassify some parts as non-safety related based upon their QA manual, internal procedures and past practice used on Electricite de France (EdF) component supply; and (3) Chalon did not engage the responsible design agency (Areva NP Inc.) in their reclassification decisions, nor did they inform Areva NP Inc. which parts were classified different from the P.O. requirements.

A list of seven recommended corrective/preventive actions were identified, including investigate ongoing projects for similar occurrences. It was then identified that these actions were also applicable to other projects for shipped RVCHs (Crystal River Unit 3 (CR-3), Davis Besse, Three Mile Island (TMI), and Turkey Point). The Prescribed Actions section of the CR identified six actions to be taken, including Chalon issuing a request to Areva NP Inc. to approve reclassification of any parts on the ANO-1, TMI, CR-3, Davis Besse and Turkey Point that were procured as other than safety related.

The Deviation Determination (CR # 2005-526) concluded that this issue was not a reportable defect under Part 21 since Chalon was able to reclassify the affected parts as safety related based upon results of physical and mechanical testing of materials from the same heat numbers that were used to fabricate the original parts. This action did require significant correction of product documentation and data packages for these RVCHs. During this review, the NRC inspectors noted that CR 2005-526 did not mention Deviation Determination (CR # 2005-526) and thus there was no traceable connection between CR 2005-526 and the Deviation Determination (CR # 2005-526). Areva NP Inc. issued CR 2006-2960 during the inspection, dated July 19, 2006, to tie this Deviation Determination (maintained by regulatory affairs) to CR 2005-526.

Finally, the NRC inspectors reviewed the CR 2005-526 Action Item List that was developed to identify all actions required and taken for this CR. The NRC inspectors verified that the Action Items had been completed, including the notification of the customers mentioned above, and reviewed the Chalon corrective action report (CAR) issued to address the generic issue of reclassification of parts without the concurrence from the design agency and the preventive actions to prevent recurrence.

CR 2006-1444 – The NRC inspectors reviewed CR 2006-1444, dated March 28, 2006, which described a concern where the customer, Areva NP Inc., identified dimensional variations in an reactor coolant pump (RCP) shaft supplied by an Areva NP Inc. foreign supplier. Contrary to the supplied specifications, Areva NP Jeumont SA incorrectly used the old RCP shaft dimensions when there was a conflict, instead of using the new drawing supplied by the customer. Areva NP Inc. issued a stop work on any further shop work, including repairs and machining of the RCP shaft. This was done to ensure that repairs were reviewed and accepted by the customer prior to implementation. Areva NP Jeumont SA was requested to provide Areva NP Inc. with a nonconformance report, a repair evaluation, and a repair quality plan, which were accepted by Areva NP Inc. The NRC inspectors reviewed the Areva NP Jeumont SA Deviation Report Number 06 QN 17, Revision 0, and noted that it does not have a mechanism to initiate a 10 CFR Part 21 evaluation of the deviation or failure to comply for a potential substantial safety hazard. The CR was identified as a Significance Level 3 condition with no potential reportability under 10 CFR Part 21.

## b.2 Review of Condition Report Tracking and Trending

The NRC inspectors reviewed the processes in place for tracking and trending condition reports. This included the review of the June 2006 CR Status Report and the overdue data for all the Areva NP Inc. user groups. The June 2006 Monthly report from the Manager, Quality Program and Analysis, to the Manager, Quality Audits and Programs, was also reviewed. This report included among other issues, critical issues and root cause evaluations as part of the CR process. This report also identifies overdue CRs and CRs not screened within the 7-day requirement. During the review of the sample of CR reports discussed above, the NRC inspectors identified that 34 CRs had exceeded their required due date and 8 CRs had exceed their initial 7-day screening time frame. This issue has been identified as Nonconformance 99901359/2006-201-01.

The NRC inspectors also reviewed the July - December 2005 Trend Analysis. This trend analysis included a review of WebCAP CRs, restraint orders, Receipt Deficiency reports, audit findings (internal and customer), accident reports, customer complaints, and other product line reports to determine if a pattern of repetitive deficiencies exists that would warrant system level corrective action. It also provides comparisons to previous trend periods to identify long term performance trends. The NRC inspectors found this to be a comprehensive document that provides excellent insight for management performance trending. This is identified as Observation 99901359/2006-201-01.

## c. Conclusions

Based on the review of the sample CRs documentation, the NRC inspectors concluded that Areva NP Inc. was adequately implementing their corrective action program as per Areva NP Inc. Administrative Procedure No. 1717-06, Revision 01. The NRC inspectors did identify Nonconformance 99901359/2006-201-01 for failure of various Areva NP Inc. user groups to complete the CRs by the assigned due date or complete the initial screening within 7-days. The NRC inspectors identified that as of July 19, 2006, 34 CRs had exceeded their required completion due date and 8 CRs had exceed the initial 7-day screening time frame. Additionally, the NRC inspectors identified the tracking and trending process for CRs as a strength within the Areva NP Inc. corrective action program.

## 3.2 10 CFR PART 21 PROGRAM

### a. Inspection Scope

The NRC inspectors reviewed the Areva NP Inc. policy and procedures governing the 10 CFR Part 21 program to assure those guidelines provided adequate description of the process and implemented the requirements described in 10 CFR Part 21, "Reporting of Defects and Noncompliances."

### b. Observations and Findings

The Areva NP Plants QEM Manual, Section 5.3, states, in part, that for the US market when 10 CFR 21 applies, any individual that is aware of a nonconformance must notify the management of the organization responsible for issuing the product according to the implementing procedures. Section 1.4 of the Plants QEM states, in part, that the quality and environment

records are records which provide objective evidence of the activities carried out or the results of these activities.

Areva NP Inc. Corporate Policy 0401, "Reporting of Defects and Noncompliances Concerning Substantial Safety Hazards," Revision 17, dated November 30, 2005, provides the Areva NP Inc. policy for establishing and implementing procedures for promptly reporting defects or failures to comply to the NRC. Specifically, section 4.3 states, in part, that the product line purchasing shall inform suppliers of the applicability of 10 CFR 21 and shall report any vendor notifications concerning deviations or defects to the appropriate individuals in accordance with Areva NP Inc. procedures.

Areva NP Inc. Administrative Procedure 1707-01, "Evaluation and Reporting of Safety-Significant Issues," Revision 33, dated July 14, 2006, establishes procedures and responsibilities to ensure compliance with and timely execution of 10 CFR Part 21 requirements. Specifically, Section 8 provides the requirements for completing Areva NP Inc. Form 22668, "Deviation Determination," Revision 2, dated June 6, 2006, and Form 22669, "Defect Determination," Revision 2, dated June 6, 2006.

Areva NP Inc. Administrative Procedure 1717-06, Revision 1, establishes, in part, the process for determining if a nonconformance/problem/concern needs to be evaluated for reporting under 10 CFR Part 21. Specifically, Section 7 defines a Safety Significant issue as an issue (nonconformance) identified in a CR that is a potential deviation and requires evaluation using the discovery process outlined in Areva NP Inc. Administrative Procedure 1707-01.

Areva NP Inc., "Records Management Program Manual (IEI)," Revision 20, dated May 22, 2006, states, in part, that all Part 21 documentation is considered a lifetime record, stored as a scanned image.

#### b.1 10 CFR Part 21 Program

The NRC inspectors reviewed the QA manual, implementing procedures, and policy guidelines governing Areva NP Inc.'s Part 21 program to verify that the guidance was consistent with the requirements described in 10 CFR Part 21. The NRC inspectors verified that the Areva NP Inc. process adequately outlined the requirements for identification, evaluation, and reporting of significant conditions adverse to quality. The NRC inspectors verified postings of the Part 21 regulations, sampled CRs, root cause investigation reports, and procurement documents. The NRC inspectors found them to be in accordance with the provisions of the regulation.

Areva NP Inc. Administrative Procedure No. 1717-06, Revision 01, includes several sections within the procedure that require the determination of whether the condition is potentially reportable under 10 CFR Part 21. These sections include Section 8.2.1.5.B, "Screening Section," Section 8.3.1.2, "Issue Evaluation," Appendix 1, "Root Cause Analysis," and Appendix 2, "Apparent Cause Evaluation." During the CR screening process, the Issue Owner has two options depending on the availability of information for determining the potential reportability of the CR. For the case where the Issue Owner can make the 10 CFR Part 21 reportability determination with the existing information, Section 8.2.1.5.B(1)c. states that if the condition is not potentially reportable, select 'no' in the drop down field in WebCAP and no further action is required. For the case where the Issue Owner is not confident that adequate information is available to make the 10 CFR Part 21 reportability decision, Section 8.2.1.5.B(4)a. requires the

immediate notification of the appropriate management to assist in making the decision, and Section 8.2.1.5.B (4) b. requires documenting any contact/discussion in the "Comments" field of WebCAP. If the CR is potentially reportable, Section 8.2.1.5.B(1)b requires the Issue Owner to complete form 22668, Deviation Determination, per Areva NP Inc. Administrative Procedure 1707-01.

The NRC inspectors reviewed several conditions reports that were screened as not being potentially reportable under 10 CFR Part 21. The NRC inspectors identified two CRs, 2005-1417 and 2005-4212, that were difficult for the NRC inspectors to determine the reasoning for these safety related CRs to be screened out without any objective evidence for answering "no" in WebCAP.

CR 2005-1417 - The NRC inspectors reviewed CR 2005-1417, dated April 13, 2005, which describes the condition where a licensee identified that a patch cord from a voltage regulatory door connection to the DB9 switch was wired incorrectly. In reviewing the tests performed on the patch cord, which was procured as a safety related subcomponent of the voltage regulator door, Areva NP Inc. determined that no commercial grade dedication activities were performed on the patch cord. As part of the corrective action for CR 2005-1417, a training session was held to instruct management on enforcement of 10 CFR Part 21 principles, including special emphasis on commercial grade dedication. As part of the review, the NRC inspectors were unable to identify the reason why this CR was screened as not being potentially reportable under 10 CFR Part 21.

CR 2005-1417 was re-screened to a Significance Level 1 in accordance with the customer request for a formal root cause investigation. The root cause investigation determined that human error resulted in the DB9 patch cords to be sent from the original equipment manufacturer (OEM) to the customer site without the patch cords being dedicated prior to shipment. Specifically, the door mounted DB9 switch, RS485 communication port and communication patch cords were part of a design enhancement incorporated late in the design phase to enable the Masterdrive diagnostics and testing from the panel door, eliminating the requirement to open and enter the panel for testing and maintenance. The DB9 switch and associated connectors were seismically qualified and the DB9 switch was dedicated as part of the system commercial grade dedication plan (CGDP). Section 9 of the CGDP excludes dedication of electrical conductors, based on a plan to procure all electrical conductors Nuclear Safety Related from an approved Appendix B supplier; as such, the patch cords were not included in the CGDP. The root cause investigation report also stated that this concern was initially screened as a Significance Level 3 because the communication cables do not perform any safety function or support any equipment that performs a safety function, and as such, does not represent a significant safety issue. The root cause investigation determined that the operating instructions and procedures were acceptable when followed properly. The NRC inspectors noted that without the root cause investigation report, the NRC inspectors would not have been able to identify why this CR was not potentially reportable under 10 CFR Part 21.

CR 2005-4212 - The NRC inspectors reviewed CR 2005-4212, dated October 3, 2005, which described the condition of safety-related motor control center (MCC) buckets found to be improperly wired during a licensee receipt inspection. This CR was screened as a Significance Level 2 but not potentially reportable under 10 CFR Part 21. In the Screening Comments section of the CR, it stated that after consultation with engineering, management, and QA personnel, this concern is not seen as a potential Part 21, however, notification of the cause



determination to the customer involved should be required. No further justification was provided in the CR. According to the CR, the MCC buckets were reworked at a vendor facility to add a backup plate to increase the section thickness at the tap. The vendor performing the repair apparently disconnected leads between the contactor and overload relay for additional access to the repair area and did not return the leads to the proper terminal location upon reassembly. Continuity checks performed by Areva NP Inc. did not detect the problem.

The NRC inspectors questioned why CR 2005-4212 was not considered potentially reportable under 10 CFR Part 21 especially since the NRC inspectors reviewed another CR dealing with another concern with the same MCC buckets, contract, and customer. Specifically, CR 2005-2433, dated June 8, 2005, identified a concern with the MCC bucket heater packs. Due to the potential reportability of the concern, CR 2005-2433 was processed through the Areva NP Inc.'s Part 21 program which included two Part 21 interim reports, dated August 8 and September 20, 2005, to the NRC. By letter dated November 30, 2005, Areva NP Inc. informed the NRC that they had determined that the deviation was not a defect. In response to the NRC inspector's inquiry, a representative from Regulatory Affairs provided an email from the Issue Owner of CR 2005-4212 which explained the reasoning behind the determination that this concern was not potentially reportable. The NRC inspectors concluded that this type of objective evidence should have been included in the Screening Comments section of CR 2005-4212, as required by Areva NP Inc. Administrative Procedure No. 1717-06, Revision 01.

In both cases, the NRC inspectors concluded that Areva NP Inc. made the appropriate determination on the potential reportability of safety related CRs 2005-1417 and 2005-4212. However, the information supporting these determinations was not readily available, if at all, in WebCAP. The NRC inspectors also concluded that the requirements of Areva NP Inc. Administrative Procedure No. 1717-06, Revision 01, are not consistent with the Areva NP Plants QEM which requires records to contain objective evidence of the activities carried out or the results of these activities. This is identified as Observation 99901359/2006-201-02.

The NRC inspectors identified examples where subcontractors to Areva NP Inc. are not implementing Part 21. The examples that were identified specifically demonstrated that certain foreign suppliers were not performing Part 21 evaluations of deviations and/or failures to comply for the determination of reporting of potential defects that could cause a substantial safety hazard. These examples are documented in CR 2006-1444 and CR 2005-526, described in Section 3.1 of this inspection report, and CR 2006-2472, described below. This is identified as observation 99901359/2006-201-02.

The NRC inspectors noted that Areva NP Inc. has proactively implemented standard procurement language in Administrative Procedure 1212-12, "Purchasing Documents," Revision 31, dated June 6, 2006, that requires their foreign subcontractors to provide all nonconformances or conditions that could affect the acceptability of a product or services already delivered so that Areva NP Inc. can evaluate the deviation and/or notify its customers. This is identified as Observation 99901359/2006-201-03. One example of Areva NP Inc. performing the 10 CFR Part 21 evaluations is documented below in CR 2006-2472.

CR 2006-2472 – The NRC inspectors reviewed CR 2006-2472, dated June 7, 2006, in which Areva NP Inc., was notified by Areva NP Jeumont SA that, during the pre-shipment inspection, a quality control inspector had noticed rust/corrosion on the horizontal thermal shield of an RCP that was being shipped to the customer. Areva NP Jeumont SA initiated a root cause

investigation to investigate the source of the rust/corrosion. This investigation determined that the safety related material that was used to fabricate the outer spacers on a RCP thermal barrier had not been properly annealed (heat treated). This deviation was not identified during Jeumont SA receipt inspection of the material. Areva NP Inc. initiated CR 2006-2472 as a result of the rust/corrosion in the horizontal thermal shield and to address the Jeumont SA quality performance issues. The CR was identified as a Significance Level 1 condition and identified as potentially reportable under 10 CFR Part 21. Areva NP Inc. completed a Deviation Determination (CR # 2006-2401 & 2472) which determined that a deviation did exist and that Defect evaluation was required. Areva NP Inc. performed a Defect Determination (CR # 2006-2472) and concluded that a defect did not exist. The NRC inspectors reviewed the Deviation Determination and Defect Determination and concluded that Areva NP Inc. had completed the determinations in accordance with procedural requirements. However, there was no indication in the CR documentation that was reviewed that Jeumont SA had performed any Part 21 evaluations.

#### b.2 10 CFR Part 21 Reports

The NRC inspectors noted that Areva NP Inc. Plants had performed 18 Part 21 evaluations since August 2004. The NRC inspectors reviewed 3 of the CRs that were identified as being potentially reportable under 10 CFR Part 21 and concluded that Areva NP Inc. had adequately followed their implementing procedures.

The NRC inspectors reviewed the CR associated with the 10 CFR Part 21 Interim Report 06-001 dated April 13, 2006. This CR was generated by Areva NP Inc. Fuel America and is not one of the 18 CRs discussed above. The issue identified relates to the performance of the control rods during a loss of coolant accident (LOCA). Specifically, the concern relates to the possibility that the control rod could melt during a LOCA, potentially impacting the analyses performed to demonstrate compliance with the criteria in 10 CFR 50.46. The NRC reviewed the current status of the CR which involves Areva NP Inc. and Westinghouse working together to resolve the concern per the Pressurized Water Reactor Owners Group (PWROG) approved approach. The phased approach begins with the preparation of a generic white paper and discussion with the NRC. The current status of the CR was on track with the proposed completion date of January 17, 2007.

#### c. Conclusions

The NRC inspectors determined that Areva NP Inc.'s Part 21 program was consistent with the requirements of 10 CFR Part 21. However, the NRC inspectors concluded that Areva NP Inc.'s WebCAP procedure is not consistent with the Areva NP Plants QEM which requires records to contain objective evidence of the activities carried out or the results of these activities. Specifically, the NRC inspectors determined that Areva NP Inc. Administrative Procedure No. 1717-06, Revision 01, did not require objective evidence to be documented for determining a CR was not potentially reportable under 10 CFR Part 21. This issue has been identified as Nonconformance 99901359/2006-201-02.

### 3.3 AREVA NP CROSS AUDIT PROCESS

#### d. Inspection Scope

The NRC inspectors reviewed the Areva NP policy and procedures governing the cross-audit process to determine whether those procedures provided an adequate description of the process and implemented the requirements of Criterion XVIII, Audits, of Appendix B to 10 CFR Part 50.

#### b. Observations and Findings

Areva NP Plants QEM Manual, Section 5.2.2, states, in part, that internal audits are performed according to the Quality Management (QM) procedure, "Internal and Supplier Audits." Specifically, Section 5.2.2 states that Areva NP Plants have established a quality and environmental audit process to verify the implementation and effectiveness of the QEM system. The process consists of one annual independent audit of QEM and QEM System Units led by an audit team leader outside of Plants, and one annual independent audit of the QEM Liaison Officer's function in each Region according to the QM procedure, "Performance and Evaluation of Cross-Audits."

Areva NP procedure, PO NP SDI BQ 4, "Corporate Quality Management Procedures Internal and Supplier Audits (Q-102)," Revision 3, dated April 1, 2006, describes the methods and responsibilities for scheduling, preparation, performance, documentation of internal and supplier QM system audits as well as for the related follow-up of actions. Procedure PO NP SDI BQ 4 defines a cross-audit as "an internal audit performed annually by an independent Areva NP audit team on an Areva NP QM organization to assess compliance with corporate QM Directives, Corporate QM Procedures and concerned Sector's QM system."

Areva NP procedure, PO NP SDI BQ 3, "Corporate Quality Management Procedure Performance and Evaluation of Cross-Audits (Q-105)," Revision 2, dated April 1, 2006, states, in part, that cross-audits are part of the process used to check the consistency of the QM system throughout the entire company. Cross-audits, performed by independent teams, complement the internal audit program performed by different QM organizations and gives assurance to the customers that the QM system is correctly applied regardless of the entities of the company Regions/Units/Sectors/Corporate Departments.

Areva NP procedure, PO BQ 007, "Corporate Quality Management Procedure Qualification of Audit Personnel (Q-103)," Revision 1, dated December 1, 2004, describes, in part, the responsibilities and requirements for the qualification of lead auditors for both internal and supplier QM system audits. This procedure is applicable only to Areva NP Inc.

The NRC inspectors reviewed the Areva procedures that governed the cross-audit process to verify that those procedures provided an adequate description of the cross-audit process and were consistent with the requirements of Appendix B to 10 CFR Part 50. The NRC inspectors specifically reviewed the checklist for cross-audits exhibited in Appendix A to Areva NP procedure, PO NP SDI BQ 3. The NRC inspectors noted that the checklist only addressed selective criteria of Appendix B to 10 CFR Part 50. The NRC inspectors inquired as to why certain criteria of Appendix B to 10 CFR 50 were missing from the checklist. The Areva NP Inc. personnel stated that the remaining criteria were included into the cross-audit process to the



extent that those criteria are included into the quality assurance programs of the various Areva Regions/Units/Sectors/Corporate Departments. Additionally, the NRC inspectors were informed that when an audit of the complete 18 criteria of Appendix B to 10 CFR 50 is required, the cross-audit process will be augmented by the appropriate quality directives.

As noted in PO NP SDI BQ 3, the cross-audits are part of the process used to check the consistency of the QM system throughout the entire company. The Areva NP procedure PO NP SDI BQ 3 was completely rewritten with Revision 2 and Areva NP Inc. had not performed any cross-audits under the revised procedure. Therefore, the NRC inspectors were unable to verify the effectiveness of the cross-audit process at the time of inspection.

The NRC inspectors verified that procedures were in place to qualify lead auditors and audit personnel to perform cross-audits, in addition to internal and supplier audits. Qualification requirements for Areva NP Inc. auditors are documented in Areva NP procedure PO BQ 007. The NRC inspectors also noted that Section 4 of the checklist of procedure PO NP SDI BQ 3 requires the audit team verify compliance with procedure PO BQ 007.

c. Conclusions

The NRC inspectors determined that the Areva NP procedure associated with the cross-audit process appears to be consistent with the requirements of Appendix B to 10 CFR 50, Criterion XVIII and Areva NP Plants QEM. The NRC inspectors verified that procedures were in place to qualify lead auditors and audit personnel to perform cross-audits, in addition to internal and supplier audits. Once Areva NP Inc. has performed a cross-audit with the revised procedure, the NRC may elect to review the cross-audit process again.

**4.0 ENTRANCE AND EXIT MEETINGS**

In the entrance meeting on July 18, 2006, the NRC Inspectors discussed the scope of the inspection, outlined the areas to be inspected, and established interfaces with Areva NP, Inc., staff and management. In the exit meeting on July 21, 2006, the NRC Inspectors discussed their concerns and findings with Areva NP, Inc., management and staff.

**5.0 PARTIAL LIST OF PERSONS CONTACTED**

Gayle Elliott	Manager, Corp Product Licensing	Areva NP Inc. ***
Jim Bartleman	Manager, Corrective Action Program	Areva NP Inc. *
Tara Werner	Manager, Quality Audits & Programs	Areva NP Inc. ***
Cynthia Garrett	Lead, Internal Audits Program	Areva NP Inc. ***
Michael Morgan	Manager, Mechanical Comp/NPD	Areva NP Inc. **
Mark Burzynski	Regulatory Affairs	Areva NP Inc. **

- \* Attended Entrance Meeting
- \*\* Attended Exit Meeting
- \*\*\* Attended Entrance & Exit Meeting