



***AREVA's Perspective on Implementing NRC
Requirements***

***Improvements and Benefits
realized from
Inspections and Audits***

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Introduction

- ▶ **AREVA's unique integrated offering covers every stage of the fuel cycle, reactor design and construction, and related services.**

In addition, the group is developing a portfolio of operations in renewable energies.

- ▶ **Quality Programs is responsible for the following in the U.S Region:**

- ◆ **Quality Programs**
- ◆ **Safety and non-safety related QA Programs**
- ◆ **Audits Programs**
- ◆ **Corrective Action Program**

Types and Frequency of Oversight

- ▶ **NRC Inspection frequency has increased with the introduction of the nuclear renaissance**
 - ◆ 2006
 - ◆ 2007
 - ◆ Upcoming 2010
- ▶ **NUPIC Audits are performed every two years**
 - ◆ 3 Teams (average of 28 people)
 - ◆ 3 Locations
 - ◆ 1 week
- ▶ **ASME/National Board Surveys are performed every three years for renewal of the AREVA certificates**
- ▶ **Single customer audits average 15 per year since 2006**
- ▶ **INPO Assists began with the introduction of the nuclear renaissance**

Results and Improvements from Oversight

- ▶ **NRC Inspection 99901359/2006-201 in July 2006; this inspection was limited scope focused on the Corrective Action Program and 10 CFR 21**
 - ◆ **Procedure did not contain adequate justification to be documented for determining that a CR was not potentially reportable under 10 CFR 21.**

- ▶ **Corrective Actions**
 - ◆ **Part 21 issue**
 - **Implemented enhancement in the electronic Corrective Action Program; this enhancement causes the following Part 21 questions to individually and automatically pop-up during the Screening process**

Results and Improvements from Oversight

Corrective Action Manager - Decision Point -- Web Page Dialog

Does the condition affect the design or procurement information approved or to be approved within the scope of the design certification or approval for a structure, system, or component, or part thereof under 10 CFR 52/New Plants?
(IF YES, CONTACT REGULATORY AFFAIRS FOR PART 21 APPLICABILITY AND REFER TO PROCEDURE 1707-01).

Corrective Action Manager - Decision Point -- Web Page Dialog

Potentially Reportable Question 1/4: Is the condition a deviation to a technical requirement included in a procurement document?

Corrective Action Manager - Decision Point -- Web Page Dialog

Potentially Reportable Question 2/4: Does the condition affect a basic component designed/fabricated under a 10 CFR Part 50 Appendix B QA Program or one that has successfully completed dedication?

Corrective Action Manager - Decision Point -- Web Page Dialog

Potentially Reportable Question 3/4: Could the deviation create a substantial safety hazard that could cause a major reduction in the degree of protection provided to public health and safety for any facility or activity licensed or otherwise approved or regulated by the NRC?

Corrective Action Manager - Decision Point -- Web Page Dialog

Potentially Reportable Question 4/4: Is the Condition Potentially Reportable Under 10 CFR Part 21?

Results and Improvements from Oversight



- **Major improvement/Best practice**
 - ◆ **Automatic pop-up questions drive employees to consider each Part 21 question for potential reportability**
 - ◆ **In the event that a question is answered “yes” or “unsure,” the Deviation Determination process automatically is generated and runs parallel to the Condition Report in the electronic system**
 - ◆ **Defect Determination and Operability Assessment also automatically generate as the process is followed and run parallel to the Condition Report.**
 - ◆ **Potential Part 21 consideration is necessarily improved as a result of this enhancement**

Results and Improvements from Oversight



▶ 2009 Customer Audit

- ◆ Audit Finding was written in May 2009 by a single customer to document weaknesses in the AREVA Software Quality Assurance Program

▶ Corrective Action

- ◆ Hired an expert in Software Quality Assurance
- ◆ Established a team to review the Software Quality Assurance Program
- ◆ Revised Software Quality Assurance Program
 - Procedures
 - Computer Software Index Listing

▶ Major Improvement

- ◆ Procedures are streamlined and current
- ◆ Program is better controlled and understood

Results and Improvements from Oversight



▶ 2008 ASME Material Organization Survey

- ◆ It was identified that Document Control throughout the organizations was weak related to printed information

▶ Corrective Action

- ◆ Implemented Water Marks (software enhancement to Document Control system) for printing documents
 - Information Only
 - Controlled

▶ Major Improvement

- ◆ Introduced a further level of control for document control
- ◆ Printed information is readily identifiable as “For Information Only” or “Controlled”

Results and Improvements from Oversight



▶ 2007 INPO Assist

- ◆ It was identified that the AREVA Self-Assessment Program was weak.

▶ Corrective Action

- ◆ Performed bench marking effort to determine best practices in the industry
- ◆ Revised Self-Assessment Program to reflect more robust controls and requirements
- ◆ Implemented software enhancement to the corrective action program to address new Self-Assessment Program

▶ Major Improvement

- ◆ Encourages a more self-critical culture
- ◆ Encourages continuous improvement across AREVA

Similarities and Differences in Oversight



▶ Similarities

- ◆ Preparations are generally the same for all types of audits and inspections
- ◆ Hosting audits is similar for all types of oversight
- ◆ Process for addressing auditor concerns is similar

▶ Differences

- ◆ ASME/National Board Surveys review and require revisions to the QA Manual during the survey
- ◆ Audit team make-up varies from audit to audit (team sizes, technical specialists)
- ◆ Audit time frames vary from audit to audit

Conclusions and Questions

- **Inspections, audits, and assists allow for identifying areas of weakness that lead to potential improvements and positive evolutions in QA Programs**
- **Corrective actions and improvements can sometimes be realized as best practices**

Questions?