

June 26, 2008

Mr. Dominique Grandemange, Manager
AREVA NP, Inc.
Mt. Athos Road Facility
1724 Mount Athos Road
P.O. Box 11646
Lynchburg, VA 24506-1646

SUBJECT: INSPECTION REPORT NO. 70-1201/2008-202

Dear Mr. Grandemange:

The U.S. Nuclear Regulatory Commission (NRC) conducted a routine announced criticality safety inspection at your AREVA facility in Lynchburg, VA, on June 6, 2008. The purpose of the inspection was to determine whether activities involving licensed materials were conducted safely and in accordance with NRC requirements. An exit meeting was held on June 6, 2008. The inspection observations and findings were discussed with members of your staff.

The inspection, which is described in the enclosure, focused on: (1) the nuclear criticality safety (NCS) program; (2) NCS inspections, audits, and investigations; (3) the facility criticality accident alarm system; and (4) plant operations. The inspection involved review of pertinent documents such as operating procedures and new or revised NCS analyses, facility walkdowns, and interviews with plant personnel. No violations of NRC requirements were identified during this inspection.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," a copy of this letter and the enclosure will be made publicly available in the public electronic reading room of the NRC's Agency-Wide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/ADAMS.html>.

D. Grandemange

- 2 -

If you have any questions concerning this report, please contact Thomas Marenchin, of my staff, at (301) 492-3209.

Sincerely,

/RA/

Patricia Silva, Chief
Technical Support Branch
Division of Fuel Cycle Safety
and Safeguards, NMSS

Docket No.: 70-1201
License No.: SNM-1168

Enclosure: Inspection Report 70-1201/2008-202

cc: Samuel Miller, Manager
Environmental Health, Safety and Licensing

D. Grandemange

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**U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS**

Docket No.: 70-1201

License No.: SNM-1168

Report No.: 70-1201/2008-202

Licensee: AREVA NP, Inc.

Location: Lynchburg, VA

Inspection Date: June 6, 2008

Inspectors: Dennis Morey, Senior Criticality Safety Inspector
Thomas Marenchin, Criticality Safety Inspector

Approved by: Patricia Silva, Chief
Technical Support Branch
Division of Fuel Cycle Safety and
and Safeguards, NMSS

Enclosure

EXECUTIVE SUMMARY

AREVA NP, Inc. NRC Inspection Report No. 70-1201/2008-202

Introduction

Staff of the U.S. Nuclear Regulatory Commission (NRC) performed a routine and announced nuclear criticality safety (NCS) inspection of the AREVA NP, Inc., Lynchburg, Virginia, facility on June 6, 2008. The inspection focused on risk-significant fissile material processing activities involved in the manufacture of low-enriched light-water reactor fuel. The inspection included an on-site review of licensee programs dealing with new or revised NCS analyses; NCS inspections, audits, and investigations; the criticality accident alarm system; and plant operations. No violations of NRC requirements were identified during the inspection.

Results

- No safety concerns were identified regarding the licensee criticality safety program.
- No safety concerns were identified regarding licensee NCS-related inspections, audits and investigations.
- No safety concerns were identified regarding the licensee criticality accident alarm system.
- No safety concerns were identified during plant walkdowns.

REPORT DETAILS

1.0 Summary of Plant Status

AREVA NP, Inc. (AREVA) manufactures light water reactor fuel bundles and control assemblies at its facility near Lynchburg, VA. The licensee also operates shops involved in the manufacture and refurbishing of in-core instruments. During the inspection, the licensee conducted routine fuel and in-core equipment manufacturing operations and was preparing to begin operations with a new fuel shipping container.

2.0 Nuclear Criticality Safety Program (IP 88015, IP 88016)

a. Inspection Scope

The inspectors reviewed new and revised NCS analyses to determine whether criticality safety of risk-significant operations was adequately assured. The inspectors reviewed the adequacy of NCS-related items relied on for safety (IROFS). The inspectors reviewed selected aspects of the following documents:

- 32-5055102-002, "Shipping/Receiving Bay Criticality Safety Analysis (CSA) for the MAR [Mount Athos Road] Facility, Revision 02, dated May 2008
- Procedure SL-1100, "IROFS Administrative Procedure for ISA," Revision 9, dated October 1, 2007
- Procedure SL-1101, "Management Measures Program," Revision 5, dated March 14, 2007

b. Observations and Findings

The inspectors reviewed an NCS Evaluation and determined that the analysis was performed by qualified a NCS engineer, that an independent review of the evaluation was completed by qualified a NCS engineer, and that the analysis provided for subcriticality of the systems and operations. The inspectors observed that the analysis contained appropriate limits on controlled parameters for each credible accident sequence leading to inadvertent criticality. The inspectors did not identify any safety concerns related to NCS controls in approved NCS analysis, approvals, or calculations.

c. Conclusions

No safety concerns were identified regarding the licensee criticality safety program.

3.0 Nuclear Criticality Safety Inspections, Audits, and Investigations (IP 88015)

a. Inspection Scope

The inspectors reviewed the most recent licensee internal NCS audit. The inspectors reviewed selected aspects of the following document:

- CE07-24, "2007 Mount Athos Road Annual Nuclear Criticality Safety Audit," dated August 13, 2007

b. Observations and Findings

The inspectors observed that the NCS audits conducted in the previous year covered: (1) review for open NCS issues related to inspections and audits, training, Safety Review Board requests, or operational change requests; (2) inspection of plant operations for compliance with the license, procedures, and postings; (3) a nuclear criticality safety program review; and (4) review of the quality of standard work instructions. The audit had a finding that addressed the wording of NCS postings. Through discussions with the licensee's staff, the licensee placed an item into its corrective action program to review their NCS postings to address the finding of the audit.

c. Conclusions

No safety concerns were identified regarding licensee NCS-related inspections, audits and investigations.

4.0 Criticality Accident Alarm System (IP 88017)

a. Inspection Scope

Inspectors reviewed the licensee analytical basis for adequate implementation of the criticality accident alarm system. The inspectors reviewed selected aspects of the following document:

- NCS-1992-022, "Recommended Placement of Criticality Detectors at CNFP," dated February 12, 1992

b. Observations and Findings

The inspectors reviewed licensee criticality alarm detector circuit logic to determine that the system would effectively discriminate between input signals and sound an alarm in accordance with license requirements.

c. Conclusions

No safety concerns were identified regarding the licensee criticality accident alarm system.

5.0 Plant Activities (IP 88015, IP 88016)

a. Inspection Scope

The inspectors performed plant walkdowns to review activities in progress and to determine whether risk-significant fissile material operations were being conducted safely and in accordance with regulatory requirements. The inspectors discussed the

activities with NCS staff during the walkdowns. The inspectors reviewed selected aspects of the following documents:

- NCS-1992-022, "Recommended Placement of Criticality Detectors at CNFP," dated February 12, 1992
- MA-307, "Packaging and Storing of UO₂ Material," Revision 19, dated November 13, 2007
- MA-332, "SNM Scrap and Empty Container Shipping," Revision 30, dated November 13, 2007

b. Observations and Findings

The inspectors walked down the shipping and receiving areas, the pellet storage vault, the pellet loading room, the rod loading and bundle assembly areas, and fuel bundle storage areas. The inspectors also observed a cask loading operation dry run. The inspectors determined that plant activities were conducted safely and in accordance with printed NCS postings and administrative requirements in applicable CSAs.

c. Conclusions

No safety concerns were identified during plant walkdowns.

6.0 Exit Meeting

The inspectors presented the inspection scope and results to members of the licensee's management and staff during an exit meeting on June 6, 2008. The licensee acknowledged and understood the findings as presented.

SUPPLEMENTAL INFORMATION

1.0 List of Items Opened, Closed, and Discussed

Items Opened

None

Items Closed

None

Items Discussed

None

2.0 Inspection Procedures Used

IP 88015	Headquarters Nuclear Criticality Safety Program
IP 88016	Nuclear Criticality Safety Evaluations and Analyses
IP 88017	Criticality Accident Alarms

3.0 Key Points of Contact

AREVA NP, Inc.

T. Blanks	Supervisor, Environmental Health and Safety
D. Grandemange	MAR Site Manager
T. Lovelace	Criticality Safety Engineer
R. Montgomery	Advisory Engineer
M. Moore	Manager, Uranium Product Center
J. Peden,	Supervisor, Environmental Health and Safety
G. Wertz	Manager, Environmental Health and Safety

NRC

T. Marenchin	Criticality Safety Inspector
D. Morey	Senior Criticality Safety Inspector

All attended the exit meeting on June 6, 2008.

4.0 List of Acronyms and Abbreviations

ADAMS	Agency-Wide Document Access and Management System
AREVA	AREVA NP, Inc. (Licensee)
CSA	Criticality Safety Analysis
IP	inspection procedure
IROFS	item relied on for safety
MAR	Mount Athos Road
NCS	nuclear criticality safety