

INSPECTION REPORT

1. LICENSEE OR CERTIFICATE HOLDER/LOCATION INSPECTED:
AREVA NP, Inc.
P.O. Box 11646
Lynchburg, VA 24506-1646

2. NRC/REGIONAL OFFICE:
U.S. Nuclear Regulatory Commission
Region II
61 Forsyth Street, Suite 23T85
Atlanta, GA 30303-8931

REPORT NO: 2009-001

3. DOCKET NUMBER:
70-1201

4. LICENSE OR CERTIFICATE NUMBER:
SNM-1168

5. DATE(S) OF INSPECTION:
April 20, 2009 – April 30, 2009

LICENSEE OR CERTIFICATE HOLDER:

The inspection was an examination of the activities conducted under your license or certificate as they relate to safety and/or safeguards and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license or certificate. The inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector. The inspection findings are as follows:

- 1. Based on the inspection findings, no violations were identified.
- 2. Previous violation(s) closed.
- 3. Reported events reviewed
- 4. The violation(s), specifically described to you by the inspector as non-cited violations, are not being cited because they were self-identified, non-repetitive, and corrective action was or is being taken, and the remaining criteria in the NRC Enforcement Policy, to exercise discretion, were satisfied.
Non-Cited Violation(s) was/were discussed involving the following requirement(s) and Corrective Action(s):

- 5. During this inspection, certain of your activities, as described below and/or attached, were in violation of NRC requirements and are being cited. This form is a NOTICE OF VIOLATION, which may be subject to posting in accordance with 10 CFR 19.11.
(Violations and Corrective Actions)

LICENSEE OR CERTIFICATE HOLDER STATEMENT OF CORRECTIVE ACTIONS FOR ITEM 5, ABOVE

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violation(s) identified. This statement of corrective actions is made in accordance with the requirements of 10 CFR 2.201 (corrective steps already taken, corrective steps which will be taken, date when full compliance will be achieved). I understand that no further written response to the NRC will be required, unless specifically requested.

Title	Printed Name	Signature	Date
LICENSEE/CERTIFICATE HOLDER REPRESENTATIVE			
NRC INSPECTOR	O. López and D. Hartland	/RA/	5/28/09

INSPECTION REPORT

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6. INSPECTOR(S): O. López and D. Hartland			
7. INSPECTION PROCEDURES USED: 88020, 88054, 88055, 88025, and 88030			

EXECUTIVE SUMMARY

Executive Summary

- The Areva-Lynchburg facility fabricates fuel assemblies for use in commercial nuclear power reactors. During the inspection period, the plant was shutdown for the annual maintenance outage and inventory. This routine, announced inspection included a review of plant operations, fire protection, maintenance, and radiation protection activities. The inspection involved observation of work activities, a review of selected records, and interviews with plant personnel.

Plant Operations (IP 88020)

- The inspectors reviewed several of the applicable safety-related controls from the integrated safety analysis. The inspectors noted no deficiencies in their implementation.
- Licensee personnel demonstrated adequate knowledge of process operations, safety controls, and applicable operations procedures for their areas.
- During review of the site's radiological hazards analysis, the inspectors identified an issue regarding the analysis performed for the scenario involving a fire in the pellet loading room vault (Case III). The analysis concluded that the risk of a significant fire was highly unlikely based on the Fire Hazards Analysis. That conclusion appeared to be based on control of combustible loading in the room that limited the source term to a single shelf of pellets (1320 kg UO₂). The analysis also assumed the mitigative action of evacuation of personnel in the room limited exposure to six minutes and that smokeheads in the pellet room ventilation system would alarm and prompt an evacuation of other personnel in the area. The radiological hazards analysis provided the basis for the conclusion documented in the ISA Summary that the performance requirements of 10 CFR 70.61 would not be exceeded for the bounding upset condition.

The inspectors noted that Section 5.3.4.1 of the ISA Summary indicated that Table 5-4, "Risk Matrix," was used to determine the risk index of **uncontrolled and unmitigated** accident sequences. This was done by determining both the likelihood and potential consequence of each accident sequence and entering the table to obtain the risk index number. A risk index value less than or equal to "5" meant an accident sequence was either sufficiently unlikely or not of sufficient consequences as to require the designation of IROFS.

EXECUTIVE SUMMARY (Continued)

The inspectors also noted a discrepancy in the 1320 kg UO₂ source term documented in the radiological hazards analysis and Table 4-1 of the ISA Summary, which indicated that the bounding radiological scenario evaluated involved 42,000 kg of UO₂ pellets. The inspectors determined that the licensee's conclusion that the risk index for the accident scenario involving the fire in the pellet loading room vault was less than or equal to "5" and, therefore, was either sufficiently unlikely or not of sufficient consequences as to require the designation of IROFS was not based on an **uncontrolled and unmitigated** accident sequence.

During followup discussion, the licensee agreed to revise the accident scenario to be consistent with methodology described in the ISA Summary and correct the discrepancy with the source term described in the ISA Summary and radiological hazards analysis. The inspectors' review of the licensee's revision to the radiological hazards analysis is an unresolved item (URI 70-1201/2009-01-01).

Fire Protection (Annual IP 88054 and Triennial IP 88055)

- The inspectors reviewed the facilities fire hazard analysis to verify that the analysis considered effects of fires on safety controls, effects of suppression activities on process areas, malfunction of an automatic fire protection system, potential for spread of contamination, transient combustibles, effectiveness of offsite fire department and onsite fire brigade, and Life Safety considerations. No safety issues were identified.
- The inspectors verified that facility pre-fire plans for the selected areas were consistent with the fire hazard analysis and the as built configuration. No safety issues were identified.
- The process area, equipment, and material storage areas were operated in accordance with fire safety requirements. The licensee adequately controlled combustible and flammable materials throughout the facility. The inspector observed and discussed with operations personnel the handling of zirconium fines. No safety problems were observed.
- The inspector reviewed maintenance records and walked down selected components of the fire detection system and noted that they were properly implemented and maintained. The reviewed components included the uninterruptible power supply, smoke detectors, and heat detectors.
- The inspectors verified that fire ratings of fire barriers (e.g. walls, doors, and dampers) were appropriate for the credible fire hazards in the selected areas. The inspectors verified that a material of an appropriate fire rating was used to fill openings and penetrations and that the installation met engineering design. No safety issues were identified.
- The inspectors reviewed the material condition, operational lineup, and maintenance requirements of the fire suppression systems to verify that the systems were reliable and available. No safety issues were identified.
- The inspectors reviewed the design and installation for the automatic sprinkler systems installed in the SERF-5 Bay 9 and 7, and for the old pellet receiving areas. No safety issues were identified.

EXECUTIVE SUMMARY (Continued)

- The inspectors reviewed inspector follow up item (IFI) 70-1201/2008-03-01, licensee's review to determine the acceptability of deficiencies identified during sensitivity testing of smoke heads in areas where licensed activities are conducted. The inspectors noted that the licensee revised Procedure SL-1316, "MAR Fire Protection Equipment Program." Procedure SL-1316 was revised to include an independent review of test results to ensure that identified deficiencies are corrected. This item is closed.
- The inspectors reviewed IFI 70-1201/2008-03-02, licensee's determination of acceptance criteria for fire protection system testing and inclusion of that criteria in Procedure SL-1316. The inspectors reviewed the sensitivity testing of smoke detectors conducted in April 2008. The inspectors noted that test documentation included pass/fail criteria for the test. However, the licensee had not specified the acceptance criteria for the fire hydrant loop test in Procedure SL-1316. Therefore, IFI 70-1201/2008-03-02 remains open.

Maintenance and Surveillance (IP 88025)

- The inspectors reviewed work control procedures to verify that maintenance activities involving items relied on for safety (IROFS) received an adequate safety review. No safety issues were identified.
- The inspectors reviewed functional test and inspection records for passive-engineered IROFS. The inspectors noted that functional tests were performed at the required frequency and contained the appropriate amount of detail to perform the tests. No safety problems were identified.
- The inspectors reviewed maintenance records and discussed with the licensee the calibration, testing, and maintenance of IROFS related to the air cleaning system. No safety issues were identified.
- The inspectors reviewed maintenance records and discussed with the licensee the calibration and routine maintenance of the criticality warning system to verify that the system was tested to confirm reliability and operability. No safety issues were identified.

Radiation Protection (88030)

- The external and internal exposure monitoring program was implemented in a manner that maintained doses as low as reasonably achievable (ALARA) and within the limits of 10 CFR 20.1201. The licensee determined that there was no exposure above the corporate action level of 2000 millirems for the calendar year.
- Radiation protection instruments and equipment was being calibrated and otherwise maintained in accordance with the license requirements.
- Radiological control practices such as posting, radiation work permits, and labels were adequate and generally met regulatory requirements.
- The radiation and contamination survey programs were appropriately implemented to protect workers and identify potential radiation hazard areas. The licensee's staff was cognizant of the active radiation work permits, and current radiation and contamination survey maps were available.

EXECUTIVE SUMMARY (Continued)

Exit Meeting Summary

- The inspection scope and results were summarized on Thursday, April 23, 2009 and April 30, 2009 with E. Miller, and members of his staff. The inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

List of Items Opened, Closed, Discussed

<u>Item Number</u>	<u>Status</u>	<u>Description</u>
IFI 70-1201/2008-03-01	Closed	Licensee's review to determine the acceptability of deficiencies identified during sensitivity testing of smoke heads in areas where licensed activities are conducted. Procedure SL-1316 was revised to include an independent review of test results to ensure that identified deficiencies are corrected
IFI 70-1201/2008-03-02	Open	Licensee's determination of acceptance criteria for fire protection system testing and inclusion of that criteria in Procedure SL-1316. The IFI remains open until the licensee specifies the acceptance criteria for the fire hydrant loop test in Procedure SL-1316.
URI 70-1201/2009-01-01	Open	Review of the licensee's revision to the radiological hazards analysis involving a fire in the pellet loading room vault to be consistent with the methodology described in the Integrated Safety Analysis Summary.