

**INSPECTION REPORT**

1. LICENSEE OR CERTIFICATE HOLDER/LOCATION INSPECTED: AREVA NP, Inc. 2101 Horn Rapids Road Richland, WA 99352-0130		2. NRC/REGIONAL OFFICE: U.S. Nuclear Regulatory Commission Region II 61 Forsyth Street, Suite 23T85 Atlanta, GA 30303-8931	
REPORT NO: 2008005			
3. DOCKET NUMBER: 70-1257	4. LICENSE OR CERTIFICATE NUMBER: SNM-1227	5. DATE(S) OF INSPECTION: November 3-7 and November 10-12, 2008	

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)

See attached

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	M. Thomas and R. Prince	/RA/	12/10/08

## INSPECTION REPORT

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5. DATE(S) OF INSPECTION:

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6. INSPECTOR(S): Mary Thomas and Robert Prince

7. INSPECTION PROCEDURES USED: 88010, 88020, 88070, 92702

### EXECUTIVE SUMMARY

#### Summary of Plant Status

- The AREVA NP Richland facility converts uranium hexafluoride into uranium dioxide for the fabrication of low-enriched fuel assemblies used in commercial nuclear power reactors. During the inspection period, normal production activities were ongoing. This routine, announced inspection included observations and evaluations in the area of plant operations, operator training, and permanent plant modifications. The inspection involved observation of work activities, a review of selected records, and interviews with plant personnel.

#### Plant Operations (IP 88020)

- The inspectors verified that selected Items Relied On For Safety (IROFS) for the Dry Conversion Facility (DCF), Ceramics, Solvent Extraction, Industrial Waste Water Treatment, and the Ventilation System were adequately implemented and maintained. The inspectors also verified that an established program was in place to ensure that the IROFS were capable of performing their intended safety function. The IROFS reviewed were in place, properly tested, and in good condition with one exception as described below.
- Through discussion with the operators, the inspectors determined that the operators were knowledgeable of plant procedures and the safety-significant aspects of the licensee's process operations. Based on observations of plant operations and discussions with production operators, the inspectors determined that the licensee was adequately maintaining compliance with nuclear criticality safety (NCS) controls and nuclear material storage requirements.
- The inspectors reviewed operating procedures and determined that the process layout and steps described in the procedures were in agreement. The procedures provided operators with information regarding safety components and guidelines to follow.
- The inspectors administratively closed event 42936, worker exposed to hydrogen fluoride release, which occurred on October 23, 2006. This event was the subject of a special inspection as documented in inspection report 70-1257/2006-010 and subsequent Severity Level III violation. The corrective actions taken in response to the violation were reviewed and the violation was closed in inspection report 70-1257/2008-001.

## EXECUTIVE SUMMARY (Continued)

- The inspectors reviewed the corrective actions taken in response to event 42981, hydrogen accumulation due to loss of water seal, which occurred on November 9, 2006. The licensee was starting up Dry Conversion Line 1 (DCL1) when they realized that they had to complete the semi-annual functional tests of two IROFS. The licensee placed DCL1 in hot standby and completed the semi-annual functional tests. Upon completion of the semi-annual functional tests, the licensee resumed startup where they left off without recognizing the impact of being in hot standby on the previously completed pre-startup steps. As a result, the water seal was lost and hydrogen accumulated in the hydrogen fluoride (HF) recovery room and set off the hydrogen detector. Dry Conversion Line 1 was shutdown, appropriate plant personnel were contacted, and the NRC Headquarters Operations Officer was contacted to report an event of an unanalyzed condition in accordance with 10 CFR 70 Appendix A(b)(1).

The performance requirements of 10 CFR 70.61(a) state, in part, that each applicant or licensee shall evaluate, in the integrated safety analysis performed in accordance with § 70.62, its compliance with the performance requirements in paragraphs (b), (c), and (d) of this section. The integrated safety analysis 10 CFR Part 70.62(c)(1) states, in part, that each licensee or applicant shall conduct and maintain an integrated safety analysis (ISA), that is of appropriate detail for the complexity of the process, including identification of potential accident sequences, consequences and likelihood, and IROFS.

Contrary to the above, on or before November 9, 2006, the licensee failed to identify potential accident sequences, consequences and likelihood, and IROFS for an accumulation of hydrogen in the HF recovery room. The failure to identify these items was considered a violation of NRC requirements, VIO 2008005-01.

As a result of the licensee's apparent cause analysis the licensee classified the following as IROFS: piping and vessel integrity; the actuation of the hydrogen detection system to alert operators to a significant hydrogen accumulation in the hydrogen recovery room; and operator surveillance to ensure the water seal remains intact prior to startup and at least once per operating shift. The licensee also revised their integrated safety analysis to include the associated accident analyses. In addition, the licensee revised procedure SOP-40286, "Dry Conversion Facility – Process Startup," to include a step which required the operator to verify the offgas water seal water legs are intact before starting steam and [DA] disassociated ammonia. Lastly, the licensee revised procedure SOP-40287, "Dry Conversion Facility - Steady State Operation," to include a step to perform offgas seal leg check once per operating shift to ensure water seal is intact. These corrective actions were fully implemented on November 11, 2006.

Based on a review of the corrective actions taken, the inspectors determined that implementation of the corrective actions was adequate. The event and the violation are closed.

- The inspectors administratively closed event 44197, loss of nuclear criticality detection system for two areas caused during maintenance, which occurred on May 9, 2008. The corrective actions taken in response to the violation were reviewed and the violation was closed in inspection report 70-1257/2008-202.
- The inspectors administratively closed violation 70-1257/2008001-03, failure to adhere to requirements in Environment Health Safety and Licensing document E04-NCSS-G06NCS for combustible loading. The corrective actions taken in response to the violation were reviewed and the violation was closed in inspection report 70-1257/2008-202.

### Training (IP 88010)

- The inspectors reviewed training procedures and instructor guides and determined that process safety information and hazard identification and assessment information were included in the training material.

## EXECUTIVE SUMMARY (Continued)

- Operators were provided refresher training in nuclear criticality safety, general employee, radiation protection, and general emergency training.
- The licensee used an electronic training system to monitor the qualification status of operators for ensuring that training was provided in accordance with training requirements. The inspectors verified that the training for selected operators was current.

### Followup On Traditional Enforcement Actions Including Violations, Deviations, Confirmatory Action Letters, Confirmatory Orders, And Alternative Dispute Resolution Confirmatory Orders (IP 92702)

- The inspectors reviewed the corrective actions and interviewed the licensee's training staff for violation 70-1257/2008202-01, failure to provide adequate procedures to prevent employees from independently working at work stations after failing to complete annual requalification training. Based on the inspectors' review and interviews the licensee took corrective action to prevent recurrence. This item is closed.

### Permanent Plant Modifications (IP 88070)

- The inspectors reviewed the licensee's plant modification process and found that procedures adequately addressed elements associated with the permanent plant modification program. The inspectors reviewed several modification work packages and determined that the modification work packages were developed, reviewed, and implemented in accordance with approved procedures.
- The inspectors verified that the "as-built" drawings agreed with field configuration by performing field walk downs with licensee personnel for selected modifications. Through discussion with licensee personnel, inspectors determined that personnel were knowledgeable of the details associated with field installation and the importance of ensuring that plant drawings accurately reflected plant configuration.
- Through discussions with licensee personnel, inspectors determined that personnel were knowledgeable of the permanent plant modification process, including the review and approval process, and requirements associated with field implementation of plant modifications.
- Through discussions with licensee personnel, inspectors found that personnel were knowledgeable of their responsibilities and the review and closure of modification work packages were performed in accordance with approved procedures.
- The inspectors reviewed completed modification work packages and determined that they were properly reviewed and contained the necessary documentation required by the licensee's program.

### Exit Meeting Summary

On November 12, 2008, the inspectors presented the inspection results to Mr. C. Perkins and other members of his staff, who acknowledged the findings.

EXECUTIVE SUMMARY (Continued)

Key Points of Contact

<u>Name</u>	<u>Title</u>
Charles Perkins	Site Manager
Robert Link	Environmental Health, Safety and Licensing
Calvin Manning	Criticality Safety
Timothy Tate	Safety, Security, and Emergency Preparedness
Lance Stephens	Richland Operations
Vincent Gallacher	Uranium Conversion and Recovery
David Vetrano	Ceramics
Richard Kimura	Project Management
Terry Watkins	Technical Support and Maintenance
Tami Johnson	Training

List of Items Opened, Closed, Discussed

<u>Item Number</u>	<u>Status</u>	<u>Type</u>	<u>Description</u>
42936 (NMED No. 060660)	Closed	LER	Worker exposed to hydrogen fluoride release.
42981	Closed	LER	Hydrogen accumulation due to loss of water seal.
70-1257/2008005-01	Open/Closed	VIO	Failure to identify potential accident sequences, consequences and likelihood, and IROFS for an accumulation of hydrogen in the HF recovery room.
44197 (NMED No. 080275)	Closed	LER	Loss of nuclear criticality detection system for two areas caused during maintenance.
70-1257/2008001-03	Closed	VIO	Failure to adhere to requirements in Environment Health Safety and Licensing document E04-NCSS-G06NCS for combustible loading.
70-1257/2008202-01	Closed	VIO	Failure to provide adequate procedures to prevent employees from independently working at work stations after failing to complete annual requalification training.