UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

April 26, 2007

Mr. Charles Perkins
Site Manager
AREVA NP, Inc.
2101 Horn Rapids Road
Richland, WA 99352-0130

SUBJECT: NRC INSPECTION REPORT NO. 70-1257/2007-003

Dear: Mr. Perkins

This refers to the results of the above-referenced Nuclear Regulatory Commission (NRC) inspection conducted at your Horn Rapids Road, facility on April 2-5, 2007.

As a result of the inspection, the enclosed NRC Form 591FF, SAFETY INSPECTION REPORT, is being issued. The enclosed form indicates that no violations were identified during the inspection of your licensed activities. Please retain the original Form 591FF Parts 1 and 3 for your files.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

Should you have any questions concerning this letter, please contact us.

Sincerely,

/RA/

David J. Hartland, Acting Chief
Fuel Facility Inspection Branch 1
Division of Fuel Facility Inspection

Docket No. 70-1257
License No. SNM-1227

Enclosure: NRC Form 591FF Parts 1 and 3

cc w/encl: (See page 2)

cc w/encl:
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Distribution w/encl: (see page 3)

Distribution w/encl:
D. Hartland, RII
A. Gooden, RII
N. Baker, NMSS
M, Adams, NMSS
M. Galloway NMSS

*see previous concurrence

X☐ PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE **X**☐ NON-SENSITIVE

ADAMSX:☐ Yes ACCESSION NUMBER:_____

OFFICE	RII:DFFI	RII:DFFI									
SIGNATURE	OL 4/19/07										
NAME	OLopez	AGooden									
DATE											
E-MAIL COPY?	YES NO	YES	YES	NO	YES	NO	YES	NO	YES	NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: C:\FileNet\ML071160424.wpd

NRC FORM 591FF PART 1
(11-2005)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE/LOCATION INSPECTED:	2. NRC/REGIONAL OFFICE:
AREVA NP, Inc. 2101 Horn Rapids Road Richland, WA 99352-0130 REPORT NUMBER(S): 70-1257/2007-003	**U.S. Nuclear Regulatory Commission** **Region II, Division of Fuel Facilities Inspection** **61 Forsyth Street, Suite 23T85** **Atlanta, GA 30303**

3. DOCKET NUMBER(S):	4. LICENSEE NUMBER(S):	5. DATE(S) OF INSPECTION:
70-1257	SNM-1227	April 2-5, 2007

LICENSEE:

The inspection was an examination of the activities conducted under your license as they relate to radiation safety and to compliance with the Nuclear Regulatory Commission (NRC) rules and regulations and the conditions of your license. 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:

[x] 1. Based on the inspection findings, no violations were identified.

[ ] 2. Previous violation(s) closed.

[ ] 3. 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):

[ ] 4. 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's Statement of Corrective Actions for Item 4, above.

I hereby state that, within 30 days, the actions described by me to the inspector will be taken to correct the violations 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 NRC will be required, unless specifically requested.

Title	Printed Name	Signature	Date
LICENSEE'S REPRESENTATIVE			
NRC INSPECTOR	Omar R. López	*/RA/*	4/19/07

NRC FORM 591FF PART 3
(11-2005)
10 CFR 2.201

U.S. NUCLEAR REGULATORY COMMISSION

SAFETY INSPECTION REPORT AND COMPLIANCE INSPECTION

1. LICENSEE

AREVA NP, Inc.
2101 Horn Rapids Road
Richland, WA 99352-0130

2. NRC/REGIONAL OFFICE

U.S. Nuclear Regulatory Commission
Region II, Division of Fuel Facilities Inspection
61 Forsyth Street, Suite 23T85
Atlanta, GA 30303

REPORT NUMBER(S): **70-1257/2007-003**

3. DOCKET NUMBER(S):	4. LICENSE NUMBER(S):	5. DATE(S) OF INSPECTION:
70-1257	SNM -1227	April 2-5, 2007

6. INSPECTOR(S): Omar López, and Paul Startz (in-training)

7. INSPECTION PROCEDURES USED: 88025

SUPPLEMENTAL INSPECTION INFORMATION

Executive Summary

AREVA NP Richland facility fabricates low-enriched uranium fuel and blended low-enriched uranium fuel for use in commercial reactors. During the period of the inspection, the facility was shutdown due to a maintenance outage. This was a routine, announced inspection that included observations and evaluation of the maintenance and surveillance of safety controls program. The inspection involved observations of work activities, reviews of selected records, and interviews with plant personnel. The inspection identified the following aspects of the licensee's program as outlined below:

- The inspectors observed maintenance activities for the ammonium diuranate calciner, dryer, and uranium dioxide sintering furnaces to assess the implementation of the work order, maintenance work permit, and hot work procedures. No safety problems were identified.

- The inspectors observed a smoke test for the Line 2 reactor in the Dry Conversion Facility (DCF) and reviewed documentation related to the in-service maintenance for the Line 1 and 2 reactor vessels. No safety problems were identified.

- The inspectors observed functional tests of the following active engineering controls in the DCF: reaction gas interlocks for the Line 1 reactor; smoke detectors and temperature interlocks for Line 1 vaporization; and, Line 1 powder preparation discharge interlocks. The inspectors reviewed calibration records for the DCF moisture analyzers. No safety problems were identified with any of the testing or calibration.

Enclosure

Executive Summary (continued)

- The inspectors reviewed the licensee's initial response to a minor explosion that occurred on April 4, 2007, in the saturation vessel for hydrogen gas flow to the neutron absorber fuel sintering furnace. At the time of the incident, an instrument technician and an engineer were attempting to reestablish hydrogen flow to the furnace. The two individuals immediately evacuated the affected area with no serious injuries. The building was evacuated, and the emergency response team responded to incident scene in appropriate personal protective equipment and verified that a hazardous atmosphere was not present.

  The licensee formed a root cause analysis (RCA) team to investigate the cause of the minor vessel explosion. The RCA team identified that the hydrogen lines were opened during maintenance activities, and the lines were not purged to eliminate the trapped oxygen after the system was restored following maintenance. The oxygen and hydrogen mixture was ignited by the high temperature in the furnace. As a result, the flames flowed back to the saturation vessel resulting in the minor explosion. The preliminary corrective actions involved implementing a requirement to purge the hydrogen system every time that activities were performed that created the potential to introduce oxygen in the system and installing a detonation arrester in the saturation vessel.