



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

April 24, 2014

Mr. Dominique Grandemange
Site Manager
AREVA NP, Inc.
2101 Horn Rapids Road
Richland, WA 99354-0130

SUBJECT: AREVA NP, INC. (RICHLAND) – NUCLEAR REGULATORY COMMISSION
INTEGRATED INSPECTION REPORT 70-1257/2014-002

Dear Mr. Grandemange:

The Nuclear Regulatory Commission (NRC) conducted announced, routine inspections from January 1 through March 31, 2014, at the AREVA NP, INC., facility in Richland, Washington. The purpose of the inspections was to perform routine reviews of operational safety, fire protection, and emergency preparedness. The enclosed report presents the results of the inspections. At the conclusion of the inspections, the results were also discussed with you and members of your staff at an exit meeting held on March 13, 2014.

During the inspections, NRC staff examined activities conducted under your license as they relate to public health and safety to confirm compliance with the Commission's rules and regulations and with the conditions of your license. The inspection consisted of facility walk-downs, selective examinations of relevant procedures and records, interviews with plant personnel, and observations of activities. No findings of significance were identified.

In accordance with 10 CFR 2.390 of 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 Agencywide Documents Access and Management System (ADAMS), which is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions, please call me at (404) 997-4629.

Sincerely,

/RA/ M. Thomas for

Marvin D. Sykes, Chief

Projects Branch 2

Division of Fuel Facility Inspection

Docket No. 70-1257

License No. SNM-1227

Enclosure: NRC Inspection Report 70-1257/2014-002

w/Attachment: Supplemental Information

cc: (See page 3)

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cc:

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U. S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.: 70-1257

License No.: SNM-1227

Report No.: 70-1257/2014-002

Licensee: AREVA NP, Inc.

Facility: Richland, Washington

Dates: January 1 through March 31, 2014

Inspectors: M. Toth, Fuel Facility Inspector (Section A.1)
G. Goff, Fuel Facility Inspector (Section A.2)
N. Pitoniak, Fuel Facility Inspector (Section B.1)

Approved by: M. Sykes, Chief
Projects Branch 2
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

AREVA NP, INC. - RICHLAND
NRC Integrated Inspection Report 70-1257/2014-002
January 1 through March 31, 2014

Inspections were conducted by regional inspectors during normal shifts in the areas of operational safety, fire protection, and emergency preparedness. The inspectors performed a selective examination of licensee activities that were accomplished by direct observation of safety-significant activities and equipment, tours of the facility, interviews and discussions with licensee personnel, and a review of facility records.

Safety Operations

- The items relied on for safety (IROFS) reviewed were properly implemented and maintained in order to perform their intended safety function. (Paragraph A.1)
- The fire protection programs was adequately maintained in accordance with licensee procedures. (Paragraph A.2)

Facility Support

- The Emergency Preparedness program was implemented in accordance with the Emergency Plan and applicable regulatory requirements. (Paragraph B.1)

Attachment

Key Points of Contact
List of Items Opened, Closed, and Discussed
Inspection Procedures Used
Documents Reviewed

REPORT DETAILS

Summary of Plant Status

The AREVA Richland facility converts uranium hexafluoride (UF₆) into uranium dioxide (UO₂) for the fabrication of low-enriched fuel assemblies used in commercial light water reactors. During the inspection period, a maintenance outage was in effect.

A. Safety Operations

1. Operational Safety (Inspection Procedure (IP) 88020)

a. Inspection Scope and Observations

The inspectors conducted a general plant tour to determine plant status, equipment condition, and compliance with combustible material control and housekeeping requirements. The facility was in a scheduled shutdown period and, thus, the inspectors focused on conduct of maintenance and testing, records review, and interviews with operators. The records reviewed included, but were not limited to, internal licensee program assessments, completed preventive maintenance (PM) items, functional tests, and training documents.

The inspection centered on the dry conversion facility (DCF) and UO₂ process areas. The inspectors selected items relied on for safety (IROFS) including active engineered controls, passive engineered controls, and administrative controls to ensure the IROFS were maintained and available to meet the performance requirements as depicted in 10 CFR 70.61. The review included process area walk downs using select piping and instrumentation diagrams (P&IDs) and a review of management measures in accordance with 10 CFR 70.62(d).

Through interviews with various operators, technicians, and direct observation of PM work and instrument calibrations, the inspectors determined that required safety controls were adequately implemented. The inspector observed operators' performance and determined that all were adhering to applicable procedures. The inspectors reviewed the postings and operator aids applicable to the tasks being observed and determined that these postings and operator aids were current, reflected safety controls, and were followed by licensee personnel.

The inspectors reviewed the licensee's training program to verify that training and qualification commitments were satisfied and maintained current for a selection of personnel. The inspectors interviewed several operators regarding process area evacuation requirements (administrative IROFS in the integrated safety analysis (ISA) summary) when dealing with chemical hazards in the plant areas and determined that this training was adequately implemented. The inspectors observed mandatory safety conscious work environment (SCWE) training given at the site by an external AREVA employee and determined the presentation and subject material were suitable. The licensee has begun to implement a new training initiative for active and passive engineered controls in specific process areas, where an engineer leads a walk-through

discussion with a small group of operators. The inspectors observed an 'IROFS walk down' in the UF₆ Cylinder Wash station and noted that this type of training was useful in increasing operator knowledge of safety controls in the facility.

The inspectors reviewed select corrective action program entries for the period occurring since the last NRC Operational Safety inspection and determined that deviations from procedures and unforeseen process changes, including any infractions, affecting nuclear criticality, chemical, radiological, or fire safety, were documented and effectively investigated.

b. Conclusion

No violations of NRC requirements were identified.

2. Fire Protection (Annual) (IP 88055)

a. Inspection Scope and Observations

The inspectors reviewed licensee procedures; drawings/diagrams; permits; and toured plant areas containing safety controls, including IROFS to assess the material condition of fire protection equipment, systems, and features. The areas inspected were: DCF, UO₂ building, Engineering Laboratory Offices (ELO) building, Supercritical carbon dioxide (SCCO₂), Blended Low Enriched Uranium (BLEU), ceramics, fuel bundling and assembly, Specialty Fuels (SF) building, Uranyl Nitrate Building (UNB), Building 9, Warehouses 2 and 7, and outdoor areas. While all of the above areas were inspected, the inspection activities focused heavily on DCF and UO₂ process areas.

The inspectors verified that flammable materials were stored properly in marked cabinets, as specified in approved procedures. Furthermore, inspectors confirmed that housekeeping and the control of combustible materials were adequate and consistent with approved procedures. Through interviews with supervisors and reviews of hot work documentation, the inspectors verified that the hot work program (cutting, grinding, welding, etc.) was implemented in accordance with approved procedures.

The inspectors reviewed preventive maintenance and functional test records and determined that fire detection and suppression equipment had been properly tested to perform the intended safety function. As a result, inspectors verified that the fire protection equipment was maintained in an adequate state of readiness. In addition, the inspectors determined that fire dampers, doors, and penetration seals were being maintained in a condition that would ensure availability and reliability to perform the intended safety function. Also, the inspectors determined that fire hoses and portable extinguishers were provided at their designated locations; in adequate condition; and access was unobstructed.

The inspectors reviewed the licensee corrective action program entries related to fire protection since the last fire protection inspection and determined that the licensee was identifying safety controls or IROFS operability problems at an appropriate threshold and was entering them into the corrective action program. Also, the inspectors evaluated the corrective actions associated with fire protection and determined that completed corrective actions were adequate.

b. Conclusion

No violations of NRC requirements were identified.

B. Facility Support

1. Emergency Preparedness (IP 88050)

a. Inspection Scope and Observations

The inspectors interviewed staff and reviewed records and determined that changes made to the Emergency Plan and within the facility had been properly coordinated within the Emergency Preparedness program. The inspectors reviewed procedures with significant revisions since the last emergency preparedness inspection and determined that the changes were in compliance with the applicable Emergency Plan procedures. The inspectors reviewed the licensee's emergency call list and verified that the list was current.

The inspectors reviewed records and interviewed licensee staff regarding emergency preparedness training for Plant Emergency Directors and Incident Commanders in the past year. The inspectors reviewed personnel qualification status for these positions and verified all qualifications were up-to-date. The inspectors attended a mass casualty training session for selected members of the Plant Emergency Response Team. The inspectors determined that emergency response training was in compliance with the Emergency Plan. The inspectors verified that the licensee provided response training credible emergency situations which were effective and consistent with the frequency and performance objectives required in the Emergency Plan.

The inspectors reviewed the written agreements with the off-site agencies and verified that the organizations required by the Emergency Plan had up-to-date agreements and reviews were within the periodicity required in the Emergency Plan. The inspectors interviewed off-site personnel and reviewed records and subsequently verified that the licensee invited off-site organizations to participate in drills, provided training, offered site visits, and conducted an annual emergency preparedness orientation for these organizations, as required by the Emergency Plan. The inspectors interviewed representatives of the Richland Police Department and the Benton County Emergency Management Department and determined that they maintained an adequate understanding of the written agreements. The inspectors also reviewed records and verified that the licensee performed a communications check with the off-site organizations at a quarterly frequency as required by the Emergency Plan.

The inspectors observed the storage of emergency equipment in the Emergency Operations Center (EOC) equipment repository, Office Building 4, DCF, and the Central Guard Station and verified that the inventory levels were adequately maintained and checked monthly as required by the Emergency Plan. The inspectors verified equipment checks, to include calibrations and testing, were completed as required in order to maintain the equipment inventory in a ready-to-use status as required by the Emergency Plan. The inspectors toured the EOC and verified that the areas were readily accessible and maintained the appropriate amount of communications equipment. The inspectors reviewed the accountability procedure and verified that accountability meeting

points were accessible. The inspectors noted an additional off-site accountability and staging area had been designated and a new agreement established with the responsible off-site agency.

b. Conclusion

No violations of NRC requirements were identified.

C. Exit Meeting

The inspection scope and results were presented to members of the licensee's staff at various meetings throughout the inspection period and were summarized on March 13, 2014, with D. Grandemange and staff. No dissenting comments were received from the licensee. Proprietary information was discussed, but not included in the report.

SUPPLEMENTAL INFORMATION

1. KEY POINTS OF CONTACT

<u>Name</u>	<u>Title</u>
J. Beck	Benton County Emergency Manager Director
S. Cline	Mechanical Maintenance Supervisor
M. Cobb	Captain, Richland Police Department
J. Deist	Emergency Planning Coordinator
W. Doan	Criticality Safety Engineer
D. Grandemange	Site Manager
D. Harris	Principle Project and Reliability Engineer/Mechanical Engr.
A. Landon	Project and Maintenance Engineer
R. Link	Environmental, Health, Safety and Licensing Manager
C. Manning	Manager, Nuclear Criticality Safety
K. Olsen	Project and Reliability Engineer
T. Tate	Manager, Safety, Security, and Emergency Preparedness
H. Welker	IRM Manager
J. Veysey	Maintenance Manager

Other licensee employees contacted included engineers, technicians, production staff, and office personnel.

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

3. INSPECTION PROCEDURES USED

IP 88020, Operational Safety
IP 88050, Emergency Preparedness
IP 88055, Fire Protection (Annual)

4. DOCUMENTS REVIEWED

Records:

Training records for selected individuals
CG06010, Safety Inspection, Revision (Rev.) 9
C065P007 UF6 Cylinder Wash, Rev. 4
C070P006 Tank 20A Overflow, Rev. 2
C370P001, Pellet Line Sludge, Rev. 11
C380P00X, Furnace Sintering, Rev. 6
C390P006-000X, Dump Pellet to Hopper, Rev. 0
C800P001, Roof Leak Detector, Rev. 3
C810P003-000X, Heat Interlocks, Rev. 14
C820P003-000X, Interlock Check, Rev. 12

C820P004-000X, VX-203 Interlock, Rev. 10
 C820P005-000X, Interlock Check, Rev. 12
 C820P006-000X, Interlock Gas, Rev. 13
 C820P007-000X, PLC Interlock, Rev. 8
 C820P008-000X, Calciner Interlock, Rev. 8
 C820P009-000X, Discharge Interlock, Rev. 8
 C820P010-000X, Discharge Interlock, Rev. 10
 C830P001-000X, Power Prep Interlocks, Rev. 20
 C840P001-000X, Tank Scrubber Overflow, Rev. 3
 E04-07-2013XX, Criticality Safety – NCS Audits, Rev. 1
 E04-07-2014XX, Criticality Safety – NCS Audits, Rev. 1
 E12-03-034, EHS&L Industrial Hygiene Program Review, Rev. 3.1
 E12-03-037, EHS&L Hazard Communication Program Review, Rev. 5.1
 FRM-00004-B, Radiation Protection Surveillances, Rev. 2.2, December 13 - March 14
 FRM-30379J, Building Wall/Floor Penetration Request, version 2.0
 FRM-30379T, Fire Barrier Penetration Record, version 1
 IR ARV 3SE IG 13-029, Fire Hazard, dated June 24, 2013, RO
 IRM C186I006 Pressure Transmitter SC CO₂, Rev. 2
 IRM S186I001 CO₂ Detector, Rev. 8
 JCO: 2013-9082, 2013-9630
 Order 13155195, PM005018 Review MOU 12 month SA, completed August 13, 2013
 Order 13184992, PM000091 Emergency Repository 1 mo safe, November 2013
 Order 13187586, PM000091 Emergency Repository 1 mo safe, December 2013
 Order 13190604, PM000091 Emergency Repository 1 mo safe, January 2014
 Order 13191006, PM004493 Telephone Test Q1 Safe
 Order 13193738, PM000091 Emergency Repository 1 mo safe, February 2014
 PERT Hands-on Fire Extinguisher Training 2013
 PMs: CG06P001, CG06P002, CG06P003, CG06P004, CG06P005, CG06P006,
 CG06P007, CG06P008, CG06P009, CG06P010, CG06P014, CG06P016,
 CG06P018, CG06P019 (these PMs date from the third quarter of CY 2013 to the
 first quarter of CY 2014 and each was performed on a monthly basis)
 PM005094, PM005095, PM005099, PM005104, & PM005109 (these PMs dated
 from September 2013 through January 2014; some were performed semi-
 annually, others were done quarterly, still some were monthly)
 Semi-Annual Criticality Evacuation Drill Results for October 23, 2013

Procedures:

AID-10502, Calibration Reference 1100-199
 AID-10569, Operator Aid for using Emergency Radios equipped with throat microphone
 and ear piece
 E04-NCSS-G06, Fire Prevention and Firefighting, Version 21
 E08-02-1.0, Part II, Quick Reference, version 10.0, dated August 28, 2013
 E08-03-1.1, Part III, Classifying an Emergency, version 5.0, dated February 7, 2013
 E08-03-2.1, Protective Action Decisions, version 3.3, dated January 7, 2014
 E08-03-3.7, Staging Area Supervisor, version 4.0, dated August 26, 2013
 E08-03-3.8, PERT Incident Commander, version 6.1, May 15, 2013
 E08-03-4.1, Incident Notification Form, version 4.0, dated December 11, 2012
 E08-03-4.2, Incident Notification Worksheet – Alert and Hazmat Level 2, version 11.0,
 dated February 18, 2014

E08-03-4.3, Incident Notification Worksheet – Site Area Emergency and Hazmat Level 3, version 10.0, dated February 18, 2014
 E08-03-4.4, Incident Notification Worksheet PERMT, version 4.1, dated December 5, 2012
 E08-03-8.2, Plant Evacuation Procedures – Offsite, version 4.0, dated August 12, 2013
 E08-03-8.3, Plant Evacuation Procedures – Onsite, version 3.2, dated December 11, 2012
 E08-03-8.4, Plant Evacuation Procedures – Individual Buildings, version 3.2, dated December 13, 2012
 E08-03-8.5, Emergency Equipment Lists, version 6.0, dated August 26, 2013
 MCP-30039, Hot Work Procedure, version 8.0
 MCP-30040, Fire Protection Program, version 8.0
 MCP-30383, Preventive Maintenance, Rev. 4
 SOP-40486, Standard Operating Procedure, Attachment A Standards of Conduct, version 25
 SOP-40839, Instrument Repetitive Maintenance, Rev. 11
 SOP-40841, Preventive Maintenance, Rev. 8
 SOP-40857, Maintenance Hot Work Permit Procedure, version 5.0
 SOP-41044, Designated Hot Work Area Requirements Procedure, version 1
 SWI-50045A, Standard Work Instruction for Filling SCBA Bottles, version 2.0

Condition Reports Review:

CRs: 2011-2293, 2013-5987, 2013-7788, 2013-8001, 2013-8002, 2013-8086, 2013-8091, 2013-8342, 2013-8511, 2013-9075, 2013-9082, 2013-9139, 2013-9570, 2013-9630, 2014-232, 2014-1120

Condition Reports Written as a Result of the Inspection:

CRs: 2014-2175, 2014-2179

P&IDs:

CSA-611,065 ADU Process Cylinder Wash, Rev. 19
 CSA-611,812 Line 2 Vaporization, Rev. 5

Other:

Building Layouts: CSA-607, 590, BLEU Pelletizing Powder Prep, Rev. 2
 CSA-607, 590, Dry Conv. Bldg, 1st Floor Plan, Rev. 28
 E08-05-004, Pre Fire Plan for UO₂, version 1.0
 E08-05-005, Pre-Fire Plan for DCF, version 1.0
 E14-02-004, UO₂ Building Fire Hazards Analysis, version 4.0
 E24-01-001, Fire Hazards Analysis – Horn Rapids Road Site, version 2.0
 E24-01-102, Fire Hazards Analysis – Dry Conversion Facility, version 1.0
 EMF-608, 610 Horn Rapids Road Site Arrangement Fire and Water Supply, Sheet 3, Rev. 22
 Emergency Response Organization – PERMT
 Lesson plan for course HRR-EP-100002 2013 HRR Refresher Training for Plant Emergency Director
 Lesson Plan for course HRR-EP-1000014 refresher Training for PERT Incident Commander and Team Leader
 MOU Between Areva NP Inc., and Benton County Emergency Services, dated June 18, 2013
 MOU Between Areva NP Inc., and Energy Northwest, dated June 18, 2013

MOU Between Areva NP Inc., and Franklin County Emergency Management, dated June 18, 2013

MOU Between Areva NP Inc., and Kadlec Regional Medical Center, dated August 12, 2013

MOU Between Areva NP Inc., and Richland Parks and Recreation Department, dated June 19, 2013

MOU Between Areva NP Inc., and Richland Police Department, dated June 18, 2013

MOU Between Areva NP Inc., and Richland Fire Department, dated June 20, 2013

MOU Between Areva NP Inc., and U.S. Department of Energy, Richland Operations Office, dated August 12, 2013

PERT/ICS Organizational Chart

Qualification records for Incident Commander (IC)

Qualification records for Plant Emergency Directors, HRR-EP-PED