

## UNITED STATES NUCLEAR REGULATORY COMMISSION

REGION II 245 PEACHTREE CENTER AVENUE NE, SUITE 1200 ATLANTA, GEORGIA 30303-1257

July 29, 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 70-1257/2014-003 AND NOTICE OF

**VIOLATION** 

Dear Mr. Grandemange:

The Nuclear Regulatory Commission (NRC) conducted announced, routine inspections from April 1 through June 30, 2014, at the AREVA NP, INC., facility in Richland, Washington. The purpose of the inspections was to perform routine reviews of radiation protection; radioactive waste processing, handling, storage, and transportation; and effluent control and environmental protection. 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 May 8, 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.

However, based on follow-up actions to an unresolved item identified during an inspection in the last quarter of 2013, the NRC has determined one Severity Level IV violation of NRC requirements occurred related to an improper modification of an item relied on for safety (IROFS). The violation is being included in this inspection report. This violation was evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is included on the NRC's Web site at (<a href="http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html">http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html</a>).

The violation cited is in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in the subject inspection report. The violation is being cited in the Notice because the NRC determined AREVA did not maintain compliance with 10 CFR 70.72.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC review of your response to the Notice will also determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of NRC's "Rules of Practice," a copy of this letter and its enclosures 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 <a href="http://www.nrc.gov/reading-rm/adams.html">http://www.nrc.gov/reading-rm/adams.html</a>. To the extent possible, your response should not include any personal privacy or proprietary, information so that it can be made available to the Public without redaction.

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

Sincerely,

/RA/

Marvin D. Sykes, Chief Projects Branch 2 Division of Fuel Facility Inspection

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

#### Enclosures:

- 1. Notice of Violation
- 2. NRC Inspection Report 70-1257/2014-003 w/Attachment: Supplemental Information

cc: (See page 3)

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cc: (See page 3)

## **DISTRIBUTION:**

M. Crespo, RII

G. Goff, RII

M. Baker, NMSS

M. Diaz, NMSS

M. Sykes, RII

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CC:

Loren J. Maas, Manager Licensing and Compliance Areva NP, Inc. 2101 Horn Rapids Road Richland, Washington 99352

Ron Land, Vice President Manufacturing Areva NP, Inc. 3315 Old Forest Road Lynchburg, Virginia 24501

Calvin D. Manning, Manager Nuclear Criticality Safety Areva NP, Inc. 2101 Horn Rapids Road Richland, Washington 99352

Robert E. Link, Manager Environmental, Health, Safety & Licensing Areva NP, Inc. 2101 Horn Rapids Road Richland, Washington 99352

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Earl Fordham, Deputy Director Office of Radiation Protection Department of Health 309 Bradley Boulevard, Suite 201 Richland, Washington 9935

#### NOTICE OF VIOLATION

Areva Richland Richland, WA

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

During NRC inspection activities conducted April 1 through June 30, 2014, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 70.61(e) states, in part, the safety program established in 70.62 of this subpart, shall ensure that each item relied on for safety (IROFS) will be available and reliable to perform its intended function when needed and in the context of the performance requirements of this section.

10 CFR Part 70.62(d) states, in part, that each licensee shall establish management measures to ensure compliance with the performance requirements. These measures shall ensure that IROFS will be available and reliable to perform its intended function when needed, to comply with performance requirements. One such management measure is configuration control, also known as an engineering change notice.

Section 11.4, Procedures Development and Implementation, states, in part, AREVA conducts its licensed activities in accordance with a system of written operating procedures. Activities involving licensed SNM and/or IROFS will be conducted in accordance with approved procedures.

Section 4.1.1, Criteria Required for Engineering Change Notice (ECN) Initiation, of Management Control Procedure MCP-30379, Management Control Procedure Operations Projects – Manufacturing Engineering Procedures Construction or Modification Change Control – Initiation, requires the use of an ECN if the change directly affects criticality safety or IROFS.

Contrary to the above, on and before October 27, 2013, the licensee failed to implement management measures such as configuration control for IROFS. Specifically, the licensee failed to require the use of an ECN for changes affecting criticality safety and IROFS. Failure to classify the change as an ECN resulted in the failure to perform the required ISA reviews and approvals for the change as well as the corresponding 10 CFR 70.72(b) evaluation. The NRC concluded that failure to treat the change as an ECN contributed to the failure of IROFS 3526 to meet it intended performance requirements in accordance with 10 CFR 70.61(e).

This is a Severity Level IV Violation (Section 6.2.a).

Pursuant to the provisions of 10 CFR 2.201, AREVA is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspectors at AREVA, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that

have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved. Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response 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 to the extent possible, it should not include any personal privacy, proprietary, classified, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 29th day of July 2014

# U. S. NUCLEAR REGULATORY COMMISSION REGION II

Docket No.: 70-1257

License No.: SNM-1227

Report No.: 70-1257/2014-003

Licensee: AREVA NP, Inc.

Facility: Richland, Washington

Dates: May 5 through May 8, 2014

Inspectors: G. Goff, Fuel Facility Inspector (Section A.1)

S. Startz, Fuel Facility Inspector (Section A.2)

D. Hartland, Senior Fuel Facility Inspector (Section A.3)

Approved by: M. Sykes, Chief

Projects Branch 2

Division of Fuel Facility Inspection

## **EXECUTIVE SUMMARY**

AREVA NP, INC. - RICHLAND NRC Integrated Inspection Report 70-1257/2014-003 April 1 through June 30, 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.

## **Radiological Controls**

- The Radiation Protection program was implemented in accordance with the license application and regulatory requirements. (Paragraph A.1)
- The Radioactive Waste Processing, Handling, Storage, and Transportation program was implemented in the license application and regulatory requirements. (Paragraph A.2)
- The Effluent Control and Environmental Protection program was implemented in accordance with the license application and regulatory requirements. (Paragraph A.3)

## Other Areas

A violation was identified for the failure to implement configuration control procedures for item relied on for safety (IROFS) 3526.

#### **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 (UF<sub>6</sub>) into uranium dioxide (UO<sub>2</sub>) 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. Radiological Controls

- 1. Radiation Safety (Inspection Procedure (IP) 88030)
  - a. <u>Inspection Scope and Observations</u>

The inspectors reviewed audits and assessments to ensure that the radiation protection program's performance was being reviewed, at least annually, to comply with 10 CFR 20.1101. In addition, the inspectors also reviewed radiological procedures revised since the last inspection. Inspectors determined that the changes were consistent with regulations and license requirements. As a result of the review of these documents, a review of the organizational structure, and interviews with licensee personnel, inspectors determined that the radiation protection program's functions and responsibilities are independent from operations.

The inspectors reviewed calibration records for survey and monitoring equipment and observed daily and weekly field activities performed with this equipment. Inspectors determined that the usage of the radiation detection equipment was in accordance with license requirements and procedures. Specifically, inspectors observed technicians performing: calibrations on alpha and gamma survey meters; source checks on alpha, beta, and gamma survey meters; stack sample change outs; and fixed air monitor change-outs. Furthermore, inspectors observed and verified that the licensee had a ready-to-use supply of survey meters to replace any that needed to be taken out of service.

The inspectors reviewed the Total Effective Dose Equivalent (TEDE) records and determined that they were less than the regulatory limit of five (5) rem/year. The maximum TEDE was between 0.9 and 1.0 rem. The inspectors reviewed the 2013 personnel dosimeter results as submitted to the licensee by their contractor and determined that the Lens Dose Equivalent and Shallow Dose Equivalent results were less than the regulatory limit of 15 rem and 50 rem/year, respectively. The inspectors verified that the exposure/dose records were maintained in accordance with 10 CFR 20.2106.

The inspectors reviewed the respiratory protection program. The inspectors determined that the respiratory protection program adequately identified potential hazards and that users were properly trained, qualified, and re-qualified in the use of respiratory protection equipment. Inspectors physically examined respirators for use and found one to have minor damage. The licensee promptly removed the damaged respirator from service. The inspectors concluded that the program was in compliance with 10 CFR 20.1703, the license application, and applicable procedures.

The inspectors toured portions of the Dry Conversion Facility (DCF), UO<sub>2</sub> Building, Supercritical CO<sub>2</sub> Extraction facility (SCCO<sub>2</sub>), Specialty Fuels Building, Uranyl Nitrate Building, Engineering Laboratory Operations, cylinder yard, laundry facility and verified that radiological signs and postings accurately reflected radiological conditions within these posted areas. These areas were posted in compliance with 10 CFR 20.1902 and 20.1904. The inspectors verified that the latest version of Notice to Employees, NRC Form 3, was posted in high traffic areas in accordance with 10 CFR 19.11.

The inspectors observed contamination surveys and reviewed related records. Consequently, the inspectors determined that these surveys were performed in accordance with procedures and adequately evaluated the magnitude and extent of radiation levels in accordance with 10 CFR 20.1501.

The inspectors reviewed radiation protection program-related corrective actions issued since April 2013 and noted no significant issues of concern with licensee response actions.

The inspectors reviewed As Low As Reasonably Achievable (ALARA) program requirements and determined that ALARA principles, as required by the license application. The 2013 annual ALARA Report had not been published at the time of the inspection. Hence, this document could not be reviewed.

#### b. Conclusion

No violations of NRC requirements were identified.

#### 2. Radioactive Waste Processing, Handling, Storage, and Transportation (IP 88035)

### a. <u>Inspection Scope and Observations</u>

The inspectors evaluated and confirmed that the licensee had established and maintained adequate procedures and quality assurance programs to ensure compliance with the requirements of 10 CFR Part 20 and 10 CFR Part 61 applicable to low-level radioactive waste form, classification, stabilization, and shipment manifests/tracking.

The inspectors reviewed samples of procedures and observed performance of tasks related to radioactive waste. The procedures were adequately written and delineated responsibilities related to radioactive waste management practices. The operators were familiar with their responsibilities and performed their tasks in accordance with facility procedures.

The inspectors reviewed samples of the quality assurance program for radioactive waste management practices and determined that the licensee was performing the required audits. The findings from these audits were entered into the licensee's corrective action program (CAP) for resolution.

The inspectors reviewed the licensee's program for classifying low-level radioactive waste. The inspectors reviewed the procedures for classifying waste as well as records relating to waste. The inspectors reviewed the licensee's program for ensuring that waste was properly packaged so that the waste form met the requirements of 10 CFR 61.56.

The inspectors reviewed the licensee's procedures for labeling waste shipments and tracking radioactive waste. The procedures were adequate to ensure that radioactive waste was properly labeled and specified actions to be taken should the shipments not reach the intended destination in the time specified. Additionally, the inspectors reviewed the procedures for placement, inspection, and repackaging of radioactive waste and determined that these procedures were properly implemented.

The inspectors performed walk-downs of selected radioactive material storage areas. The storage areas had adequate postings to ensure that the proper material was being stored in the area and the material was safely stored in accordance with the nuclear criticality safety requirements. The containers were properly labeled to reflect their contents and were in good physical condition.

## b. Conclusion

No violations of NRC requirements were identified.

## 3. <u>Effluent Control and Environmental Protection (IP 88045)</u>

#### a. <u>Inspection Scope and Observations</u>

The inspectors reviewed program changes and procedures revised since the last inspection and verified that the program and procedures were in accordance with license requirements. The inspectors also reviewed self-assessments and audits and verified that identified corrective actions were adequately implemented.

The inspectors reviewed the latest semi-annual effluent reports and determined that the licensee was in compliance with 10 CFR 70.59. The inspectors reviewed the public dose assessment and determined that the average annual effluent concentrations released did not exceed the values specified in Appendix B of 10 CFR Part 20.

The inspectors walked down environmental monitoring stations and reviewed sampling results for soil, surface water, ambient air, external radiation, etc., and determined that the sampling points and results were in compliance with the license requirements. The inspectors verified that liquid and gaseous effluent monitors were calibrated and functional checks performed in accordance with licensee procedures. The inspectors observed a sample analysis and determined that the quality control of laboratory measurements was implemented in accordance with the license application.

## b. Conclusion

No violations of NRC requirements were identified.

## B. Other Areas

#### 1. Follow-up on Previously Identified Issues

# a. (Closed) Unresolved Item (URI) 70-1257/2013-005-001, Independent Review of Analysis and Corrective Actions for Loss of IROFS 3526

Unresolved Item 70-1257/2013-005-001 was closed to the violation stated below.

## b. (Opened) Violation (VIO) 70-1257-2014-003-001, Failure of IROFS 3526, a uranium dioxide (UO<sub>2</sub>) building steam boiler vacuum breaker

Introduction: The NRC identified a Severity Level IV violation of 10 CFR Part 70.61(e) while reviewing the failure of Items Relied On For Safety (IROFS) 3526, a uranium dioxide (UO<sub>2</sub>) building steam boiler vacuum breaker.

Description: On October 27, 2013, during an annual preventative maintenance task on IROFS 3526, a UO<sub>2</sub> building steam boiler vacuum breaker, a pipefitter observed that the IROFS failed to open as required and notified the Uranium Conversion and Recovery supervisor. The failure was reported under 10 CFR 70 Appendix A (a)(5), Event Notice (EN) 49475. The report was made because IROFS 3526 appeared to have been unable to perform the required safety function for more than eight hours leaving only one additional IROFS to prevent the potential reverse flow of uranium-bearing material solution in three accident sequences. The 30-day licensee event report (ML13330A016), dated November 22, 2013, describes the corrective actions taken by the licensee.

As a follow-up to this event report, the inspectors determined that when the vacuum breaker was replaced in March 2013, the licensee failed to follow Management Control Procedure (MCP)-30379, Manufacturing Engineering Procedures Construction or Modification Change Control – Initiation, which requires the use of an Engineering Change Notice (ECN) since the change directly affected criticality safety or an IROFS. Specifically, the licensee failed to issue an ECN for a replacement of the vacuum breaker to a different design and treated the change as a like-for-like replacement using a maintenance work order. Failure to classify the change as an ECN resulted in the failure to perform the required Integrated Safety Analysis (ISA) reviews and approvals for the change as well as the corresponding 10 CFR 70.72 evaluation. The NRC concluded that failure to treat the change as an ECN contributed to the failure of IROFS 3526 to be available and reliable to perform its intended function in accordance with 10 CFR 70.61(e).

Analysis: The failure to follow procedures is a noncompliance and a violation of NRC requirements. This issue is more than minor because it involves a failed passive engineered IROFS (IROFS 3526) and a failed management measures (procedures) such that a change to an IROFS was not evaluated by the licensee as specified in paragraph 10 CFR 70.72(b) before the change was implemented which resulted in the failure of IROFS 3526 to meet its performance requirements in accordance with 10 CFR 70.61(e). The issue was considered to be very low risk significance based because the initiating events did not occur for the accident sequences.

Enforcement: 10 CFR 70.61(e) states, in part, the safety program established in 70.62 of this subpart, shall ensure that each item relied on for safety (IROFS) will be available and reliable to perform its intended function when needed and in the context of the performance requirements of this section. 10 CFR Part 70.62(d) requires, in part, that each licensee shall establish management measures to ensure compliance with the performance requirements. These measures shall ensure that IROFS will be available and reliable to perform its intended function when needed in order to comply with performance requirements. One such management measure is configuration control, also known as an ECN. Section 11.4 of the Areva license application SNM-1227

requires that activities involving licensed Special Nuclear Material (SNM) and/or IROFS be conducted in accordance with approved procedures. Section 4.1.1, Criteria Required for Engineering Change Notice (ECN) Initiation, of Management Control Procedure MCP-30379, Management Control Procedure Operations Projects – Manufacturing Engineering Procedures Construction or Modification Change Control – Initiation, requires the use of an ECN if the change directly affects criticality safety or IROFS.

Contrary to the above, on and before October 27, 2013, the licensee failed to implement management measures such as configuration control for IROFS. Specifically, the licensee failed to require the use of an ECN for changes affecting criticality safety and IROFS. Failure to classify the change as an ECN resulted in the failure to perform the required ISA reviews and approvals for the change as well as the corresponding 10 CFR 70.72(b) evaluation. The NRC concluded that failure to treat the change as an ECN contributed to the failure of IROFS 3526 to meet its intended performance requirements in accordance with 10 CFR 70.61(e), Violation 70-1257/2014-003-001.

## C. <u>Exit Meeting</u>

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 May 9, 2014, with Robert Link 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**

Name Title

R. Burklin Certified Health Physicist

D. Durham Health and Safety Technicians Supervisor

D. Grandemange Site Manager

D. Harris Principle Project and Reliability Engineer/Mechanical Engr.

J. Kreitzberg Criticality Safety Engineer

R. Link Environmental, Health, Safety and Licensing Manager

S. Powers Project and Reliability Engineering Manager

V. Sakach Health Physicist M. Salisbury Process Engineer

T. Tate Manager, Safety, Security, and Emergency Preparedness

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

#### 2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

### Closed

URI 70-1257/2013-005-001 Independent Review of Analysis and Corrective

Actions for Loss of IROFS 3526

Opened

VIO 70-1257/2014-003-001 Failure of IROFS 3526, a uranium dioxide (UO<sub>2</sub>)

building steam boiler vacuum breaker

## 3. INSPECTION PROCEDURES USED

IP 88030, Radiation Safety

IP 88035, Radioactive Waste Processing, Handling, Storage, and Transportation

IP 88045, Effluent Control and Environmental Protection

#### 4. DOCUMENTS REVIEWED

#### Records:

Dose records for many employees during CY 2013

Calibration records: 13179423, 13193956, 13185346, 13185278, 13179399, 13191053, 13196446, 13179601, 13199561, 13203011,

FRM-40001-B, Daily Background and Uranium Source Check, Version 3.1 (6 were reviewed)

Attachment

- 20140505C1SFDAILYSRCCH, Radiological Safety Records QC of Portable Contamination Instruments & Dose Rate Meters, dated May 5, 2014
- 20140506C1SFDAILYSRCCH, Radiological Safety Records QC of Portable Contamination Instruments & Dose Rate Meters, dated May 7, 2014

Contamination Sample Results Ordered by Survey ID, dated May 7, 2014

Training records for fourteen radiological workers

Air Sample Batch Reports for DCF, BLEU, and Randoms, dated May 6, 2014 Stacks Batch Reports, dated May 6, 2014

Waste Shipment Manifest 00264, dated August 21, 2013, AREVA to US Ecology Washington

Waste Shipment Manifest 02266, dated September 25, 2013, AREVA to US Ecology Washington

Waste Shipment Manifest 0680-02-0181, dated December 30, 2013, AREVA to Energy Solutions

#### Procedures:

AID-10061, Reference 059 Ludlum Model 177-61, 177-45, 177-3, 28A, 21S, Model 12 Ratemeters, and Eberline E-140 Ratemeters Using Geiger-Mueller (GM) Probers, Version 2.3 (calibration)

AID-10065, Reference 065 Ludlum Model 1000 and 2000, Counter With Models 43-1 or HP-210T Probes, Version 2.3 (calibration)

AID-10194, Reference 300 Neutron Criticality Detectors, Version 2.2

AID-10197, Reference 306 Eberline Alpha Air Monitor Model ALPHA-6 and ALPHA-6A-1, Version 2.3

AID-10198, Reference 307 Canberra NetCAM Alpha Continuous Area Monitor Model AS1700R, Version 4.1

AID-10408, Reference 1082 Canberra Sirius-2AB, Hand, Cuff and Foot Contamination Monitor, Version 3.3

AID-10409, Reference 1083 Canberra Argos – 4AB & 5AB, Personnel Contamination Monitors, Version 4.2

AID-10538, Reference 1136 Dwyer Flowmeters for Air Flows, Version 1.1

SOP-40000, Quality Control of Portable Alpha Survey Instruments, Version 4.1

SOP-40020, In-Plant Air Sampling, Version 14.0

SOP-40032, Radioactive Gaseous Effluent Sampling, Version 17.0

SOP-40046, Area/Facility Removable Contamination Control, Version 8.0

SOP-40195, Fuel Services Operations, Version 4.0 (RWP for Building 9)

SOP-40820, Quality Control of Beta/Gamma Survey Instruments, Version 5.1

SOP-40954, Quality Control of Portable Dose Rate Instruments, Version 1.1

SOP-40256, Version 14.0, ARF Ion Exchange System

SOP-40382, Version 27.0, Waste Operations – Waste Packaging, Handling, and Movement

SOP-40383, Version 8.0, Waste Assay Operation.

SOP-40253, Version 16.0, Ammonia Recovery Procedures

SOP-40255, Version 4.1, Ammonia Recovery Facility Ion Exchange Metal Removal

SOP-40257, Version 3.3, ARF Ion Exchange Feed Tank System

AID-10360, Version 4.1, Reference 1028 Ortec ISOCART Object Counting Assay System

SWI-40487A, Version 4.1, Waste Generator Disposal Pathways/flowchart

## **Condition Reports Review:**

2013-4302, 2013-6905, 2013-9847, 2013-9990, 2014-1813

## Condition Reports Written as a Result of the Inspection:

657, Air Sampling System Condition Report, dated May 6, 2014 (WO# 11249077)

658, Air Sampling System Condition Report, , dated May 6, 2014 (WO# 11249078)

659, Air Sampling System Condition Report, , dated May 6, 2014 (WO# 11249080)

#### Other:

EMF-1507, 8.1-1, Removable Contamination Survey Report, dated December 19, 2013, Revision (Rev.) 1

Radioactive Sealed Source Inventory as of June, 2013

Instrument Status Report, dated May 7, 2014

Training Exam – HRR-RADRADCHALLENGE

Triennial Training Program assessment dated September 13-15, 2011

2013 Annual Radiation Protection Program Audit (HP-4), dated January 16, 2014

Monthly Surveillances: March 2013, June 2013, July 2013, August 2013, October 2013, December 2013, January 2014

ALARA Audit / HP -5, dated July 2013

ALARA Committee Meeting - February 2014

Posting Audits (HP-9): September 2013, November 2013, March 2013

Airborne Audit (HP-6): August 7, 2013, December 17, 2013

Protective Clothing Audit (HP-14), dated January 13, 2014

Bioassay/HP -10, dated January 2014

Records Audit (HP-2), dated February 21, 2014

Criticality Dosimeter Inspection / HP - 17, dated February 6, 2014

Containment Audit (HP-16), dated November 4, 2013

Radiological Safety Training Audit HP-13, dated July 16, 2013

Contamination/Radiation Survey Audit / HP – 8, dated November 4, 2013

RWP/RJP Audit (HP-11), dated November 4, 2013

Dose Tracking System Audit/HP-18, dated November 13, 2013

Sealed Source Audit/HP-12, dated November 19, 2013

Radiological Respiratory Protection Program Audit/ HP-19A, dated May 21, 2013

External Radiation Protection Program Audit/HP-3, dated April 7, 2014

Laboratory Instrument Audit/HP-15, dated March 24, 2014

Licensee Audit, MCP 30235, Version 4.1, Semi-annual Radioactive Waste Handling Audit Checklist, Audit Date January 9, 2013

Licensee Audit, MCP 30235, Version 4.1, Semi-annual Radioactive Waste Handling Audit Checklist, Audit Date 7July 30, 2013

Licensee Audit, MCP 30235, Version 4.1, Semi-annual Radioactive Waste Handling Audit Checklist, Audit Date January 15, 2014