



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

October 28, 2015

Dr. Ronald J. Land
Site Manager
AREVA, Inc.
2101 Horn Rapids Road
Richland, WA 99354-0130

**SUBJECT: AREVA NP, INC. (RICHLAND) – NUCLEAR REGULATORY COMMISSION
INTEGRATED INSPECTION REPORT 70-1257/2015-004**

Dear Dr. Land:

The Nuclear Regulatory Commission (NRC) conducted announced, routine inspections from July 1 to September 30, 2015, at the AREVA NP, Inc., facility in Richland, Washington. The purpose of these inspections was to perform routine reviews of operational safety, criticality safety, effluent control and environmental protection, and plant modifications. The enclosed report presents the results of the inspections. At the conclusion of the inspections, the results were discussed with you and members of your staff at exit meetings held on August 27 and September 24, 2015.

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 inspections 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 and Procedure," 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 Agency-wide Documents Access and Management System (ADAMS), which is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html>.

R. Land

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If you have any questions, please call me at (404) 997-4555.

Sincerely,

/RA/

Eric C. Michel, Chief
Projects Branch 2
Division of Fuel Facility Inspection

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

Enclosure:
NRC Inspection Report 70-1257/2015-004
w/Supplemental Information

cc: (See page 3)

R. Land

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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.: 70-1257/2015-004

Licensee: AREVA NP, Inc.

Facility: Richland Facility

Location: Richland, Washington 99354

Dates: July 1 through September 30, 2015

Inspectors: D. Anderson, Fuel Facility Inspector (A.1)
P. Glenn, Fuel Facility Inspector (Section A.2)
M. Crespo, Senior Fuel Facility Inspector (Section B.1)
D. Hartland, Senior Fuel Facility Inspector (Section C.1)
G. Goff, Fuel Facility Inspector (Section C.1)

Approved by: E. Michel, Chief
Projects Branch 2
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

AREVA NP, INC. - Richland
NRC Integrated Inspection Report 70-1257/2015-004
July 1 through September 30, 2015

Inspections were conducted by regional inspectors during normal shifts in the areas of operational safety, criticality safety, effluent control and environmental protection, and plant modifications. 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 reviewed were properly implemented and maintained in order to be available and reliable to perform the intended safety function. The Operational Safety program was implemented in accordance with the license application and regulatory requirements. (Paragraph A.1)
- The nuclear criticality safety program was implemented in accordance with the license application and regulatory requirements. (Paragraph A.2)

Radiological Controls

- The effluent control and environmental protection program was implemented in accordance with the license application and regulatory requirements. (Paragraph B.1)

Facility Support

- The configuration management and the plant modification program was implemented in accordance with the license application and regulatory requirements. (Paragraph C.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, normal production activities were ongoing.

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 had recently completed a scheduled shutdown and, thus, the inspectors focused on conduct of maintenance and testing, records review, and interviews with operators, technicians and supervisors. The records reviewed included, but were not limited to, internal licensee program assessments, completed preventive maintenance (PM) items, and training documents.

The inspection centered on the Plant Ventilation System, UF₆ Cylinder Receiving and Storage Facility, and the Hydrogen/Nitrogen (H₂/N₂) System. 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 required in Title 10 of the *Code of Federal Regulations* (10 CFR) 70.61. The review included area walk-downs using select piping and instrumentation drawings (P&IDs) and a review of management measures as required in 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 inspectors observed operators' and technicians' 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 and verified that training and qualification commitments were satisfied and maintained current for a selection of personnel. The inspectors interviewed several personnel regarding the safety control requirements of the H₂/N₂ System, Plant Ventilation System, and UF₆ Cylinder Receiving and Storage Facility. The inspectors noted that the personnel were knowledgeable of the potential hazards in each area and determined that their training was adequate.

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 findings of significance were identified.

2. Nuclear Criticality Safety (IP 88015)

a. Inspection Scope and Observations

The inspectors evaluated the adequacy of the licensee's Nuclear Criticality Safety (NCS) program and analyses to assure the safety of fissile material operations through compliance with 10 CFR 70 and the license application. The inspectors reviewed selected NCS documents and determined that criticality safety of risk-significant operations was assured through engineered and administrative controls with adequate safety margin, preparation, and review by qualified staff. The NCS analyses demonstrated adequate identification and control of NCS hazards to assure operations within subcritical levels through appropriate limits on controlled parameters. NCS analyses reviewed included a sample focused on the dry conversion building, cylinder wash, and the ammonium diuranate (ADU) system. The inspectors interviewed two licensee criticality engineers, two managers, and multiple operators regarding operations, equipment, and controls. The inspectors reviewed aspects of selected NCS-related IROFS in the following systems 65, 120, 130, 190, 360, 810, 820, and 830. The inspectors verified that the performance requirements were met for the selected accident sequences.

The inspectors reviewed the procedures and commitments for monthly audits and weekly walk-downs. Also, the inspectors ensured that the licensee was meeting the commitments via interviews with engineers and observing an audit in progress. The inspectors reviewed the results of the most recent NCS monthly audits to confirm that safety issues were identified and resolved. The inspectors reviewed monthly audits that were completed since the last NCS inspection in April 2015. Additionally, the inspectors reviewed the weekly walk-down log for 2015. The inspectors noted that the monthly audits and weekly walk-downs were performed by NCS engineers who reviewed open NCS infractions; reviewed plant operations for compliance with license requirements, procedures and postings; and examined equipment and operations to determine that past evaluations remained adequate, as applicable. The inspectors confirmed that deficiencies identified during audits and walk-downs were entered into the licensee's corrective actions program, WebCAP, and addressed as required.

The inspectors conducted multiple walk-downs in the Dry Conversion Facility and verified that associated risk-significant fissile material operations were being conducted safely and in accordance with regulatory requirements. The inspectors interviewed operations staff and NCS engineers before and during walk-downs. The inspectors verified that controls identified in NCS analyses were in place and functionally tested to

ensure safety. The inspectors also verified that safety was being maintained for observed facility operations. The cognizant NCS engineers were knowledgeable and interacted regularly with operators on the process floors.

The inspectors reviewed the licensee's response to a selection of recent internally-reported events. The inspectors reviewed the progress of investigations and interviewed licensee staff considering the events and the associated corrective actions. The inspectors determined that the events were investigated in accordance with procedures and that corrective actions were assigned and tracked as required.

b. Conclusion

No findings of significance were identified.

B. Radiological Controls

1. Effluent Control and Environmental Protection (IP 88045)

a. Inspection Scope and Observations

The inspectors reviewed program changes and procedures revised since the last inspection and verified that the program and procedures were in accordance with the license application requirements. Specifically, inspectors focused on the re-introduction of stack K-59 into the sampling program and determined that any changes/revisions did not diminish safety.

The inspectors verified that the training and qualifications for the new Radiation Protection manager met the requirements dictated in the license application. The inspectors selected several Health and Safety Technicians and verified that all were up-to-date on the required training.

The inspectors reviewed semi-annual, triennial, and quarterly audits and verified that identified recommendations and findings were captured in the corrective action system. The inspectors reviewed the semi-annual effluent reports for 2014, and determined that the licensee was in compliance with 10 CFR 70.59. The inspectors reviewed the 2013 As Low As Reasonably Achievable (ALARA) Report for 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, ambient air, wastewater, sanitary sewer sludge, external radiation, and ground water 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 functionally checked in accordance with licensee procedures. The inspectors reviewed activities in the Ammonia Recovery Facility (ARF) and determined that the process was adequately implemented to ensure liquid effluents from the plant were ALARA. The inspectors selected several IROFS in the ARF and determined that the licensee had implemented adequate management measures to ensure the availability and reliability of these IROFS.

The inspectors conducted interviews with laboratory personnel and conducted a walk down of sample processing and noted activities to be consistent with requirements in the license application.

b. Conclusion

No findings of significance were identified.

C. Facility Support

1. Plant Modifications (IP 88070)

a. Inspection Scope and Observations

The inspectors interviewed senior managers, managers, supervisors, and engineers and confirmed that the licensee has established an effective configuration management system to evaluate, implement, and track permanent plant modifications (PPMs) which could affect safety.

The inspectors verified that the licensee's work control program had provisions to ensure adequate pre-job planning and preparation of PPM design packages. The configuration management system had adequate provisions to ensure that PPMs did not degrade the performance capabilities of IROFS or other safety-related equipment that are part of the design basis.

The inspectors reviewed 10 PPM design packages since the last PPM inspection and found these PPMs did not reduce safety. The inspectors also reviewed changes made to the Integrated Safety Analysis (ISA) Summary during the previous calendar year. The inspectors subsequently walked down and reviewed modifications and confirmed that the "as-built" drawings agreed with the field configurations, when applicable. The inspectors determined that the licensee had management measures in place to ensure that the IROFS affected by facility changes remained capable of performing their intended safety function before approving the modification for operation. The inspectors verified that applicable post maintenance installation and testing requirements were adequately identified and performed prior to implementation of PPM design packages. Completed modifications were adequately reviewed prior to implementation and before returning affected equipment to service.

The inspectors also verified that designs of PPMs met the specific design criteria of specified in applicable modification packages.

The inspectors verified that the licensee addressed the impacts of modifications to the ISA, ISA Summary, and other safety program information developed in accordance with 10 CFR 70.62.

The inspectors reviewed the licensee's problem identification and resolution program and verified that issues relating to the preparation and installation of PPMs were entered into the corrective action program and the corrective actions were adequate.

b. Conclusion

No findings of significance were identified.

D. Exit Meeting

The inspection scope and results were presented to members of the licensee's staff at daily debriefings during the inspection and at the exit meetings on August 27 and September 24, 2015, with T. Tate 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>
W. Backus	Training Coordinator
M. Crawford	Project Engineer
G. Crybleskey	UCAR Shift Supervisor
W. Doan	ISA Criticality Safety
D. Felch	UF ₆ Area Contact
D. Hanson	Mechanical Engineer
D. Harris	Engineering
M. Koontz	NMSR Supervisor
C. Kahambwe	Criticality Safety Engineer
A. Kornbau	Electrical Engineer, P.E.
B. Krajcik	Senior Administrative Assistant
J. Kreitzburg	Criticality Safety Engineer
R. Land	Site Manager
P. Lee	Preventive Maintenance Manager
L. Maas	Licensing and Compliance Manager
C. Manning	Nuclear Criticality Safety Manager
S. McAdie	Conversion Operator
K. Olsen	Engineering (HVAC)
S. Powers	Project and Reliability Engineering Manager
G. Purser	Instrument Technician
J. Rolland	Support Technician
T. Tate	Environmental, Health, Safety and Licensing Manager
T. Watkins	Reliability Engineer
H. Welker	Instruments & Electrician Supervisor

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

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

3. INSPECTION PROCEDURES USED

IP 88015	NCS
IP 88020	Operational Safety
IP 88045	Effluent Control and Environmental Protection
IP 88070	Plant Modifications

4. DOCUMENTS REVIEWED

Records:

COB0 P020, Tank 23A High Level Interlock Check
S186P001 - SC CO₂ Evacuation Alarms Functional Test
2015 Walk-down Log Book

ADU Area Training Operator Records

DCF Training Operator Records

E04-07-201404, "NCS Audit/Inspection Report – April 2015," Version 1.0
 E04-07-201405, "NCS Audit/Inspection Report – May 2015," Version 1.0
 E04-07-201406, "NCS Audit/Inspection Report – June 2015," Version 1.0
 E04-NCSA-065, "UF6 Cylinder Washing Operation," Version 10
 E04-NCSA-070, "ADU Line – ADU Process," Version 16
 E04-NCSA-190, "Conversion of UO2 Pellets to U3O8 Powder," Version 11
 E04-NCSA-810, "Dry Conversion Vaporization System," Version 12
 E04-NCSA-820, "Dry Conversion Powder Production Process," Version 11
 E04-NCSA-830, "Dry Conversion Powder Preparation," Version 17
 NCS Infraction 2014-20, dated April 8, 2014
 NCS Infraction 2015-010, dated March 13, 2015
 NCS Infraction 2015-013, dated April 30, 2015
 NCS Infraction 2015-017, dated July 29, 2015
 NCS Infraction 2015-019, dated August 4, 2015
 NCS Infraction 2015-022, dated August 27, 2015
 NCS Infraction 2015-024, dated September 3, 2015
 NCS Infraction 2015-025, dated September 15, 2015
 2013 Annual Groundwater Report, E06-09-007, Version 1.0
 2014 Annual Groundwater Report, E06-09-007, Version 1.0
 AID-10094, Reference 101 Dwyer Flowmeters for Room Air Samples, Version 3.1
 Annual Dose Report for 2014, dated July 1, 2015
 Environmental Audit (HP-7), dated June 16, 2015, January 9, 2015, January 8, 2015, and
 November 20, 2014
 Required Reporting of Effluents per 10 CFR 70.59, dated February 25, 2015 and
 August 28, 2014
 Semi-Annual Environmental Monitoring Audit Summary and Checklist, dated
 December 3, 2014
 Semi-Annual Environmental Monitoring Audit Summary and Checklist, dated March 3,
 2015
 The ALARA Report – January 1, 2013 – December 21, 2013, Version 1.0, dated
 February 11, 2015
 S932I001 Pressure Switch 12 Mo. In Version 7, March 2014
 S932I001 Pressure Switch 12 Mo. In Version 7, March 2015
 S932I002 Pressure Switch 12 Mo. In Version 7, March 2015
 S932I002 Pressure Switch 12 Mo. In Version 7, March 2014
 S932I003 Pressure Switch 12 Mo. In Version 6, March 2015
 S932I003 Pressure Switch 12 Mo. In Version 6, March 2014
 S932I004 Pressure Switch 12 Mo. In Version 6, March 2015
 S932I004 Pressure Switch 12 Mo. In Version 6, March 2014

Procedures:

E04-05-01, "Criticality Safety – NCS Standards," Version 15
 E04-06-002, "Routine Nuclear Criticality Safety Audits," Version 5
 E04-06-004, "Preparation & Review of Nuclear Criticality Safety Documents," Version 10
 E04-06-007, "Routine Nuclear Criticality Safety Walkthroughs," Version 3.1
 E12-01-002, "Work Sequence Plan Preparation," Version 3.0
 SOP-40234, "Dry Powder Blending, Handling, and Labeling of Poisoned Drums and Safe
 Batch Containers," Version 10

SOP-40915, "DCF Scrap Downloading Hood Operation," Version 6
 SOP-40231, "Chemical and Waste Sampling Procedures," Version 17
 MCP-30499, SC CO₂ (System 186) Controls Design Description, Version 2.1
 MCP-30537, Essential Material Class 1: Ethylenebisstearamide (EBS) as a Powder Additive, Version 1.3
 SOP-40233, Blending Powder Additives into UO₂ Powder Drums, Version 13.0
 SOP-40248, Ultrasonic Cleaning Operations, Version 5.0
 SOP-40273, Ion Exchange Operation and Regeneration-ADU Line 2, Version 6.0
 SOP-40278, Dilute Nitric Makeup System, Version 2.0
 SOP-40330, Blending Powder Additives into UO₂/Gd₂O₃ Powder for Pellet Pressing In NAF, Version 11.0
 SOP-40343, Ceramic Operations – UO₂ and NAF Sintering, Version 14.0
 SOP-40531, Blending Powder Additives into 45-Gallon Powder Drums in BLEU (Room 157), Version 8.0
 C163I101, Revision (Rev.) 1, Calibration Procedure for the Canberra ADM 606M Rate Meter and GSP-100 Probe
 C163P104 – IX Feed Interlock Checks
 MCP-30577, iMatic Procedure and Calibration Definitions, Version 3.0
 PG000103, Fan Exhaust, Rev. 4
 SOP-40024, Use of E-PERM System for Measuring Thoron Gases in Air, Version 6.0
 SOP-40031, Waste Effluent Monitoring & Sampling, Version 10.0
 SOP-40032, Radioactive Gaseous Effluent Sampling, Version 19.0
 SOP-40037, Stack Fluoride Sampling, Version 7.1
 SOP-40039, Richland WWTF Sludge Sampling, Version 6.0
 SOP-40600, Preparation of Miscellaneous Samples for Uranium Analysis, Version 1.5
 SOP-40375, Retention Tanks and Sumps, Version 10.0
 E04-07-201408, NCS Audit/Inspection Report – August 2014, Version 1.0
 E04-07-201412, NCS Audit/Inspection Report – December 2014, Version 1.0
 E04-07-201506, NCS Audit/Inspection Report – June 2015, Version 1.0
 E04-NCSA-000, UF₆ Cylinder Receiving and Storage, Version 9.0
 E04-NCSS-932, Hydrogen Service System, Version 7.0
 E14-01-010, North Tank Farm and Ancillary Service Systems, Version 5.0
 MCP 30383, Preventive Maintenance, Version 5.0
 MCP 30524, Hydrogen Generating and Mixing (System 932) Controls Design Description, Version 2.1
 SOP 40486, Richland Operations General Rules, Version 29.0
 SOP 40841, Preventive Maintenance (PM), Version 9.0
 SOP 40920, Items Relied On For Safety (IROFS) and Equipment Essential to Safety, Version 5.0
 SOP 40886, Working on Nitrogen (N₂), Argon (Ar), Hydrogen (H₂), H₂/N₂ and Associated Supply Lines, Version 5.1
 SOP 40821, Instruction Manual HEPA and Pre-filter Change-outs, Version 10.0
 SOP 40839, Instrument Repetitive Maintenance, Version 11.0
 C0000P001 Storage Pad Pot Hole 12 Mo SHIP, Rev. 0, May 2015
 C000I001-0001 SCALE CYL STOR 1Y CALIB IN, Version 2, November 2014
 C000I001-0001 SCALE CYL STOR 1Y CALIB IN, Version 2, November 2013
 C000I001-0002 CYLINDER SCALE 1 YR IN, Version 2, March 2014
 C000I001-0002 CYLINDER SCALE 1 YR IN, Version 2, February 2015
 C000I002 ANLYZR UF6 CYL M1 CAL IN, Version 5, August 2015
 C000I002 ANLYZR UF6 CYL M1 CAL IN, Version 5, July 2015
 C000I003 ASSAY UF6 CYL (EAST) 1 Mo IN, Version 3, August 2015

C000I003 ASSAY UF6 CYL (EAST) 1 Mo IN, Version 3, July 2015
 C820P012-0001 MISC INTRLK CKS L1 Y2 OPDC, Rev. 15, April 2015
 C820P012-0001 MISC INTRLK CKS L1 Y2 OPDC, Rev. 15, October 2014
 C820P012-0002 MISC INTRLK CKS L2 Y2 OPDC, Rev. 15, August 2015
 C820P012-0002 MISC INTRLK CKS L2 Y2 OPDC, Rev. 15, February 2015
 C820P012-0003 MISC INTRLK CKS L3 Y2 OPDC, Rev. 15, June 2015
 C820P012-0003 MISC INTRLK CKS L3 Y2 OPDC, Rev. 15, December 2014
 C080P020 TK-23A HIGH LVL INTRLCK 6 MO IN, Rev. 0, August 2015
 C840P001-002 TK Scrub L2 Overflow 1Y PF, Rev. 3, March 2015
 C840P001-001 TK Scrub L1 Overflow 1Y PF, Rev. 3, March 2015
 C840P001-0003 TK SCRUB L3 OVERFLOW 1Y PF, Rev. 3, March 2015
 C960I015 D/P SWITCH VAC-22 1YR IN, Version 1, August 2015
 C960P003 Duct Inspection 3 Mo OPCH, Rev. 5, March 2015
 C960P001 HVAC K3 EXH SYS UO2 3 Mo OPCR, Rev. 8, March 2015
 C960P001 HVAC K3 EXH SYS UO2 3 Mo OPCR, Rev. 8, June 2015
 C960P002 Duct Inspection 3 Mo OPCH, Rev. 12, June 2015
 C960P002 Duct Inspection 3 Mo OPCH, Rev. 12, March 2015
 C960P003 Duct Inspection 3 Mo OPCH, Rev. 5, June 2015
 C960P023 HVAC K31 HEPA HSE Drain 12 Mo AB, Rev. 0, January 2015
 C960P031 HVAC K62 HEPA HSE Drain 12 Mo AB, Rev. 0, January 2015
 C960P033-0001 FILTER POROUS 3 MO OPCH, Rev. 2, February 2015
 C960P033-0001 FILTER POROUS 3 MO OPCH, Rev. 2, May 2015
 C960P033-0002 FILTER POROUS 3 MO OPCH, Rev. 2, May 2015
 C960P033-0002 FILTER POROUS 3 MO OPCH, Rev. 2, August 2015
 C960P034 K37-17-7 HEPA REPLACE 6MO AB, Rev. 0, 1January 2015
 C960P034 K37-17-7 HEPA REPLACE 6MO AB, Rev. 0, July 2015

Condition Reports Reviewed:

CR-2014-2586, 4808, 5094, 6889
 CR-2015-796, 938, 3106, 2269, 3663, 5334, 5743, 5857, 6441, 6657, 6833, 6895

Condition Reports Written as a Result of the Inspections:

2015-6420-FA, 2015-7297-FA

Other Documents:

NSCWSP-325-001, NSC Work Sequence Plan, Version 1, dated May 4, 2015
 NSCWSP-820-001, NSC Work Sequence Plan, Version 2, dated February 23, 2015
 3-D Objects Spreadsheet Calculations for ADU area
 2015 Top Ten Safety Projects Status, dated September 23, 2015
 Drawing Number EMF-609,485; Rev. 9
 Drawing No. EMF-608, 610, Rev. 10
 E04-NCSA-080, Line 2 Uranium Recovery, Version 15.0
 E04-NCSA-380, Pellet Sintering Area, Version 8.0
 E04-NCSA-960, HVAC Exhaust Systems, Version 25.0
 ECN 8511 – Support EBS Tumble Blends, Lubricant, and Oxidation of BBD Material
 ECN 8679 – Furnace #4 Rebuild and Control Upgrade
 ECN 8694 – ELO Waste Recover Area Improvements
 ECN 8702 – Dry Conversion Process Vacuum Sample System Modification

ECN 8703 – ADU Process Upgrades
ECN 8704 – Redesign Pump 23A Piping
ECN 8706 – SWUR Upgrades
ECN 8713 – SC CO₂ Air Flow Monitor Replacement
ECN 8723 – UCAR Drum Tumbler Upgrades
ECN 8730 – MERF Restart
P&ID: CSA 611, 950, Nitric Acid Storage & Distribution System, Rev. 11
E04-NCSA-163, Version 23.0
Environmental Thermoluminescence Dosimetry, Version 8.1
Hydrogen P&ID, CSA 611, 932, Rev. 4, Sheet 1-2
PM004827 DOS Test EXH Final FLTR
Purolite S-950 Resin Uranium Loading Capacity, dated June 18, 2009