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

January 23, 2013

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 NUMBER 70-1257/2012-005

Dear Mr. Grandemange:

This refers to the inspections completed during the fourth quarter of calendar year 2012, at the AREVA NP, Inc., facility in Richland, Washington. The purpose of the inspections was to determine whether activities authorized under the license were conducted safely and in accordance with Nuclear Regulatory Commission (NRC) requirements. The enclosed report presents the results of these inspections. The findings were discussed with members of your staff at exit meetings held on October 25 and December 6, 2012.

During the inspections, the NRC staff examined activities conducted under your license as they related to public health and safety and 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 plant observations. Throughout the inspections, observations were discussed with your staff.

The inspections covered the following areas: radiation protection, emergency preparedness, and permanent plant modifications. No significant findings were identified.

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.

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

Sincerely,
/RA/

Marvin D. Sykes, Chief
Fuel Facility Inspection Branch 3
Division of Fuel Facility Inspection

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

Enclosure:
NRC Inspection Report 70-1257/2012-005
w/Attachment: Supplementary Information

cc w/encl: (See page 3)

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Sincerely,

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cc w/encl: (See page 3)

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U.S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.:	70-1257
License No.:	SNM-1227
Report No.:	70-1257/2012-005
Licensee:	AREVA NP, Inc.
Facility:	Richland, Washington
Dates:	October 1 to December 31, 2012 (Fourth Calendar Quarter)
Inspectors:	O. López, Senior Fuel Facility Inspector (Section B.2) N. Coovert, Fuel Facility Inspector (Sections B.2 and C.2) M. Toth, Fuel Facility Inspector (Section B.1) S. Mendéz, Fuel Facility Inspector (Section B.2) N. Peterka, Fuel Facility Inspector (Section A.1) C. Rivera, Fuel Facility Inspector (Section B.2) T. Vukovinsky, Fuel Facility Inspector (Sections B.1 and D.1)
Approved by:	M. Sykes, Chief Fuel Facility Inspection Branch 3 Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

AREVA NP, Inc.
NRC Inspection Report No. 70-1257/2012-005

Inspections were conducted by regional inspectors during normal shifts in the areas of safety operations and radiological controls. 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 applicable regulatory requirements. (Paragraph A.1)

Emergency Preparedness

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

Plant Modifications

The Plant Modifications program was implemented in accordance with the license application and applicable regulatory requirements. (Paragraph B.2)

Attachment

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

REPORT DETAILS

Summary of Plant Status

The AREVA Richland facility converts uranium hexafluoride (UF_6) 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.

A. Radiological Controls

1. Radiation Protection (IP 88030)

a. Inspection Scope and Observations

The inspectors reviewed internal and external audits to ensure that the program performance was being reviewed, at least annually, to comply with 10 CFR 20.1101. The audits did not identify programmatic issues, but did offer recommendations for improving different areas of the radiation protection program. The inspectors reviewed selected radiation protection procedures and program documents to determine if changes made since the last inspection were consistent with regulations and license application requirements. Through interviews with responsible staff, the inspectors determined that radiation protection procedures and program documents were reviewed and updated when necessary and contained reasonable level of detail for the operations involved. The majority of the procedure and program document changes were administrative in nature with no discrepancies identified during the review. The inspectors also reviewed draft radiation protection procedures for the new Uranyl Nitrate Receiving/Storage Facility (UNR/SF) on site, a storage warehouse for uranyl nitrate solution.

The inspectors examined selected portable survey instruments and fixed monitoring equipment to determine operability and calibration status. The inspectors reviewed records associated with portable instruments and personnel contamination monitors. Procedures for calibration and functional checks of the instruments were found to be current and adequate. The inspectors reviewed selected calibration records for the personnel contamination monitors for accuracy and completeness with no discrepancies identified.

The inspectors reviewed the Total Effective Dose Equivalent (TEDE) results for plant personnel and determined that the results were less than the regulatory limit of 5 rem/yr. The inspectors reviewed the fourth quarter 2011 and first and second quarter 2012 plant personnel dosimeter results as submitted to the licensee by their dosimetry provider and determined that the Lens Dose Equivalent and Shallow Dose Equivalent results were less than the regulatory limit of 15 rem and 50 rem/yr, respectively. The inspectors verified that records were maintained in accordance with 10 CFR 20.2106. The inspectors verified the dosimetry provider used by the licensee is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP).

The inspectors reviewed the respiratory protection program and determined that the program as required by the license application was in compliance with 10 CFR 20.1703. Based on field observations and discussions with responsible personnel, the inspectors determined that respiratory protection equipment was adequately maintained and handled in accordance with approved procedures. Provisions to ensure that only qualified individuals use respiratory protection equipment were adequate and implemented in accordance with approved procedures with no discrepancies identified.

The inspectors toured the Dry Conversion Facility (DCF) and UO_2 Building and verified that radiological signs and postings accurately reflected radiological conditions. Areas were posted in accordance with 10 CFR Part 20 and the Notice to Employees, NRC Form 3, was posted in high traffic areas in accordance with 10 CFR 19.11.

The inspectors observed two Health and Safety Technicians (HSTs) perform a daily contamination survey and air sampler filter changes in the Specialty Fuels Building and DCF respectively. The inspectors determined that HSTs adequately evaluated the magnitude and extent of radiation levels in accordance with 10 CFR 20.1501 and the manner and frequency at which the air sampler filter changes for the occurred followed the licensee's procedures.

The inspectors reviewed the 2011 annual As Low As Reasonably Achievable (ALARA) Report and determined that there has been an upward trend the past three years in the collective TEDE for the site. The licensee attributes the increase to incorporate the does from radon BLEU powder radon emissions. The inspectors observed the dose levels are well below the regulatory requirements and below the licensee's ALARA goal of 1.4 rem per person. The inspectors reviewed ALARA program requirements and determined the program and ALARA goals were being developed and implemented as required by the license application.

b. Conclusion

No significant findings were identified.

B. Facility Support

1. Emergency Preparedness (IP 88050)

a. Inspection Scope and Observations

The inspectors reviewed changes made to the site Emergency Plan (Plan) since the last inspection and determined that the changes made to the Plan were reviewed and approved through the facility evaluation change process procedure. The inspectors noted this procedure is used facility-wide for all changes. The inspectors verified that the review process for the emergency preparedness program changes included key positions within the emergency preparedness program. Most changes were administrative in nature but included the addition of the Uranyl Nitrate Receiving/Storage Facility (UNR/SF), a storage warehouse for uranyl nitrate solution. The inspectors noted that the licensee had updated the Plan to account for the amount of solution that could be stored on site. The inspectors reviewed a selection of emergency plan implementing procedures that had been updated with revisions since the last emergency preparedness inspection and determined that the changes were in compliance with the Plan. The inspectors reviewed the licensee's emergency contact phone list and verified that the list was current.

The inspectors reviewed training records regarding emergency preparedness training in the past year for a selection of Plant Emergency Response Team (PERT) members. The inspectors verified required training elements for PERT members were up-to-date and met the requirements of the Plan. The inspectors discussed the training with the Emergency Preparedness Coordinator, including how training items were tracked for all required personnel. The inspectors noted the licensee maintains a Training Summary Spreadsheet, which contains a list of site personnel and the type of emergency response training they

possess. A copy of this spreadsheet is located in the site Emergency Operations Center (EOC), where Emergency Directors (ED) could use the information to make quick personnel decisions when responding to emergency situations. The inspectors also interviewed a selection of operators and managers who are part of the emergency response program, and determined that emergency responder training offered by the licensee was adequate. The inspectors determined that emergency response training, including decontamination techniques, advanced first aid, fire extinguisher and Self-Contained Breathing Apparatus (SCBA) use, were in compliance with the Plan. The inspectors verified that the licensee provided training for hypothetical emergency situations which were effective and consistent with the frequency and performance objectives required in the Plan.

The inspectors reviewed the memoranda of understanding (MOU) with off-site agencies and verified they were up-to-date. The inspectors interviewed an emergency response manager at Kadlec Regional Medical Center, Battalion Chiefs at the Richland Fire Department, and a Captain at the Richland Police Department and determined that they maintained an adequate understanding of the written agreements. As part of the interviews, the inspectors verified that the licensee had invited each off-site agency for training, offered site visits, and performed communication equipment checks as required by the Plan.

The inspectors performed walk-downs and spot checks of the emergency equipment storage areas throughout the facility, including: the EOC storage annex, the central security guard station, the UO_2 and DCF process areas, and miscellaneous storage sheds. The inspectors verified that the inventory levels were maintained as required by the Plan and preventive maintenance inventory checks had been performed at regular intervals by the licensee. The inspectors toured the EOC and verified that the areas were readily accessible and maintained the appropriate amount of communication and weather equipment, along with maps of the site and surrounding areas, and copies of the emergency plan. The inspectors reviewed the accountability procedure and verified that accountability meeting points were accessible.

b. Conclusion

No significant findings were identified.

2. Permanent Plant Modifications (IP 88070)

a. Inspection Scope and Observations

The inspectors interviewed 14 managers, supervisors, and operators to verify that that the licensee has established an effective configuration management system to evaluate, implement, and track permanent plant modifications (PPMs) to the site which could affect safety.

The inspectors verified that the licensee's work control program had provisions to ensure the adequate pre-job planning and preparation of design modification packages. The configuration management system had adequate provisions to ensure that PPMs did not degrade the performance capabilities of items relied on for safety (IROFS) or other safety controls that are part of the safety design basis.

The inspectors reviewed 19 permanent plant design modification packages since the last PPM inspection for accuracy. The inspection was conducted in the areas of System 80 –

[ADU] Ammonium diuranate Uranium Recovery, System 140 – [ELO] Engineering Laboratory Operations Pellet Dissolver, System 186 - Supercritical CO_2 Extraction, System 328 – DCF Scrap Hood, System 670- Solid Waste Uranium Recovery (SWUR), and System 960 Ventilation System (plant wide). The inspectors walked down and reviewed PPMs to verify that the as-built drawings conformed to the field configuration where applicable. The inspectors verified 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 installation testing requirements were adequately identified and performed prior to implementation of the modifications. Completed modifications were adequately reviewed prior to implementation and before returning affected equipment to service.

The inspectors verified that the licensee addressed the impacts of modifications to the Integrated Safety Analysis (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 to verify that issues related to the development and installation of permanent plant design modifications were entered into the corrective action program and the adequacy of corrective actions.

Uranyl Nitrate Receiving/Storage Facility (UNR/SF)

The inspectors reviewed three comprehensive modifications which related to the development, installation, and functional testing of IROFS for the Uranyl Nitrate Receiving/Storage Facility (UNR/SF). The modifications were Engineering Chance Notice (ECN) 8618 – UNB Installation, ECN 8636C - UN Storage Facility Process Equipment, and ECN 8638 – Ventilation (HVAC) System.

The inspectors verified that the ECNs did not adversely impact the ISA Summary, and other safety analyses. The inspectors also verified that the reviewed ECNs were completed in compliance with the requirements of 10 CFR 70.62 and 70.72. The inspectors reviewed the ISA summary, nuclear criticality safety analysis and specifications, fire hazard analyses, licensee policies, and operating procedures to determine the IROFS and safety bases. The inspectors reviewed management measures, and supporting documentation, including system and logic drawings, functional tests, surveillances, calibrations, and maintenance for designated IROFS to ensure that safety controls were available and reliable to function when needed. The inspectors also conducted interviews with licensee personnel and performed plant walk-downs.

The inspectors reviewed the licensee's control of combustible/flammable materials and ignition sources programs. The inspectors noted that the combustible/flammable control program included requirements for limiting the amount and proximity of combustible/flammable materials. The inspectors verified that fire ratings of fire barriers were appropriate for the credible fire hazards in the selected areas. The inspectors verified that a material of an appropriate fire rating was used to fill openings and penetrations and that the installation met engineering design. The inspectors reviewed the operational lineup, and design of fire suppression and detection systems to verify that the systems were reliable and available.

The inspectors reviewed operating procedures and compared them to as-built conditions, reviewed training curriculum including qualification records, and interviewed licensee personnel to verify training completion. The inspectors also performed system walk downs with UNR/SF qualified licensee personnel.

The inspectors verified that selected IROFS were adequately designed and implemented, and that assumptions were validated with the as-built configuration and operating conditions. The inspectors also verified that the licensee had implemented management measures to assure that IROFS were available, capable, and reliable to perform their intended safety function when needed.

The inspectors confirmed that chemical and radiological safety controls, safety related backup electrical power, and engineered controls designated to control the concentration and density of UN solution were present and capable of performing their intended safety function. Specifically, the inspectors validated the design and installation of passive and active engineered safety controls, evaluated the safety controls to determine their capability and operability, and verified that potential accident scenarios were covered. No issues of safety significance were identified.

b. Conclusion

Development and installation of permanent plant design modifications were adequately evaluated for safe operations. The licensee implemented adequate management measures to ensure all safety-related controls would be maintained. The inspection was conducted in the areas of System 80 – ADU Recovery, System 140 – ELO Pellet Dissolver, System 186 - Supercritical CO_2 Extraction, System 328 – DCF Scrap Hood, System 670- SWUR, and System 960 Ventilation System (plant wide). The inspectors also reviewed three comprehensive modifications which related to the design, installation, and functional testing of IROFS for the UNR/SF. No findings of significance were identified.

C. Special Topics

1. Follow-up on Previously Identified Issues (IP 92702)

a. (Discussed) Violation (VIO) 2011-005: Failure to implement management measures to ensure that IROFS 6914 was available and reliable to perform its function when needed.

The licensee performed a complete walk down to investigate all the HEPA filters that have a criticality drain to determine if a similar design deficiency exists as described in CR 2011-7773. As a result of the walk down and P&ID reviews, no criticality drains were identified to have a design deficiency as described in CR 2011-7773 or potential for plugging due to debris. The licensee's initial plan was to replace the piping with clear PVC which would allow a visual inspection of the piping drains. Upon further review, it was determined that the clear PVC would cloud over in time and be impractical to allow visual inspections. The licensee's current plan is to modify the piping drains to allow for flow tests or boroscope inspections of the drain piping. These modifications were committed to be complete by the end of 2012 with a target date of the end of November 2012. The annual preventative maintenance (PM) for inspecting the criticality drains is scheduled for February 2013. This violation will remain open until modifications to the criticality drains have been completed and reviewed by NRC inspectors.

2. Event Follow-up

a. (Closed) Licensee Event Report (LER) 70-1257/2012-006-0: EN 48366 Unanalyzed conditions may lead to intermediate consequence events.

On October 2, 2012, AREVA NP Inc. reported to the NRC (NRC Event Report 48366) under 10 CFR 70 Appendix A criterion (b) (1) that within the approved existing ISA certain loss of containment accident sequences resulting in ocular exposure to UN solution had been incorrectly analyzed and determined to be 10 CFR 70 low consequence events. While this report was made based on the treatment of UN sprays to the eye, AREVA indicated that this scenario could be applied to other hazardous chemicals falling under the scope of the ISA treatment. Specifically two other types of chemical exposures documented in the existing facility ISA as low consequence based on 10 CFR 70 events, needed to also be re-evaluated with respect to the 10 CFR 70 consequence thresholds. These types of chemical exposures are dermal contact and inhalation of liquid aerosols. No actual exposures occurred at the time of the report.

The licensee initiated CR 2012-7435 and performed an Apparent Cause Analysis. The licensee determined in a qualitative analysis that an ocular exposure to the chemicals, including UN, may cause an acute chemical exposure that could lead to irreversible health effects. This changed the risk determination from a low consequence to an intermediate consequence event. The licensee had controls in place to protect the workers from these hazards. The controls included Personal Protective Equipment (PPE), safety showers and eye wash stations. The licensee updated the PPE requirements by adding additional PPE to mitigate the consequences of an ocular exposure to UN and applied the necessary management measures to the controls, and reclassified these controls as IROFS for the accident scenario.

The inspectors reviewed the designated IROFS for Chemical Safety and verified that they were implemented through the procedures and were available for use as required. The inspectors reviewed the corrective actions implemented by the licensee and determined that the corrective actions implemented for the prevention and mitigation of the ocular exposure were adequate. This item is closed.

b. (Opened) Inspector Followup Item (IFI) 2012-005-01 for EN 48287: Fire in Plasma Cutter Recirculating Ventilation System-Alert Declaration

On September 7, 2012, AREVA-Richland declared an Alert due to a fire lasting greater than 15 minutes in the waste handling / packaging area within the UO_2 Building. The fire was associated with a HEPA filter bank in the recirculation system of the Waste Reduction Facility (WRF), which was a standalone filter that filtered the air in the room.

The inspectors reviewed the licensee's root cause analyses, performed interviews with selected root cause team members, performed facility walk downs of the event area with the system engineer, and reviewed associated licensee procedures and training records. The inspectors also verified the amount of special nuclear material located in the waste process area, including the filters themselves, and compared them with the limits described in the licensee's safety analyses. The inspectors verified that based upon the location of the fire, the area fire loading requirements, and the amount of special nuclear material involved in the WRF, no new accident sequences were identified as a result of this event. The inspectors also verified that the existing IROFS and criticality safety controls in the

immediate and adjoining spaces were in place and adequate to mitigate the consequences of the event. As a result, the inspectors determined that this event was of low safety significance.

The inspectors reviewed the licensee's actions and alert declaration and determined they were adequate and met the criteria specified in the Emergency Response Plan.

The inspectors determined that the licensee's root cause analysis, "Fire in Waste Reduction Facility," CR 2012-6742, Revision (Rev.) 0, was performed in accordance with their procedures and Section 11.6.2, Issue Investigation and Causal Analysis, of the License Application. The licensee performed a generic implications review and created corrective actions to prevent recurrence of this specific event which are scheduled for completion in 2013.

D. Exit Meeting

The inspection scope and results were presented to you and members of your staff at various meetings throughout the inspections and summarized at exit meetings on October 25 and December 6, 2012, to you and your staff. No dissenting comments were received. Proprietary information was discussed but not included in this report.

SUPPLEMENTARY INFORMATION

1. KEY POINTS OF CONTACT

Name	Title/Area
S. Artzer	Design Technician (fire alarms and components)
W. Backus	Training Specialist
R. Burklin	Health Physicist
S. Cline	Mechanical Maintenance Supervisor
M. Cobb	Captain, Richland Police Department
J. Deist	Emergency Preparedness Coordinator & Fire Protection
D. Durham	Radiological Safety Supervisor
D. Harris	Principal Mechanical Engineer (fire suppression)
W. Koglin	Principle Engineer (radiological oil containment)
P. Lee	Preventative Maintenance Administrator
R. Link	Environmental, Health, Safety and Licensing Manager
C. Manning	Criticality Safety Manager
C. O'Shaughnessy	Training Specialist
J. Perryman	Principle Engineer (non-radiological oil containment)
T. Ricci	Battalion Chief, Richland Fire Department
V. Sakach	Health Physicist
J. Schalasky	Emergency Preparedness, Kadlec Regional Medical Center
T. Tate	Safety, Security, and Emergency Preparedness Manager
J. Veysey	Maintenance Manager
C. Ward	Principle Engineer (fire dampers)
K. Walsh	Battalion Chief, Richland Fire Department

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

2012-006-0	LER	Unanalyzed conditions may lead to intermediate consequence events

Discussed

2011-005	VIO	Failure to implement management measures to ensure that IROFS 6914 was available and reliable to perform its function when needed

Opened

None

Attachment

3. INSPECTION PROCEDURES USED

IP 88030 Radiation Protection
IP 88050 Emergency Preparedness
IP 88070 Permanent Plant Modifications
IP 92702 Followup on Corrective Actions for Violations and Deviations

4. DOCUMENTS REVIEWED

Condition Reports:

CR 2011-7773
CR 2012-0016
CR 2012-5469
CR 2012-7325
CR 2012-7435
CR 2012-7725
CR 2012-8233

Drawings:

Drawing CSA-607, 590, Sheet 113, "HRR Site Plan General Arrangement Storage Bldg," Rev. 0
Drawing CSA-611,720, Sheets 1 -6, Uranyl Nitrate Building, Rev. 0

Maintenance Orders:

11180307, 11192065, 11180050, 1313116, 13133585, 13133586, 13139314,13147468, 13147480, 13147481, 13147478, 13147469, 13147470, 13147467, 13147484, 13147471, 13147485, 13147472, 13147486, 13147473, 13147487, 13147474, 13147488, 13147476, 13147489, 13147477, 13147520, 11184960, 11188501, 11178717, 1178737, 11179259, 11180050, 11180307, 11182744, 11184058, 11184960, 11188501, 11192065

Other Documents:

Areva NP, Inc., “Technical Calculation,” A.R. Landon, dated December 18, 2012
E12-03-002, Independent Audit of the EP Program, Version 3.0
Portfolio Curriculum Data Curriculum Item Status, OJT Checklist, and Skills Evaluations for: HRR-WST-UNOPERATOR, HRR-OTR-YARDTRUCK, and HRR-WST-D Radiation Protection and Environmental Protection, March 4, 2012 (Audit)
Reducing Internal Doses at Richland, June 26, 2012 (Audit)
2011 Annual Radiation Protection Program Audit (HP-4) January 13, 2011
Root Cause Analysis, “Fire in Waste Reduction Facility,” CR 2012-6742, Rev. 0, dated November 27, 2012
UN Building LR-230 Unloading and UNH Storage Tanks Startup Council letter, dated October 19, 2012

Preventive Maintenance Orders:

PM 000091, Emergency Repository/First Aid Equipment Monthly Inventory Checks
PM 005067, SCBA Monthly Inspection
PM 005017, Transaire Escape Monthly Inspection
PM 004900, SCBA Air Cylinder Hydrostatic Annual Inspection
PM 002781, Testing of Air Packs Annual Inspection
PM 004942, Emergency Repository Annual Checks

Procedures:

AID-10565, 4 Bottle Breathing Air Cart, Rev. 1.0
AID-30036-A, General Safety Instructions; SCBA-MSA, Rev. 1.1
AID-30076A, PPE – Maintenance/ Operation Quick Guide (UO2), Version 10.0
AID-30076B, PPE – Maintenance/ Operation Quick Guide (ELO), Version 3.0
AID-30076C, PPE – Maintenance/ Operation Quick Guide (ARF), Version 3.0
AID-30076D, PPE – Maintenance/ Operation Quick Guide (UNB), Version 2.0
AID-40054, Air-Line Regulator Flow chart, General Instructions, Rev. 3.0

E04-NCSS-G08, Plant Wide Chemical Safety IROFS, Version 1.0
E04-NCSA-720, Uranyl Nitrate Storage Building, Version 1.0
E04-NCSS-720, Criticality Safety – NCSS Uranyl Nitrate Storage, Version 1.0
E04-NCSA-780, Criticality Safety- NCSA, Waste Handling, Version 17.0

E05-01-014, The ALARA Report - January 1, 2011 to December 31, 2011, June 20, 2012
E08-01-1.0, Site Emergency Plan, Rev. 7.0
E08-01-1.0, Emergency Plan, Version 8.0
E08-05-2.5, UN Storage Building Pre-Emergency Plan, Rev. 1.0
E08-03-2.1, Protective Action Decisions, Rev. 3.2
E08-03-1.1, Classifying an Emergency, Rev. 4.0
E08-03-5.1, After Action Report Form, Rev. 4.0
E08-03-7.1, Public Information Officer, Rev. 4.1
E08-04-2.2, MOU with Kadlec Regional Medical Center, Rev. 4.0
E08-04-2.7, MOU with the Richland Police Department, Rev. 4.0
E08-04-2.12, MOU with the Richland Fire Department, Rev. 2.0
E24-01-105, Fire Hazards Analysis for UNB, Rev. 1.0
E14-04-027, Uranyl Nitrate Storage Building, Version 1.0
E15-03-004, Preparation & Review of RHAs and CHAs, Version 2.0
E16-01-002, Spill & Decontamination Guide for Hazardous Waste & Substances, Version 2.0

EMF-3422, UN Storage Building Operational Test Plan, Rev. 0.

MCP-30037m Breaking and Opening Hazardous Pipelines In service, Version 6.0
MCP-30049, Powered Industrial Trucks, Version 6.0
MCP-30076, PPE – Maintenance Activities, Version 14.0
MCP-30105, Radiation Protection, Bioassay Program, Rev. 8
MCP-30109, Radiation Protection, Internal Dose Tracking System, Rev. 6.1
MCP-30102, General Instructions - Radiological Respiratory Protection Program, Rev 5.1
MCP-30131, Safety/Licensing Evaluation of Facility Changes, Rev. 8.0

MCP-30147, Operations Projects – Manufacturing Engineering Procedures Startup Council, Rev. 4.0
MCP-30675, Creation and Modification of Manufacturing Software, Version 1.0
MCP-30777, UN Building Baseline Design Criteria, Version 1.0
MCP-30779, PPE – Uranyl Nitrate Storage Building, Version 1.0

SOP-40177, Radiation Protection, HEPA Filter Operation, Rev. 3.1
SOP-40207, Radiation Protection, ADU Area and Associated Process Areas, CO2 Extraction, U3O8, I3A, and Powder Storage, Rev. 9
SOP-40011, Radiation Protection, Instruments, Ludlum Counters, Rev. 4
SOP-40019, Radiation Protection, Bioassay and Internal Dosimetry, Internal Dose Tracking System, Rev. 4
SOP-40055, Radiation Protection, Cleaning, Drying and Inspecting Respirators, Rev. 5.1
SOP-40058, Radiation Protection, Posting Requirements, Rev. 4.1SOP-40174, General Instructions - Radiation Protection, General Facility RWP, Rev. 15
SOP-40198, General Instructions - Radiation Protection, Respiratory Protection, Rev. 6
SOP-40835, Radiation Protection, Operation of Canberra Argos Full Body Monitor, Rev. 5.1
SOP-41025, Tank 10R and 10U Operation, Version 2.0
SOP-41026, UNB Tank to Tank Transfer, Version 2.0
SOP-41027, Uranyl Nitrate Positioning, Version 3.0
SOP-41028, LR-230 Transfer, Version 3.0
SOP-41036, UNB Warehouse and Associated Truck Bay, Rev. 1.0

SWI-41025A, F-10 Filter Bag Change Out, Version 1.0
SWI-50045-A, Use of Breathing Air Cylinder Filling Station, Rev. 1.2

Records:

Training Records for PERT members
Training Records for UNR/SF operators
Records associated with EN#48287, Fire in UO2 Waste Area

Work Notification:

S720P008 - TK 10R Rupture Disc Check 12MO.

5. ACRONYMS AND INITIALISMS

ALARA	As Low As Reasonable Achievable
CAP	Corrective Action Program
CR	Condition Report
DCFECN	Dry Conversion Facility
ED	Engineering Chance Notice

EOC	Emergency Director
	Emergency Operations Center
FHA	Fire Hazards Analysis
HST	Health and Safety Technician
IROFS	Items Relief on for Safety
ISA	Integrated Safety Analysis
MOU	Memorandum of Understanding
PERT	Plant Emergency Response Team
PM	Preventative Maintenance
PPE	Personal Protective Clothing
PPM	Permanent Plant Modifications
RCA	Root Cause Analysis
SCBA	Self Contained Breathing Apparatus
TEDE	Total Effective Dose Equivalent
UN	Uranyl Nitrate
UNB	Uranyl Nitrate Building
UNR/SF	Uranyl Nitrate Receiving/Storage Facility
UO_2	Uranium Dioxide
WRF	Waste Reduction Facility