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

October 27, 2016

EN 51998

Mr. B. Joel Burch
Vice President and General Manager
BWXT Nuclear Operations Group, Inc.
P.O. Box 785
Lynchburg, VA 24505-0785

SUBJECT: BWXT NUCLEAR OPERATIONS GROUP – NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT 70-27/2016-004

Dear Mr. Burch:

This letter refers to the inspections conducted from July 1 through September 30, 2016, at the BWXT Nuclear Operations Group (NOG), Inc., facility in Lynchburg, VA. The inspections were conducted to determine whether activities authorized under the license were conducted safely and in accordance with U.S. Nuclear Regulatory Commission (NRC) requirements. The enclosed report presents the results of these inspections. The results were discussed with you and members of your staff at exit meetings held on August 18, 2016 and October 13, 2016, for this integrated inspection report.

During the inspections, the NRC staff examined activities conducted under your license, as they related to public health and safety, to confirm compliance with the Commission's rules and regulations and with the conditions of your license. Areas examined during the inspections are identified in the enclosed report. Within these areas, the inspections consisted of selected examinations of procedures and representative records, observations of activities, and interviews with personnel. Based on the results of this inspection, the NRC identified one apparent violation (AV). The AV is associated with a failure to identify a high consequence accident sequence related to potential backflow of uranium bearing solution to a non-favorable geometry hot water heater in the Uranium Recovery Facility. The significance of the AV is currently being evaluated by the NRC.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice and Procedure," a copy of this letter, its enclosure, and your response, 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), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html.

If you have any questions concerning these inspections, please contact me at 404-997-4555.

Sincerely,

/RA/

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

Docket No. 70-27
License No. SNM-42

Enclosure:
NRC Inspection Report 70-27/2016-004
w/Attachment: Supplementary Information

cc: (See page 3)

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cc:
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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No:	70-27
License No:	SNM-42
Report No:	70-27/2016-002
Licensee:	BWXT
Facility:	Nuclear Operations Group (NOG)
Location:	Lynchburg, VA 24505
Dates:	July 1 through September 30, 2016
Inspectors:	L. Cain, Senior Resident Inspector, RII/DFFI/PB2 N. Peterka, Acting Senior Resident Inspector, RII/DFFI/PB2 T. Sippel, Acting Senior Resident Inspector, RII/DFFI/PB2 N. Pitoniak, Senior Fuel Facility Inspector, RII/DFFI/PB2
Approved by:	E. Michel, Chief Projects Branch 2 Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

BWXT Nuclear Operations Group
NRC Integrated Inspection Report 70-27/2016-004
July 1 – September 30, 2016

Inspections were conducted by the senior resident and acting senior resident inspectors, and regional staff during normal and back shifts in the areas of safety operations, radiological controls, and facility support. 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

- There were no violations of NRC requirements identified related to Plant Operations and Safety System Walk-downs. (Sections A.1 and A.3)

- One Apparent Violation was identified for a failure to identify a high consequence accident sequence related to potential backflow of uranium bearing solution to a non-favorable geometry vessel in the Uranium Recovery facility. (Section A.2)

- There were no violations of NRC requirements identified related to the Nuclear Criticality Safety Program. (Section A.5)

- There were no violations of NRC requirements identified related to the Fire Protection Program. (Section A.4)

Radiological Controls

- There were no violations of NRC requirements identified related to the Radiation Protection Program. (Section B.1)

Facility Support

- There were no violations of NRC requirements identified related to Post Maintenance and Surveillance Testing Programs. (Sections C.1 and C.2)

- There were no violations of NRC requirements identified related to Management Organization and Controls. (Section C.3)

- There were no violations of NRC requirements identified related to the Plant Modifications Program. (Paragraph C.4)

Attachment

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

REPORT DETAILS

Summary of Plant Status

During the inspection period, routine fuel manufacturing operations and maintenance activities were conducted in the fuel processing areas and in the Research Test Reactors and Targets (RTRT) facility. Routine operations and maintenance activities were conducted in the Uranium Recovery (UR) facility, until it was shut down for maintenance in early September.

A. Safety Operations

1. Plant Operations (Inspection Procedure 88135.02)

   a. Inspection Scope and Observations

   The inspectors performed routine tours of the fuel manufacturing areas housing special nuclear material (SNM), reviewed log sheets, and observed shift turnover exchanges in UR. The inspectors interviewed operators, front-line managers, maintenance mechanics, radiation protection (RP) staff, and process engineering personnel regarding issues with plant equipment and to verify the status of process operations.

   During the inspection period, the inspectors interviewed operators, front-line managers, maintenance technicians, engineers, and radiation protection technicians to verify that each of the individuals demonstrated adequate knowledge of the nuclear criticality safety (NCS) posting requirements, and the operations procedures associated with their assigned duties.

   The inspectors observed operations in progress in the Research and Test Reactor (RTR) area, Filler, Bay 7, and UR areas throughout the inspection period. The inspectors verified that the SNM processes and workstations observed during the walk-downs were operated in accordance with applicable procedures and NCS postings.

   b. Conclusion

   No violations of NRC requirements were identified.

2. Operational Safety (Inspection Procedure 88020)

   a. Inspection Scope and Observations

   The inspectors interviewed staff and reviewed records associated with the filler and pickling. The inspectors verified that the specific safety controls reviewed in these areas were being implemented and properly communicated as described in the Integrated Safety Analysis (ISA), and were in compliance with the regulatory requirements of 10 CFR 70.61 and 10 CFR 70.62.

   The inspectors confirmed that engineered controls for the above-mentioned areas were present and capable of performing their intended safety functions. The inspectors verified the physical presence of passive and active engineered safety controls, evaluated the safety controls to determine their capability and operability, and verified that potential accident scenarios identified in the ISA were covered.

The inspectors verified that licensee administrative controls were implemented and communicated. The inspectors reviewed various procedures to verify that required actions as identified in the ISA were correctly transcribed into written operating procedures. The inspectors evaluated the content of procedures with respect to operating limits and operator responses for upset conditions and verified that limits required to assure safety were adequately described in the procedures.

The inspectors interviewed various operators and observed several ongoing operations in the filler and pickling areas throughout the week to verify that they were implementing the required safety controls. The inspectors observed operators performance to verify that they were adhering to applicable safety procedures. The inspectors reviewed the postings applicable to the tasks being observed, and verified that the postings were current, reflected safety controls, and were followed by the operators.

Through interviews, document reviews, and observations, the inspectors verified that the licensee conducted preventive maintenance, calibrations, and periodic surveillances as required by the ISA for the selected safety controls.

The inspectors reviewed the licensee's training program related to operations in the filler and pickling areas to verify that training and qualification commitments were satisfied and maintained current for a selection of personnel. The inspectors interviewed several operators in regards to filler area safety control requirements and verified that their training was adequately implemented.

The inspectors reviewed the licensee's corrective action program (CAP) entries since the last operational safety inspection and determined that deviations from procedures and unforeseen process changes affecting nuclear criticality, chemical, radiological, or fire safety were documented and investigated promptly. In addition, the inspectors evaluated the corrective actions associated with selected CAP entries to verify that the completed corrective actions were adequate.

In addition, the inspectors followed up on an unanalyzed condition identified in the UR facility (Event Notification(EN) 51998). On June 10, 2016, BWXT reported to the NRC that there was evidence of a potential backflow of uranium bearing solution in a favorable geometry process water line. The water line is supplied from a favorable geometry process water header, which supplies other processes in the UR area including an unfavorable geometry hot water heater.

Unanalyzed Condition Regarding Potential Backflow of Uranium Bearing Solution in the Uranium Recovery Area

Introduction: The inspectors identified an apparent violation (AV) of 10 CFR 70.62(c)(iv) in that the licensee failed to properly analyze a credible abnormal condition that could potentially lead to criticality in the UR area, specifically the potential backflow of uranium bearing solution from columns through the process water system to an unfavorable geometry hot water heater. This failure resulted in the facility being in a state that was not analyzed in the licensee's ISA, and where credited IROFS were not sufficiently available and reliable to prevent criticality.

Description: On June 9, 2016 a BWXT NCS engineer was notified that a bluish tint had been observed in the favorable geometry process water connection to the horizontal columns. By procedure, a blue dye is added to the hydrofluoric acid (HF) prior to introduction to the High Level Dissolver to aid in its identification in the event of a spill. Further evaluation determined that the favorable geometry process water line was directly connected to the horizontal column system and the presence the blue dye indicated a potential backflow of uranium bearing solution into the water line. The favorable geometry water line is under constant water pressure. The two valves controlling the water flow are normally closed. The line is supplied from a favorable geometry header on the mezzanine above. The header supplies water to other processes in UR, including an unfavorable geometry hot water heater that is located 70 feet upstream of the process water line connection.

The ISA was reviewed and an accident sequence for this potential backflow could not be identified. On June 9, 2016, at 1330, it was determined that the accident sequence was unanalyzed and not properly documented in the ISA. Although IROFS listed for other accident sequences were applicable to the backflow scenario, the performance requirements of 10 CFR 70.61 were not maintained. As a result, a 24-hour event report (EN 51998) was made to the NRC Operations Center at 1202 on June 10, 2016, under 10 CFR 70 Appendix A(b)(1).

Analysis: The licensee failed to identify a high consequence accident sequence related to the potential backflow of uranium bearing solution to a non-favorable geometry hot water heater in the UR facility. This failure is a violation of 10 CFR 70.62(c)(iv), which states, in part, that "each licensee or applicant shall conduct and maintain an integrated safety analysis, that is of appropriate detail for the complexity of the process, that identifies potential accident sequences caused by process deviations or other events internal to the facility and credible external events, including natural phenomena."

This unanalyzed accident sequence results in a high consequence event as defined by 10 CFR 70.61(b) which requires the likelihood of occurrence to be maintained highly unlikely. No accident sequences in the licensee's ISA evaluated or adequately bounded the condition. This issue was determined to be more than minor because it aligns with the NRC Enforcement Policy, Section 6.2 "Fuel Cycle Operations."

There is no actual safety significance of this AV because no criticality or overexposures to radiation occurred. The potential safety significance will require additional NRC review and is therefore being further evaluated.

Enforcement: Title 10 of the *Code of Federal Regulations* (10 CFR) 70.61(a) requires, in part, that the licensee shall evaluate, in the integrated safety analysis performed in accordance with 10 CFR 70.62, its compliance with the performance requirements in paragraphs (b), (c), and (d) of this section.

10 CFR 70.62 (c)(1)(iv) requires, in part, that each licensee shall conduct and maintain an ISA, that is of appropriate detail for the complexity of the process, that identifies potential accident sequences caused by process deviations or other events internal to the facility.

Contrary to this requirement, prior June 9, 2016, the licensee failed to identify a potential accident sequence involving a potential backflow of high concentration uranium into the process water system hot water heater in the UR facility. Although there was no actual consequence, the potential consequence is being evaluated be the NRC.

The licensee's immediate corrective actions were to physically remove the piping between the process water header and the non-favorable geometry hot water heater as documented in corrective action CA 201600767. The licensee performed an extent of condition review to evaluate if other areas of the facility are subject to similar conditions. The licensee submitted a report to the NRC, EN 51998, per 10 CFR Part 70 Appendix A(b)(1).

This is an AV of NRC requirements and is documented as AV 70-27/2016-004-01, Unanalyzed Condition in the Uranium Recovery Facility.

b. Conclusion

One AV of an unanalyzed condition regarding potential backflow pathway in the UR facility (EN 51998).

3. Safety System Walk-down (Inspection Procedure 88135.04)

a. Inspection Scope and Observations

The inspectors performed walk-downs of safety-significant systems involved with the processing of SNM. As part of the walk-downs, inspectors reviewed the NCS postings associated with the UR well counters, and observed operators use the system and apply the NCS controls. The inspectors also walked down the evaporators, and drum dryer systems for which the NCS postings, operating procedure, and relevant drawings were reviewed. The inspectors conducted walk-downs in RTRT of a variety of fuel manufacturing and storage operations, and reviewed NCS postings, operating procedures, selected NCS evaluations. Through observations and interviews with the operators the inspectors verified that IROFS were available and reliable to perform their intended functions when needed to comply with the performance requirements of 10 CFR 70.61. The inspectors compared the implementation of the controls in the field with the NCS postings and Safety Analysis Reports (SARs) 15.9, 15.13, and 15.23.

To determine if plant equipment was installed correctly, the inspectors reviewed applicable drawings and an NCS release, as well as the SARs 15.9, 15.13, and 15.23 as appropriate. During the walk-downs, the inspectors verified the following as appropriate:

- Controls in place for potential criticality, chemical, and fire hazards
- Process vessel configurations and dimensions maintained in accordance with Nuclear Criticality Safety Evaluations
- Correct valve position and material condition
- Electrical power availability
- Adequate lighting in and around equipment
- Hangers and supports correctly installed and functional.

b. Conclusion

No violations of NRC requirements were identified.

4. Fire Protection Quarterly (Inspection Procedure 88135.05)

a. Inspection Scope and Observations

During plant tours, the inspectors verified that transient combustibles were being adequately controlled and minimized in the:

- RadCon office and Shop Bays 2-5,
- Bay 12A,
- Waste Treatment Facility,
- Retention Tank Building,
- Waste Operations Field Area/compactor (and the Hazardous Waste Building), and
- Laundry - Waste Operations Area.

The inspectors conducted fire safety tours of these areas and reviewed the fire detection and suppression capabilities in those areas. The inspectors also reviewed relevant portions of the Pre-Fire Plan before and during the walk-downs to verify that key features identified on the plan (e.g. sprinkler control valves) were in place in the field, and that fire hazards that existed in the field were reflected in the Pre-Fire Plan. The inspectors also verified that housekeeping in the areas reviewed was sufficient to minimize the risk of fire. The inspectors reviewed the type of manual firefighting equipment that was provided to confirm that it was appropriate for the type of fire that could occur.

b. Conclusion

No violations of NRC requirements were identified.

5. Nuclear Criticality Safety (Inspection Procedure 88015)

a. Inspection Scope and Observations

The inspectors evaluated the licensee's NCS program to assure the safety of fissile material operations and compliance with the license application and 10 CFR Part 70. The inspectors performed selected portions of Inspection Procedure 88015 with a focus on operator training, the knowledge and understanding of critical parameters and limits, and procedure use and adherence. In addition, select NCS infractions and one reportable event to the NRC were reviewed to assess the potential impact to license and regulatory requirements from a NCS standpoint.

The inspectors performed plant walk-downs in the Pharmacy, Filler, Metallurgical Laboratory, Pickling, UR, Specialty Fuels Facility (SFF), and Waste Treatment areas to determine whether risk-significant fissile material operations were being conducted safely and in accordance with regulatory requirements and license commitments. The inspectors interviewed operations staff and NCS engineers both before and during walk-

downs to verify that open communication routinely occurs between NCS engineers and operations staff. The inspectors verified that controls identified in NCS postings were understood and implemented properly by operations staff to ensure safety.

The inspectors reviewed NCS-related training records to verify whether operator training included instruction in criticality hazards and control methods, whether the licensee's established NCS-related operator training was consistent with commitments in the License Application, and whether NCS staff was involved in the development of operator training. The inspectors interviewed operations staff to determine whether they were cognizant of NCS hazards and control methods related to their specific job function. The NCS-related training records reviewed included annual refresher training for plant employees and classroom training for employees with unescorted access to the UR area.

The inspectors reviewed selected NCS-related CAP entries to verify whether anomalous conditions were identified and entered into the CAP, whether proposed corrective actions were sufficiently broad, whether they were prioritized on a schedule commensurate with their significance, and whether they were completed as scheduled and addressed the problem identified. The inspectors reviewed NCS infractions related to a degraded Smart Crane IROFS, an issue with the Waste Processing Facility Process Logic Controller (PLC), and a SFF thermocouple out of calibration. In addition, EN 51998 was reviewed and additional discussion on this topic is in Section A.2 (Operational Safety). The previous listed infractions were documented in the licensee's CAP as entries CA201600885, CA201600946, CA201600942, and CA201600767 respectively.

b. Conclusion

No violations of NRC requirements were identified.

B. Radiological Controls

1. Radiation Protection Quarterly (Inspection Procedure 88135)

a. Inspection Scope and Observations

The inspectors reviewed the licensee's RP program to verify compliance with 10 CFR 20 and License Application requirements. The inspectors toured the controlled areas and verified that radiological signs and postings accurately reflected radiological conditions within the posted areas. The inspectors observed plant personnel as they removed protective clothing at controlled area step-off pads. The inspectors observed plant personnel as they performed various tasks in different areas of the facility and verified that the proper protective equipment was used to prevent contamination. The inspectors also observed plant employees as they performed exit monitoring at the controlled areas' exits and verified that monitoring instructions were followed at the exit point. The inspectors observed employees using the exit monitors in the controlled area exit and verified that the monitors were being used properly.

The inspectors reviewed three radiological work permits (RWPs), including one utilized in the RTR controlled area, and two being used for work on the UR scrubber. The inspectors verified the RWPs contained appropriate work instructions, were posted in the work areas for employees' review, and that workers signed the applicable RWP.

The inspectors reviewed a sample of the Smear Sampling Weekly Reports for the RTR controlled area, as well as a sample of RadCon Technicians Daily Inspection Reports (RP-13-02, Form 1) for all areas. The inspectors verified that technicians were conducting and documenting random and routine smears.

b. Conclusion

No violations of NRC requirements were identified.

C. Facility Support

1. Post Maintenance Testing (Inspection Procedure 88135.19)

a. Inspection Scope and Observations

The inspectors witnessed two post-maintenance tests per work order (WO) documentation in the SFF. Specifically, the inspectors witnessed the performance of a post maintenance test of leak testing and the pressure test of inert gas piping.

b. Conclusion

No violations of NRC requirements were identified.

2. Surveillance Testing (Inspection Procedure 88135.22)

a. Inspection Scope and Observations

The inspectors observed surveillance tests on the Evaporator Heat Exchangers in the UR area, WO 20205179. One of the heat exchangers failed to meet the acceptance criteria in the WO instruction, so a new WO was generated to replace it, and conduct the surveillance on the new heat exchanger before putting it in service.

The inspectors reviewed an additional three completed surveillance WOs, for surveillance testing and inspection of safety-related systems, and verified that the results confirmed the availability and reliability of any associated IROFS and licensee operating procedure requirements.

b. Conclusion

No violations of NRC requirements were identified.

3. Management Organization and Controls (Inspection Procedure 88135)

a. Inspection Scope and Observations

The inspectors reviewed a sample of 29 items entered into the licensee's CAP system during the inspection period to ensure that items pertinent to safety, security, and non-conforming conditions were identified, investigated as necessary, and tracked to closure. The inspectors verified through interviews with cognizant licensee staff and document reviews that the issues of high safety significance were properly identified and reviewed for apparent causes. The inspectors verified that, for those issues requiring extent of condition/extent of cause reviews, the reviews were completed and documented in the applicable corrective action. The inspectors verified that appropriate corrective actions to prevent recurrence were identified in the CAP system, and were reviewed and tracked to completion in accordance with the licensee's CAP implementing procedure, Quality Work Instruction (QWI) 14.1.1, Preventive/Corrective Action System.

The inspectors also reviewed the RP Audits, Inspections 1st Quarter 2016 report. The inspectors verified that deficiencies identified during audits were appropriately addressed in the CAP.

b. Conclusion

No violations of NRC requirements were identified.

4. Permanent Plant Modifications (Inspection Procedure 88135.17)

a. Inspection Scope and Observations

The inspectors observed licensee safety walk downs to verify that changes were adequately reviewed by the affected safety disciplines. The inspectors verified that the licensee addressed any impacts of modifications to the ISA/SAR.

b. Conclusion

No violations of NRC requirements were identified.

D. Exit Meeting

On August 18, 2016 and October 13, 2016, the inspectors presented the inspection results to B.J. Burch and members of the licensee staff. No dissenting comments were received from the licensee. Proprietary information was discussed, but not included in the report.

SUPPLEMENTARY INFORMATION

1. KEY POINTS OF CONTACT

Name	Title
T. Allen	Front Line Manager, Uranium Processing and Research Reactors (UPRR)
L. Ayers	Waste Processing Technician
B.J. Burch	Vice President and General Manager
T. Cayton	UPRR Maintenance
E. Clark	Front Line Manager Pickling Area
K. Conway	Unit Manager, Radiation Protection
M. Edstrom	Fire Protection Engineer
D. Faidley	Unit Manager, Nuclear Criticality Safety
T. Gryder	Front Line Manager Metlab
T. Hinze	Engineering Manager FMO
R. Howard	Filler Fabricator
H. Hudson	Pickling Area Manager
R. Johnson	Licensing Engineer
W. Lemon	FMO Section Manager
L. Miller	Front Line Manager, UPRR
S. Niedzialek	Engineering
L. Ragland	Unit Manager, Uranium Processing and Research Reactors
C. Rucker	Front Line Manager FMO
R. Simmons	Environmental Engineering Manager
D. Spangler	Section Manager, Nuclear Safety and Licensing
T. Stinson	Waste Operations Manager
S. Subosits	Licensing Engineer
C. Terry	Unit Manager, Licensing and Safety Analysis
D. Ward	Dept. Manager, Environmental, Safety Health and Safeguards
L. Wetzel	NCS Engineer
C. Yates	Section Manager, Uranium Processing and Research Reactors

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

70-27/2016-004-01	AV	Failure to identify a high consequence accident sequence related to potential backflow of uranium bearing solution in the Uranium Recovery Facility (EN 51998) (Section A.2)

3. LIST OF INSPECTION PROCEDURES USED

88015	Nuclear Criticality Safety
88020	Operational Safety
88135	Resident Inspection Program For Category I Fuel Cycle Facilities
88135.02	Plant Status
88135.04	ISA Implementation
88135.05	Fire Protection
88135.17	Permanent Plant Modifications
88135.19	Post Maintenance Testing
88135.22	Surveillance Testing

4. DOCUMENTS REVIEWED

Records:
LMS-2016-002, RP Audits, Inspections, 2nd Quarter 2016, dated August 12, 2016
MII-FMO-033, personnel training record (2 personnel)
MII-FMO-036, personnel training records (5 personnel)
MII-F-078, personnel qualification record
MII-G-021, personnel qualification record
NCS-2016-038, Qualification of Bryan T. Thilking as a NCS Auditor, dated April 19, 2016
NCS-2010-028, NCS Safety Analysis to Revise the Safety Basis for the ATR Vertical Plate Cart in RTRT, dated February 8, 2010
NCS-2011-224, Re-evaluation of Backflow Scenarios Associated with Evaporators and Steam Condensate Cooling Heat Exchange, dated February 29, 201.
NCS-2012-061, Drum Dryer Safety Release per SER 11-033, dated May 9, 2012
OJT Training Checklist Nuclear Criticality Safety Engineers for Bryan Thilking on August 16, 2016
PM 10214461, dated October 7, 2015
PM 10222204, dated March 2, 2016
PM 10227971, dated June 14, 2016
RP-07-103, Form 2, CIDAS CAAS Failure and Non-Routine Maintenance Log, dated August 7, 2016
RP-13-02, Form 1, Technician's Daily Inspection Reports, various dates
Work Order (WO) No. 20132469
WO 20205179
WO 20206451
WO 20206675
WO 20207287
WO 20207410

Procedures:
MII-G-021, OJT Pickling, Rev. 14
MII-P-046, Annual Chemical Spill First Alert/Awareness Training, Rev. 03
MII-R-068, Packing Assembly Technician Qualification, Rev. 01
OP-0000106, Clean HFIR Elements, Rev. 6
OP-0021001, Operating Procedure for Pickling, Rev. 82
OP-0020901, Operating Procedure for Cleaning, Rev. 69
OP-0025000, Cleaning Component Washing, Rev. 5
OP-0064801, Operating Procedure for General Handwork Operations, Rev. 24
QWI 14.1.10, Safety Evaluation of Unusual Incidents, Rev. 16

RWP-16-0052, Rev. 00, dated September 5, 2016
RWP-16-0053, Rev. 00, dated September 6, 2016

Other:
257-2B NCS (Procedures, Postings, and Labeling)
Container Control / Facility Alarm System Script 2016
Container Control Safety Training – 2016 (Test A)
DWG No. 14AD2_1010E, Rev. 11, P & ID Uranium Extraction, Sheet 7, Contactor Product Evaporation
DWG No. LT-7047, Tall ATR Element Cart, Rev. 3
DWG No. UPRR 30013, P&ID Organic Column Array & Contactor Evaporator Feed Supply Column, Rev. 4
DWG No. UPRR 30052, Evaporator 6 P & ID, dated February 3, 2011
DWG No. UPRR 30053, Evaporator 3, 4, & 5 P & ID, dated February 9, 2011
Nuclear Criticality Safety Training, 2016 Annual Refresher Slides
Safety Analysis Report 15.9, Main Extraction and Drum Dryer Processes in Uranium Recovery, Rev. 97, dated October 26, 2015
Safety Analysis Report 15.13, U-235 Counting Process in Uranium Recovery, Rev. 21, dated October 19, 2015
Safety Analysis Report 15.23, Rev. 91, dated December 18, 2015

Condition Reports Reviewed:
CA201501380, CA201501573, CA201501250, CA201501427, CA201501493, CA201501852, CA201501814, CA201600884, CA201600228, CA201600562, CA201600917, CA201600063, CA201600062, CA201600013, CA201600837 CA201601022, CA201601036, CA201601040, CA201601041, CA201601045, CA201601060, CA201601063, CA201601072, CA201601090, CA201601106, CA201601124, CA201601136, CA201600870, CA201600872, CA201600874, CA201600868
Investigative Report for CA 201600767, dated August 12, 2016