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

October 30, 2015

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

SUBJECT: BABCOCK AND WILCOX NUCLEAR OPERATIONS GROUP – NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT 70-27/2015-004

Dear Mr. Burch:

This refers to the inspections conducted from July 1 through September 30, 2015, 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 July 30 and October 15, 2015, 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 these inspections, no violations 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 Agencywide Documents Access and Management System (ADAMS), which is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html.

If you have any questions 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 70-27/2015-004
w/Attachment: Supplementary Information

cc:
Joseph G. Henry
Chief Operating Officer
BWXT Nuclear Operations Group, Inc.
2016 Mount Athos Road
Lynchburg, VA 24505

Christopher T. Terry, Manager
Licensing and Safety Analysis
BWXT Nuclear Operations Group, Inc.
P.O. Box 785
Lynchburg, VA 24505-0785

Steve Harrison, Director
Division of Radiological Health
Department of Health
109 Governor Street, Room 730
Richmond, VA 23219

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ADAMS: ☒ ACCESSIONNUMBER: ML15303A104 ☐ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED

OFFICE	RII:DFFI/PB2	RII:DFFI/PB2	RII:DFFI/SB	RII:DFFI/SB	RII:DFFI/PB2	RII:DC	
SIGNATURE	/RA/	/RA/	/RA/	/RA/	EMichel for	/RA/	
NAME	SSubosits	NPitoniak	TSippel	NPeterka	PStartz	MCrespo	
DATE	10/27/2015	10/27/2015	10/27/2015	10/28/2015	10/30/2015	10/28/2015	
E-MAIL COPY	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\DFFI\REPORTS\DRAFT INSPECTION REPORT FOLDER\BWXT NOG\2015 FEEDERS\BWXT NOG IR 2015-004 (PUBLIC).DOCX

Letter to Mr. B. Joel Burch from Eric C. Michel dated October 30, 2015

SUBJECT: BABCOCK AND WILCOX NUCLEAR OPERATIONS GROUP – NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT 70-27/2015-004

DISTRIBUTION:
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E. Michel, RII
S. Subosits, RII
N. Pitoniak, RII
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R. Johnson, NMSS
M. Baker, NMSS
T. Naquin, NMSS

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No:	70-27
License No:	SNM-42
Report No:	70-27/2015-004
Licensee:	BWXT
Facility:	Nuclear Operations Group (NOG)
Location:	Lynchburg, VA 24505
Dates:	July 1 through September 30, 2015
Inspectors:	S. Subosits, Senior Resident Inspector, RII/DFFI/PB2 N. Pitoniak, Acting Senior Fuel Facility Projects Inspector, RII/DFFI/PB2 N. Peterka, Fuel Facilities Inspector, RII/DFFI/SB T. Sippel, Fuel Facilities Inspector, RII/DFFI/SB P. Startz, Fuel Facilities Inspector, RII/DFFI/PB2 R. Stone, Security Specialist, NSIR/DSP/FCSTB
Approved by:	E. Michel, Chief Projects Branch 2 Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

BWXT Nuclear Operations Group
NRC Integrated Inspection Report 70-27/2015-004
July 1 – September 30, 2015

Inspections were conducted by the senior resident inspector 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

- The items relied on for safety (IROFS) reviewed during this period were properly maintained in order to perform their intended safety function in accordance with the license application and regulatory requirements. (Sections A.1, A.2 and A.3)

- The facility was operated safely in accordance with operating procedures, nuclear criticality safety (NCS) postings and regulatory requirements. (Section A.4)

- Fire protection systems were maintained in accordance with site procedures. (Section A.5)

Radiological Controls

- The Radiation Protection program elements reviewed were implemented in accordance with the license and regulatory requirements. (Section B.1)

Facility Support

- The post maintenance testing, preventive maintenance and surveillance testing observed for IROFS and other safety controls were implemented in accordance with the license and applicable procedure requirements. (Sections C.1 and C.2)

- Reports for tracking and resolution of safety-related issues included corrective actions to prevent recurrence. Extent of condition and extent of cause reviews were conducted when required by the governing corrective action program procedure. (Section C.3)

- The Plant Modifications Program was implemented in accordance with the license application and regulatory requirements. (Paragraph C.4)

Other Areas

- Event Notification (EN) 51411 / Licensee Event Report (LER) 70-27/2015-004-01 was reported to the NRC on September 19, 2015 following the identification of an administrative nuclear criticality safety IROFS failure in the Specialty Fuels Facility. The IROFS failure

resulted in a failure to meet the performance requirements of 10 CFR 70.61. NRC Inspection Report 70-27/2015-008 documented the results of the NRC Special Inspection review for this event. (Section D.2)

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.

A. Safety Operations

1. Plant Operations (Inspection Procedure (IP) 88135)

   a. Inspection Scope and Observations

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

   During the inspection period, the inspectors interviewed five operators, two FLMs, and two nuclear materials control (NMC) technicians and determined 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 UR, Filler, Wastewater Treatment Facility, Machine Shop, and RTRT areas throughout the inspection period. The inspectors determined that the SNM processes and workstations in service at the time of walk-downs were operated in accordance with applicable procedures and NCS postings.

   b. Conclusion

   No violations of NRC requirements were identified.

2. Operational Safety (IP 88020)

   a. Inspection Scope and Observations

   The inspectors interviewed staff and reviewed records associated with the Filler and Pharmacy Area of the fuel manufacturing facility, Uranium Molybdenum foil production area of the RTRT facility, and the Furnace and High Level Dissolution processes in the UR facility. The inspectors determined that the specific safety controls reviewed were being adequately implemented and properly communicated as described in the Integrated Safety Analysis (ISA).

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 were covered.

The inspectors determined that licensee administrative controls were implemented and communicated. The inspectors reviewed various procedures and determined that required actions as identified in the ISA Summary have been correctly transcribed into written operating procedures. The inspectors evaluated the procedures' contents with respect to operating limits and operator responses for upset conditions and verified that limits needed to assure safety are adequately described in the procedures.

The inspectors interviewed various operators and determined that they were adequately implementing the required safety controls. The inspectors observed operator performance and determined that they were adhering to applicable safety procedures. The inspectors reviewed the postings applicable to the tasks being observed and determined that these 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 Summary for the selected safety controls.

The inspectors reviewed the licensee's training program to verify that training and qualification commitments were satisfied and maintained current for a selection of personnel. The inspectors interviewed several operators in regards to Filler and Pharmacy areas safety control requirements when dealing with hazards in the plant areas and determined that this training was adequately implemented.

The inspectors reviewed the licensee's corrective action (CA) program 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 CA program entries and determined that the completed corrective actions were adequate.

b. Conclusion

No violations of NRC requirements were identified.

3. Safety System Walk-down (IP 88135.04)

a. Inspection Scope and Observations

The inspectors performed a walk-down of a safety-significant system involved with the processing of SNM. As part of the walk-down, inspectors reviewed the NCS postings associated with the Scrubber Ventilation and Vacuum System in UR. The inspectors verified that items relied on for safety (IROFS) were available and reliable to perform

their intended functions when needed to comply with the performance requirements of 10 CFR 70.61. No conditions that degraded plant equipment, the availability, or reliability of IROFS were identified.

To determine if plant equipment was installed correctly, the inspectors reviewed the relevant documentation, as well as ISA/Safety Analysis Report (SAR) 15.14 for the Scrubber Ventilation and Vacuum System in UR. During the walk-downs, the inspectors verified the following as appropriate:

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

b. Conclusion

No violations of NRC requirements were identified.

4. Nuclear Criticality Safety (IP 88135, IP 88015, IP 88016 and IP 88017)

a. Inspection Scope and Observations

During daily tours of the Filler, UR, RTRT, and the general shop floor areas, the inspectors verified that NCS controls and postings were in place and available to perform their intended functions. The inspectors reviewed the field implementation of NCS-related administrative IROFS - one in the Chemistry Laboratory in UR and one in the Metallurgical Laboratory area. During these observations, the inspectors noted that the IROFS were properly implemented and that operations personnel complied with NCS posting requirements in their work areas.

The inspectors evaluated the adequacy of the licensee's NCS program and analyses to assure the safety of fissile material operations. The inspectors reviewed selected NCS documents (listed in Section 4.0 of the Attachment) to determine whether 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 evaluations and supporting documents reviewed demonstrated adequate identification and control of NCS hazards to assure operations within subcritical limits through appropriate limits on controlled parameters. The inspectors interviewed five licensee criticality engineers, the NCS manager, an operator, and several other engineers regarding operations, equipment and controls. For selected systems, the inspectors reviewed the NCS evaluations and related IROFS to determine whether the performance requirements were met for selected accident sequences.

The inspectors accompanied an NCS engineer on a weekly walkdown and observed the inspection. The inspectors noted that the walkdown was performed by NCS engineer who was familiar with open NCS issues from previous audits; reviewed the adequacy of control implementation; reviewed procedures and postings; interviewed area operators

and management; and examined equipment and operations to verify that past evaluations remained adequate. The inspectors also reviewed the results of the two most recent NCS Quarterly audits to assure that appropriate NCS-related issues and corrective actions were being identified, tracked, and resolved. The inspectors reviewed the licensee response to a selection of recent internally-reported events identified in Section 4.0 of the Attachment. The inspectors interviewed licensee staff and observed that the events were investigated in accordance with procedures and appropriate corrective actions were assigned and tracked.

The inspectors interviewed a licensee engineer responsible for the Criticality Accident Alarm System (CAAS). The interview focused on the reliability, evacuation plans, procedures for imposing compensatory measures when the CAAS is out of service, and the licensee's procedure for monitoring the CAAS during storm mode. The inspectors also reviewed records of CAAS tests and CAAS related entries in the licensee's corrective action system in order to confirm that the licensee was adequately maintaining the CAAS reliability.

The inspectors performed plant walkdowns in Recovery and RTR to determine whether risk-significant fissile material operations were being conducted safely and in accordance with regulatory requirements. The inspectors interviewed operations staff and NCS engineers both before and during walkdowns. The inspectors verified that controls identified in NCS analyses were installed or implemented and were adequate to ensure safety.

b. Conclusion

No findings of significance were identified.

5. Fire Protection Quarterly (IP 88135.05)

a. Inspection Scope and Observations

During daily plant tours, the inspectors verified that transient combustibles were being adequately controlled and minimized in Bays 4A – 6A, Bays 11-14, Filler Area Metallurgical Laboratory, Retention Tank building, Wastewater Treatment Facility and Waste Operations Drum Storage Area. The inspectors conducted fire safety tours of these areas and reviewed the fire detection and suppression capabilities in those areas. No compliance or regulatory issues were noted with respect to fire protection equipment. The inspectors also verified that housekeeping in the areas reviewed was sufficient to minimize the risk of fire.

b. Conclusion

No violations of NRC requirements were identified.

B. Radiological Controls

1. Radiation Protection Quarterly (IP 88135)

a. Inspection Scope and Observations

The inspectors toured the UR, Filler, and RTRT 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 also observed plant employees as they performed exit monitoring at the RTR controlled area exit and verified that monitoring instructions were followed at the exit point.

The inspectors reviewed two radiological work permits (RWPs) utilized in the UR controlled area. 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 noted that for the portions of work activities observed, plant workers performed tasks in accordance with the RWP requirements.

The inspectors performed a review of the licensee's semi-annual effluent monitoring report required by 10 CFR 70.59. The inspectors verified that liquid and gaseous effluents releases and the resultant off-site doses were appropriately documented for the period covering January 5, 2015 to June 28, 2015.

b. Conclusion

No violations of NRC requirements were identified.

C. Facility Support

1. Post Maintenance Testing (IP 88135.19)

a. Inspection Scope and Observations

The inspectors witnessed one post-maintenance test (PMT) per work order (WO) documentation. The inspectors witnessed performance of a post maintenance leak test of four new UR Evaporator Storage Columns. No evidence of leaks were found and, as a result, the surveillance check acceptance criteria were met. The inspectors also verified that PMT activities were conducted in accordance with applicable WO instructions for nine corrective maintenance WOs.

b. Conclusion

No violations of NRC requirements were identified.

2. Surveillance Testing (IP 88135.22)

a. Inspection Scope and Observations

The inspectors observed preventive maintenance (PM) surveillance tests on the High Liquid Level sensors for Centrifugal Contactor Organic Storage Columns #1 and #2 in the UR area. Also, they observed a PM surveillance test on the Centrifugal Contactor Hood Overflow Column High Liquid Level Sensor. Each of the PM activities conducted met the acceptance criteria in the work order instructions. The inspectors reviewed completed preventive maintenance work orders for nine surveillance test and inspection work orders of safety-related systems and verified that the results were acceptable to confirm 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 (IP 88135)

a. Inspection Scope and Observations

The inspectors reviewed a sample of 33 items entered into the licensee's CA 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 inspector verified that the issues of high safety significance were properly identified and reviewed for apparent causes. The inspectors noted that, for those issues requiring extent of condition/extent of cause reviews, the reviews were completed and documented in the applicable CAs. The inspectors verified that appropriate CAs to prevent recurrence were identified in the CA system, and were reviewed and tracked to completion in accordance with the licensee's CA system implementing procedure, Quality Work Instruction (QWI) 14.1.1, Preventive/Corrective Action System.

b. Conclusion

No violations of NRC requirements were identified.

4. Plant Modifications (IP 88070)

a. Inspection Scope and Observations

The inspectors interviewed area supervisors and cognizant engineering staff to verify that that the licensee had established an effective configuration management system to evaluate, implement, and track permanent plant modifications (PPMs).

The inspectors reviewed the most prominent facility modifications selected from the licensee's 2014 ISA/Configuration Management Review. Specifically, the inspectors evaluated the following modifications: Raffinate Extraction System, Recovery Conversion Furnace, and the U-Moly Vacuum Furnace. The inspectors interviewed the

Licensing and Safety Analysis staff responsible for these plant modifications to verify the licensee had established an effective configuration management system to evaluate, implement, and track PPMs which could affect safety.

The inspectors conducted field walk downs of all modifications to validate the as-found plant configurations were in agreement with the change package documentation and to evaluate the material condition of the safety-related equipment. In addition, the inspectors reviewed updates and changes to the SARs and procedures that were affected by the modifications.

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

The inspectors reviewed PPM design packages since the last PPM inspection for accuracy. 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 verified that the licensee addressed baseline design criteria stipulated in 10 CFR 70.64 in the designs of PPMs. The inspectors verified that designs of PPMs met the specific design criteria as specified in applicable modification packages.

The inspectors verified that the licensee addressed the impacts of modifications to the SAR, 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 relating to the preparation and installation of permanent plant modifications were entered into the CA program and the adequacy of corrective actions.

b. Conclusion

No violations of NRC requirements were identified.

D. Other Areas

1. Follow-up on Previously Identified Issues

None

2. Event Follow-up (IP 88135)

a. Event Notification (EN) 51411: Licensee Event Report (LER) 70-27/2015-004-01: Potentially Exceeding Glovebox Moderator Mass Limits

On September 16, 2015, during a routine NCS audit of the Specialty Fuels Facility (SFF) a licensee NCS engineer found anomalies with the log entries for tracking fissile material and moderating material mass associated with a glovebox utilized to process Advanced Gas Reactor (AGR) fuel. Multiple entries were found where the moderating material mass limit established by the glovebox NCS posting may have been exceeded for the associated fissile material mass entries. The engineer notified the FLM for SFF and additional follow-up occurred including a nuclear work model critique on September 18, 2015. Following the critique, the licensee determined that the entries may have not been bookkeeping errors and that the moderating material mass limits may have been exceeded. The licensee suspended operations in the SFF and initiated an extent of condition review for other areas of the plant utilizing similar three-tiered mass and moderator NCS postings. On September 19, 2015, the licensee made a 24-hour notification under the reporting requirements of 10 CFR 70.74 (a) and 10 CFR 70 Appendix A (b)(2) for the failure of a NCS administrative IROFS in the (SFF) that resulted in a failure to meet the performance requirements of 10 CFR 70.61. On September 23, 2015, the licensee amended EN 51411 to include an additional SFF glovebox where a similar condition with mass and moderator log entries was found during their extent of condition review. The licensee's investigation of the event will be captured in CA201501427. This item will be closed as LER 70-27/2015-004-01. The NRC evaluated the event for inspection follow-up and initiated a Special Inspection (SI) review of the event on September 25, 2015. The results of the SI review of EN 51411 are captured in NRC Inspection Report 70-27/2015-008.

E. Exit Meeting

On July 30 and October 15, 2015, the inspectors presented the inspection results to B.J. Burch and members of the 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
B.J. Burch	Vice President and General Manager
K. Conway	Unit Manager, Radiation Protection
N. Coles	Front Line Manager, Specialty Fuels Facility
T. Stinson	Unit Manager, Waste Treatment Operations
D. Spangler	Section Manager, Nuclear Safety and Licensing
C. England	Unit Manager, Licensing and Safety Analysis
D. Faidley	Unit Manager, Nuclear Criticality Safety
K. Kirby	Front Line Manager, Nuclear Materials Control
L. Ragland	Unit Manager, Uranium Processing and Research Reactors
H. Shaffer	Dept. Manager, Uranium Processing and Research Reactors
D. Ward	Dept. Manager, Environmental, Safety Health and Safeguards
C. Yates	Section Manager, Uranium Processing and Research Reactors
R. Johnson	Licensing Engineer
R. Simmons	Licensing Engineer
M. Edstrom	Fire Protection Engineer
R. Harvey	Front Line Manager for Wastewater Treatment

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened/Closed		
70-27/2015-004-01	LER	Event Notification 51411: Potentially Exceeding Glovebox Moderator Mass Limits (Paragraph D.2.a)

3. LIST OF INSPECTION PROCEDURES USED

88015	Nuclear Criticality Safety Programs
88020	Operational Safety
88070	Permanent Plant Modifications
88135	Resident Inspection Program For Category I Fuel Cycle Facilities
88135.04	ISA Implementation
88135.05	Fire Protection
88135.19	Post Maintenance Testing
88135.22	Surveillance Testing

4. DOCUMENTS REVIEWED

Records:
Internal Audit 256-1B Licensing, SAR 15.44, RTR Molybdenum Production, February 2015
QWI 5.1.7 Form N-105, SER Release Record for SER 14-011 Phase 2
QWI 5.1.7 Form N-105, SER Release Record for SER 13-036 Phase 1
E61-559, Recovery Conversion Furnace Process Variable Specification Sheet

A62-01-01, SER Acceptability Checklist for SER 13-036 P01
Recovery Furnace High Temperature Warning Annual Checks
CAAS Calibration & Check Log 2015
Calibration of Criticality Monitors 2014
NCS-2015-013, Justification Analysis for CR-1044004-00 [Release of additional RTR UMo Carts and Foil/Pack Storage Boxes], dated February 27, 2015
NCS-2015-016, Safety Analysis for Cleanout of Uranium-bearing Solids from the HLD Recirculation Column, dated March 13, 2015
NCS-2015-026, Justification Analysis for CR-1044067-00: UMo Shearing and Slitting Procedures, dated March 26, 2015
NCS-2015-033, NCS Justification Analysis for New ATR Vertical Plate Carts per CR-1044299, dated April 22, 2015
NCS-2015-040, NCS Safety Analysis for TREAT Fuel Development per SER 15-004, dated May 20, 2015
NCS-2015-049, NCS Violation & Observation Summary – 1st Quarter 2015, dated May 13, 2015
NCS-2015-051, NCS Safety Analysis to Revise NCS Posting for SFF Scale (CR-1044502)
NCS-2015-070, NCS Violation & Observation Summary – 2nd Quarter 2015, dated July 24, 2015
NCS-2015-140, NCS Safety Analysis for SER 14-033 Phase 01: Evaluate the Receipt & Storage of DU&LEU U-Mo Ingots, dated April 2, 2015
NCS-PA-25-00001, Nuclear Criticality Safety Evaluation of Recovery Furnace System, Revision (Rev.) 1, dated July 8, 2015
E61-001, Chemical Processing Training Checklist
MP #3924, Quarterly Inspection, SC WS 401 FUR HEPA Bank Test 3M Recovery
MP #3926, 1 Year, SC Inspection WS 401 Tube Dimensions
MP#3927, SC WS 401 Overtemp Interlock 6M Recovery
Radiation Protection TWR-04-024, Analysis of the 10 CFR 70.61 Related Effects of a Hydrogen Explosion/Deflagration Event in the Recovery High Level Dissolver, dated January 4, 2005
RWP 15-0039, Radiological Work Permit 15-0039
RWP 15-0041 Radiological Work Permit 15-0041
SAR 15.14, Scrubber Ventilation and Vacuum System in Uranium Recovery, Rev. 70
SAR 15.44, Research and Test Reactor Uranium Molybdenum Foil Production, Rev. 1
Safety Analysis Report 15.25, Furnace Process Recovery Operation, Rev. 34

Procedures:
Integrated Safety Analysis Methodology, Quality Work Instructions 2.1.3, Rev. 11
M11-F-022, Filler Operations Conventional Line Daily Operations Checks, Rev. 29
OP-1042717, Operating Procedure for Acid Cleaning of U-Mo Coupons, Rev. 01
OP-0061234, Maintenance in UPRR, Rev. 50
OP-0061161, Training of Uranium Processing Operators, Rev. 10
RP-02-07, Enclosure Air Flow Measurements in Controlled Areas, Rev. 9
SAP-MP-2411, Instructions for Airflow Checks
OP-0061146, Deep Well Gamma Counter Operation, Rev. 16
OP-0061143, Uranium Recovery Scrubber Operation, Rev. 29
OP-0061150, Inspection and Cleaning of Recovery Ducts, Rev. 25
Quality Work Instruction 14.1.1, Preventive/Corrective Action System, Rev. 30
OP-1019574, Control of Item/Container Entry into the UR CCA (U), Rev.5
OP-0061556, Recovery Conversion Furnace Operation, Rev. 11
OP-1000180, Calibration Services, Rev. 25

OP-1001077, Vacuum Furnace Testing for RTRT Controlled Area, Rev. 8
OP-101620, AGR Coating Furnace Scrubber Operation, Rev. 10
OP-1024653, Operating Procedure for Blister and Program Anneal, Rev. 1
Quality Work Instruction (QWI) 917, "Preventative and Predictive Maintenance"
SER 13-036 Phase 1, U-Moly Vacuum Furnace
SER 14-011, Phase 01, Wet Chemical Equipment Installation
SER 14-011, Phase 02, Replacing 3" extraction system with new backup raffinate system
SAR 15.25, Furnace Process Recovery Operation, Ref SER-0228, Phase1, Rev. 34
SOP CSP# 0318, Gage/Instrument Calibration Procedure, Electrical Pressure Gages, Rev. 4

Corrective Action (CA) Reports Review:
CA201500264, CA201500991, CA201500999, CA201501011, CA201501026, CA201501032, CA210501034, CA210501036, CA201501046, CA201501056, CA201501070, CA201501112, CA201501135, CA201501159, CA201501175, CA201501188, CA201501207, CA201501246, CA201501247, CA201501250, CA201501254, CA201501265, CA201501278, CA201501313, CA201501404, CA201501427

Work Orders:
NPDM 20184840, NPDM 20185780, NPDM 20186159, NPDM 20186816, NPDM 20186864, NPDM 20186875, NPDM 20187945, NPDM 20188315, NPDM 20188781, NPDM 20189004, NPDP 20183249, NPDP 20183937, NPDP 20183949, NPDP 20184448, NPDP 20184473, NPDP 20185113, NPDP 20185423, NPDP 20185431, NPDP 20185432, NPDP 20185825, NPDP 20187098, NPDP 20187119

Other Documents:
Letter from INL regarding Vacuum Anneal Furnace designated as Government Owned Equipment, dated May 28, 2015
Letter 15-117, Semi-Annual Effluent Monitoring Report, dated August 28, 2015
NCS Posting 15-14-001, Rev. 0
NCS Posting 15-14-002, Rev. 0
NCS Posting Recovery-33, Rev. 0
NCS-2001-084, dated March 12, 2001
NCS-1996-017, dated January 26, 1996
NCS-1996-165, dated July 28, 1996
NCS-2008-172, dated September 23, 2008
NCS-2015-106, dated September 24, 2015
NCS-2015-090, dated August 26, 2015
SAP Maintenance Plan, MP# 2591
SAP Maintenance Plan, MP# 636
Form E61-006, Deep Well Counter Calibration Record, Rev. 6
Form E41-134, Annual Ductwork Survey, Rev. 12