



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

March 30, 2018

EA-16-173

Mr. Mike Annacone
Vice President, Columbia Fuel
Operations and Manager,
Columbia Plant
Westinghouse Electric Company
5801 Bluff Road
Hopkins, SC 29061

**SUBJECT: WESTINGHOUSE ELECTRIC COMPANY – NUCLEAR REGULATORY
COMMISSION INSPECTION REPORT NO. 70-1151/2018-006**

Dear Mr. Annacone:

The Nuclear Regulatory Commission (NRC) conducted an announced inspection February 26 through March 1, 2018, at the Westinghouse Columbia Fuel Fabrication Facility (CFFF) in Hopkins, SC. The purposes of this inspection were to assess completion of commitments made in the Confirmatory Order (CO) dated August 9, 2017 (ML17221A112), and conduct the second Area Needing Improvement (ANI) inspection for a weakness identified in CFFF's management measures and the assumptions made in the development of the site's criticality safety evaluations (CSEs). The ANI is detailed in Inspection Report (IR) 70-1151/2017-001 dated March 6, 2017 (ML17067A134). The enclosed report presents the results of this inspection. At the conclusion of this inspection, the results were discussed with you and members of your staff at an exit meeting on March 1, 2018.

The inspection examined activities conducted under your license as they relate to public health and safety, the common defense and security, and to confirm compliance with the Commission's rules and regulations and with the conditions of your license. The inspection consisted of facility walk-downs, selective examinations of relevant procedures and records, interviews with plant personnel, and plant observations. No violations of more than minor significance were identified.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390 of NRC's "Rules of Practice and Procedure," a copy of this letter and 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, please contact Tom Vukovinsky of my staff at (404) 997-4622.

Sincerely,

/RA/ T. Vukovinsky for

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

Docket No. 70-1151
License No. SNM-1107

Enclosure:
NRC Inspection Report 70-1151/2018-006
w/Supplemental Information

cc:
John Howell
Manager
Environment, Health and Safety
Electronic Mail Distribution

Nancy Parr
Manager
Licensing
Electronic Mail Distribution

Christine Kneece
Manager
Industrial Safety
Electronic Mail Distribution

Susan E. Jenkins
Assistant Director, Division of Waste Management
Bureau of Land and Waste Management
Department of Health and Environmental Control
Electronic Mail Distribution

SUBJECT: WESTINGHOUSE ELECTRIC COMPANY – NUCLEAR REGULATORY
 COMMISSION INTEGRATED INSPECTION REPORT NO. 70-1151/2018-006

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U. S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.: 70-1151

License No.: SNM-1107

Report No.: 70-1151/2018-006

Licensee: Westinghouse Electric Company

Facility: Columbia Fuel Fabrication Facility

Location: Hopkins, SC 29061

Dates: February 26 – March 1, 2018

Inspectors: B. Adkins, Senior Fuel Facility Inspector (Section A.1)
N. Pitoniak, Senior Fuel Facility Inspector (Section A.3)
T. Vukovinsky, Senior Fuel Facility Inspector (Sections A.4, A.5, B.1, B.2,
B.3)
R. Womack, Fuel Facility Inspector (Sections A.2, B.2)

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

Enclosure

EXECUTIVE SUMMARY

Westinghouse Electric Company
Columbia Fuel Fabrication Facility
NRC Inspection Report 70-1151/2018-006
February 26 – March 1, 2018

The inspection was conducted by Nuclear Regulatory Commission (NRC) regional inspectors during normal hours in the areas of Criticality Safety Evaluation (CSE) and Management Measures, and Other Areas. The inspectors performed a selective examination of license 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.

Criticality Safety Evaluation and Management Measures

- No violations of more than minor significance were identified related to the nuclear criticality safety (NCS) program. (Paragraph A.1)
- No violations of more than minor significance were identified related to the management measures associated with procedures, training, and audits. (Paragraph A.2)
- No violations of more than minor significance were identified related to the management measures associated with the plant modification and corrective action programs (CAPs). (Paragraph A.3)
- No violations of more than minor significance were identified related to the management measures associated with the maintenance program. (Paragraph A.4)
- This inspection, together with the inspection conducted on December 22, 2017, satisfy the area needing improvement supplemental inspection effort for management measures and CSE assumptions. (Paragraph A.5)

Other Areas

- Confirmatory Order Section V, Item 7, "Development of a method to reinforce positive NSC leadership behavior and monitor for effectiveness in the nuclear safety culture monitoring panel (NSCMP)," was reviewed and closed. (Paragraph B.1)
- Confirmatory Order Section V, Item 10.c, "Westinghouse shall evaluate the results of the independent third party nuclear safety culture assessment, and any identified deficiencies will be entered into the CAP to track to completion," was reviewed and closed. (Paragraph B.2)
- Notice of Violation 70-1151/2017-004-01, "Failure to adequately design IROFS for system operation," was reviewed and closed. (Paragraph B.3.a)
- Notice of Violation 70-1151/2017-004-02, "Failure to maintain the structural integrity of the S2A/B ventilation ductwork," was reviewed and closed. (Paragraph B.3.b)

Attachment:
Supplemental Information

REPORT DETAILS

Summary of Plant Status

The Westinghouse Facility converts uranium hexafluoride (UF₆) into uranium dioxide using a wet conversion process, and fabricates fuel assemblies for use in commercial nuclear power reactors. During the inspection period, normal production activities were ongoing; however, while the inspectors were on site, conversion operations were shutdown to facilitate the S-1030 scrubber system cleanout inspections.

A. Criticality Safety Evaluation and Management Measures

1. Criticality Safety Evaluations (Inspection Procedure 88015)

a. Inspection Scope and Observations

Review of Criticality Safety Evaluation Assumptions

The inspectors reviewed a sample of nuclear criticality safety evaluations (CSEs) based on a previously identified weakness in the licensee's assumptions, which included CSE-1-H, CSE-15-C, and CSE-19-A. The inspectors reviewed the selected CSEs to determine whether they correctly reflected system configuration and normal operating conditions. The inspectors reviewed the CSEs to determine whether the licensee systematically identified all normal and credible abnormal conditions in their generation of potential accident sequences in a manner consistent with their License Application. This included a review of potential accident sequences and/or process upsets that the licensee determined to be not credible, as well as potential accident sequences determined to be subcritical by geometry. The inspectors observed that the licensee adequately described the bases for accident sequences determined to be not credible, but that certain sequences could benefit from added information in order to facilitate outside independent review.

The inspectors reviewed the CSEs to determine whether subcriticality was assured under all normal and credible abnormal conditions as required by 10 CFR 70.61(d), and whether adherence to the Double Contingency Principle (DCP) was maintained as required by the License Application. This included a review of the designated controls for each accident sequence to determine whether sufficient independence was established and whether the licensee considered potential common-mode failures. Although no regulatory non-compliances were identified, the inspectors observed instances where the independence of controls as documented in the CSE was questionable and required a more detailed explanation. Additionally, the inspectors observed that the licensee did not have specific guidance established for determining sufficient independence to ensure consistency.

The inspectors reviewed the associated Calculation Notes (CNs) to the above CSEs to determine whether the control structure in the CN was consistent with that of the CSE. Additionally, the inspectors reviewed the CSEs to determine whether calculations were performed within their validated areas of applicability and consistent with the validation report.

The inspectors reviewed the selected CSEs bounding assumptions and calculations to verify that they were consistent with the commitments in Chapter 6 of the License Application, including the consideration of the DCP, assurance of subcriticality under

normal and credible abnormal conditions including use of an approved margin of subcriticality, technical practices and methodologies, and proper use of nuclear criticality safety (NCS) parameters.

The inspectors conducted interviews, reviewed records, and conducted walk downs to verify proper implementation of management measures and NCS controls identified in the CSEs. Specifically, the inspectors reviewed the following Items Relied On For Safety (IROFS) and associated management measures:

- CSE-1-H: VENT-SOLX-106, VENT-SOLX-107, VENT-SOLX-102, VENT-SOLX-103, VENT-SOLX-104, VENT-SOLX-105
- CSE-15-C: WT-120, WT-132, WT-133, WT-171, WT-172, WT-175, and WT-176
- CSE-19-A: OVEN-1, OVEN-2, OVEN-3, OVEN-4, OVEN-7, OVEN-10, and OVEN-11

b. Conclusion

No violations of more than minor significance were identified.

2. Procedures, Training, and Audits (Inspection Procedures 35741, 88015, 88020, 88025)

a. Inspection Scope

The inspectors reviewed the licensee's management measure for Procedures, Training and Qualification, and Audits as defined in Chapter 3 of the License Application.

The inspectors reviewed operating, maintenance, and calibration procedures for systems related to CSEs highlighted in Section A.1 of this report. The inspectors evaluated the procedures to determine whether changes to CSEs that impacted procedures were being included in revisions and that changes were appropriately meeting the new conditions in CSEs. The inspectors reviewed the training requirements associated with the CSEs and their associated IROFS. The inspectors reviewed a sampling of training records for operators and maintenance personnel to verify their qualifications to operate or conduct maintenance on safety systems.

The inspectors reviewed two audits and attachments, focusing on the results from an independent NCS program review. The inspectors reviewed selected events to verify that the licensee was identifying issues in a timely manner, considering the extent of condition and generic implications of identified problems, determining the root cause, and prioritizing the resolution of problems commensurate with their safety significance to correct the problem and prevent recurrence.

The inspectors interviewed technicians in the field to determine that operators were adequately implementing the required safety controls, had the requisite training requirements, and were familiar with the safety function of controls. The inspectors reviewed process control sheets and work forms in use in the field to verify that the latest revisions were being used.

The inspectors interviewed licensee staff members responsible for improving the Operational Maintenance (OM) and Preventive Maintenance (PM) procedures as part of the site's Excellence Plan. These procedures had been previously identified as

potentially lacking sufficient detail. The inspectors discussed the proposed replacement procedures with the project engineer to verify that they adhered to the procedure writer's guide, and contained additional information and guidance for the testing and maintenance of IROFS so they remain available and reliable. The licensee has revised their preventive maintenance procedure, MCP-10800, "Maintenance and Calibration Operating Procedure," to add an addition set of procedures known as OMP/PMP (preventive maintenance procedures) which are set to eventually replace the OM/PM procedures. The inspectors reviewed procedure CA-041, "CFFF Use and Adherence Manual," created to implement, in part, changes to the procedural implementation. The inspectors discussed the planned changes, current implementation status, and expected timeline to completion of the process. The inspectors reviewed examples of changes to procedures currently in draft state.

b. Conclusion

No violations of more than minor significance were identified.

3. Configuration Management and Corrective Action Program (Inspection Procedures 88070, 88071, 88110)

a. Inspection Scope

The inspectors reviewed the licensee's management measure for configuration management (CM) as defined in Chapter 3 of the License Application within the context of the Area Needing Improvement (ANI). Following the S-2A/2B scrubber and incinerator process upsets, it was identified that some system modifications were not evaluated for their indirect effects on other system's IROFS or safety-significant controls. In addition, it was identified that the design/original plant configuration on file may not accurately reflect the as-built configuration in the field.

The inspectors reviewed modifications of plant systems and equipment per procedures TA-500, Configuration Control, and RA-104, "Regulatory Review of Configuration Change Authorization." Specifically, the inspectors reviewed modification packages and performed walkdowns of the S-1008 scrubber, the solvent extraction scrubber, and the fluoride stripping scrubber to verify reviews and approvals were complete and that the in-plant equipment accurately reflected the authorized configuration documented in the modification packages. The inspectors reviewed post-modification acceptance testing associated with the modifications to verify required reviews were completed prior to system operation.

The inspectors reviewed the licensee's management measure for the corrective action program (CAP), as defined in Chapter 3.8 of the License Application. The inspectors reviewed the effectiveness review plan for corrective actions to prevent recurrence associated with root cause analysis (RCA) 100397353. The inspectors observed a corrective action review board (CARB) meeting and interviewed licensing and CAP personnel to confirm the status of corrective actions associated with Corrective Action Program and Learning (CAPAL) in accordance with W2-5.1-101, "Westinghouse Corrective Action Program Procedure," Revision (Rev.) 5 requirements. The inspectors reviewed changes implemented to the CAP including additional staffing and training of personnel. The inspectors reviewed corrective action qualification records and annual training schedule related to the CAP for site personnel.

b. Conclusion

No violations of more than minor significance were identified.

4. Maintenance (Inspection Procedures 88020, 88025)

a. Inspection Scope

The inspectors reviewed the licensee's management measure for Maintenance, as defined in Chapter 3.2 of the License Application. The inspectors reviewed a sample of CSEs to assess the flow down of license requirements into maintenance inspections and documentation. The sample included CSE-1-P and CSE-11-AB in addition to those detailed in Section A.1. The inspectors reviewed the selected CSEs to verify the selected controls were fully incorporated into implementation procedures and maintenance documents. The inspectors reviewed the associated OM and PM procedures which implemented the safety controls detailed in the CSEs, and observed that the stated controls were captured in the OM and PM documents. Specific OM/PMs reviewed are listed in the attachment.

The inspectors interviewed technicians in the field to determine whether operators and maintenance personnel were adequately implementing the required safety controls and were familiar with the safety function of controls. The OM/PMs were implemented through a licensee maintenance management system known as MAPCON. The inspectors discussed a recent change to MAPCON with the Maintenance Manager and noted that the current and revised MAPCON program are running in parallel to verify proper functionality prior to transitioning to the new system. The inspectors noted that the site's calibration program will now be captured within the new MAPCON system.

The inspectors observed the quarterly inspection of the S-1030 scrubber cleanout and inspection. The inspectors reviewed COP-815021, "S-1030 Inspection and Clean Out," which was used to conduct the inspection and cleanout. The inspectors noted that there were no unexpected accumulations of material, and that the uranium accumulation rate during this inspection period was consistent with those observed during the previous quarterly inspections.

b. Conclusion

No violations of more than minor significance were identified.

5. Area Needing Improvement Conclusion

The inspection conducted on December 22, 2017 (ML17356A091), together with this inspection, reviewed management measures as detailed in Chapter 3 of CFFF's License Application, and the assumptions used in CSEs. These inspections satisfy the supplemental inspection effort for management measures and CSE assumptions as described in ANI detailed in IR 70-1151/2017-001, dated March 6, 2017 (ML17067A134).

B. Other Areas

1. Review of Confirmatory Order Section V Item 7 (Inspection Procedure 40100)

a. Inspection Scope

The inspectors reviewed the licensee's actions regarding Confirmatory Order (CO) Section IV, Item 7 (ML17221A103), which requires the licensee to develop a method to reinforce positive nuclear safety culture (NSC) leadership behavior and monitor for effectiveness in the nuclear safety culture monitoring panel (NSCMP). The licensee was required to implement this method for three years, after which it may evaluate the need to continue this item.

The inspectors noted that the CFFF has revised their NSCMP Charter, Rev. 3, to satisfy the requirements of the CO. The revised charter shall require the CFFF NSCMP to monitor the effectiveness of reinforcing positive NSC behaviors (both leader and employee). The inspectors noted that independent members from the Westinghouse corporate NSC staff will provide feedback as part of the CFFF NSCMP meeting. To verify the CO requirement, a self-assessment will be performed annually. This assessment will evaluate effectiveness of the NSCMP and CFFF in leveraging the tools identified in this section to close gaps and positively reinforce NSC behaviors. The assessment team shall include at least one individual external to CFFF with experience in assessing the health of NSC. The inspectors noted that the assessment requirement will be performed for three years, beginning in 2018 and ending 2021, as specified in EA-16-173. The inspectors noted that the NSCMP provided the following methods to reinforce positive NSC behaviors:

- training on NSC behaviors to establish new or reconnect behaviors expectations
- case studies following events or from Operating Experience to reinforce the NSC behavior contributors
- NSC behavior Tri-folds and routine leadership alignment discussions on leader behaviors
- NSC topic on leader behaviors in daily station meeting
- targeted observations on NSC behaviors
- use of Power Up to recognize good NSC behaviors
- posters and signage
- leadership assessments and performance reviews
- leadership selection criteria
- periodic communications to reinforce good behaviors or identify improvement opportunities

b. Conclusion

The licensee has implemented a method to reinforce positive NSC leadership behavior and monitor for effectiveness in the NSCMP. Based on a review of the implementing charter for the program, the most recent NSCMP minutes, and interviews with licensee management, the NRC concludes that the licensee has met the requirements as stated in the CO, Section V, Item 7. This item is considered closed.

2. Review of Confirmatory Order Section V Item 10.c (Inspection Procedure 40100)

b. Inspection Scope

The inspectors reviewed the licensee's actions regarding CO Section V, Item 10.c, which required the licensee to evaluate the results of the independent third party nuclear safety culture assessment, and enter any identified deficiencies into the CAP to track to completion.

The independent third party nuclear safety culture assessment was conducted in April, 2017. The survey was completed by Utilities Service Alliance, an organization independent of the licensee. The survey met the guidance provided in NEI 09-07, "Fostering a Strong Nuclear Safety Culture," and the assessment results were based on a pre-assessment survey of CFFF personnel and a week of direct interviews with selected CFFF personnel. The results of the survey were reviewed and a gap analysis was performed by the NSCMP. The areas identified in the gap analysis were entered in the CAP for tracking to completion. The inspectors reviewed the NSCMP meeting minutes and CAP entries to verify that any deficiencies were entered in the CAP and are being tracked under CAPAL 100472001.

The inspectors reviewed the actions associated with CAPAL 100472001 and noted that the CAPAL covers areas such as generation of the NSCMP, enhancement of the Employee Concerns Program (ECP), NSC training for leaders and line personnel, and NSC survey gap closure items. The inspectors interviewed the ECP manager and noted that this position is now a full time on-site position and that a healthy number of interactions were occurring within the ECP. In addition, the inspectors noted that numerous initiatives are underway to increase employee awareness of the ECP.

b. Conclusion

The licensee completed an independent nuclear safety culture survey and any identified deficiencies were entered into the CAP to track to completion. Based on a review of the NSC survey, NSCMP minutes, and interviews with licensee management, the NRC concludes that the licensee has met the requirements as stated in the CO, Section V, Item 10.c. This item is considered closed.

3. Closure of Notice of Violations

- a. Violation 70-1151/2017-004-01, "Failure to adequately design IROFS for system operation," resulted the cyclone separator and the incinerator demister pads (IROFS VENT-CON-122 and VENT-INCIN-101 respectively) not being available to perform their intended function when needed, to comply with the performance requirements of 10 CFR 70.61. This was a violation 10 CFR 70.62(d).

The inspectors reviewed the immediate and long term corrective actions associated with this violation including, but not limited to:

- The backup S-2A/2B ventilation system fan FN-962 was removed from service and replaced with a smaller unit to prevent operation outside of the established control limits for the ventilation system.
- The variable frequency drive for primary S-2A/2B ventilation system fan FN-961 was programmed to limit speed to 85% or less.
- The outlet knife gate damper for FN-961 was locked into place through the body and gate.
- The S-2A/2B system dampers were locked into the proper open positions to establish configuration control of these components.
- The operating procedure was revised to require monitoring of the differential pressure (dP) across the cyclone separators and action to be taken if the dP is more than 2" between readings.

For the second operational issue with the demister pad condition, the inspectors noted that the incinerator system was shut down and remains shut down pending completion of an engineering review and implementation of design and management measure changes. In addition, as part of the S-1030 scrubber condition corrective actions, the configuration management procedure was revised in 2016 to assure appropriate reviews of the criticality safety basis are performed prior to making plant configuration changes. The inspectors reviewed the changes to COP-814325, Scrubbers 2A & 2B, Rev. 27 for changes made to the operating procedure. In addition, the inspectors reviewed, "Interim Test Report-Scrubber 2A-2B Parametric Test," dated October 21, 2017, which detailed the airflow test to determine what parameters result in water carryover from the cyclone separator. Additionally, the inspectors reviewed the proposed long term corrective actions associated with the S-2A/2B and the incinerator system, including conducting an extent of condition, revision of the incinerator ventilation system CSE, and proposed design installation changes.

For the S-2A/2B scrubber system, full compliance with NRC regulations was achieved on October 10, 2017. For the incinerator system, full compliance was achieved on September 12, 2017, when the incinerator system was shut down for design enhancements and physical modifications. NOV 70-1151/2017-004-01 is closed.

- b. Violation 70-1151/2017-004-02, "Failure to maintain the structural integrity of the S2A/B ventilation ductwork," resulted in established management measures failing to ensure IROFS VENT-CON-107-2SA/B was available and reliable to perform its intended function when needed in order to comply with the performance requirements of 10 CFR 70.61. This was a violation 10 CFR 70.62(d).

The inspectors reviewed the immediate and long term corrective actions associated with this violation. The inspectors noted that the degraded ductwork was replaced with stainless steel ductwork on August 30, 2017, and other S-2A/2B system ductwork was inspected, repaired, or replaced as necessary. The inspectors noted that the annual IROFS inspection procedure will be revised to ensure that the inspection is capable to detect corrosion and presence of moderator. In addition, the licensee is conducting an extent of condition review to review other ductwork inspection procedures to assure they are accurately and effectively validating the effectiveness of ductwork inspection IROFS.

For the S-2A/2B scrubber system, full compliance with NRC regulations was achieved on August 16, 2017, when the degraded ductwork was repaired. NOV 70-1151/2017-004-02 is closed.

C. Exit Meeting

The inspection scope and results were presented to members of the licensee's staff at various meetings throughout the inspection period and were summarized on March 1, 2018, to B. Phillips and staff. No dissenting comments were received from the licensee. Proprietary information was discussed but not included in the report.

SUPPLEMENTAL INFORMATION

1. KEY POINTS OF CONTACT

<u>Name</u>	<u>Title</u>
M. Annacone	VP, Columbia Fuel Operation and Manager, Columbia Plant
G. Byrd	Licensing Engineer
J. Howell	Environmental, Health and Safety (EH&S) Manager
C. Miller	NCS manager
N. Parr	Licensing Manager
B. Thilking	Senior NCS Engineer
J. Vining	Senior NCS Engineer

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

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

CO Section V, Item 7	Within six months of issuance of the CO, Westinghouse shall develop a method to reinforce positive NSC leadership behavior and monitor for effectiveness in the NSC monitoring panel. Westinghouse shall implement such method for three years, after which it may evaluate the need to continue this item.
CO Section V, Item 10.c	Westinghouse shall evaluate the results of the independent third party nuclear safety culture assessment, and any identified deficiencies will be entered into the CAP to track to completion.
NOV 70-1151/2017-004-01	Failure to adequately design IROFS for system operation.
NOV 70-1151/2017-004-02	Failure to maintain the structural integrity of the S2A/B ventilation ductwork.

3. INSPECTION PROCEDURES USED

IP 35741, QA Program (Audits)
IP 88005, Management Organization and Controls
IP 88015, Nuclear Criticality Safety
IP 88020, Operational Safety
IP 88025, Maintenance and Surveillance of Safety Controls
IP 88070, Plant Modifications
IP 88071, Configuration Management Program
IP 88102, Surveillance Observations

IP 88103, Maintenance Observations
 IP 88110, Quality Assurance: Problem Identification, Resolution and Corrective Action
 IP 40100, Independent Safety Culture Assessment Follow-up

4. **DOCUMENTS REVIEWED**

Records:

CN-CRI-06-002, Determination of Single Parameter Limits for Homogeneous UO₂ Systems, Rev. 0
 CN-CRI-07-32, S-1030 Scrubber Ductwork, Rev. 1
 CN-CRI-06-13, Heterogeneous Oil Moderated UO₂ Single Parameter Limits, Rev. 0
 CSE-1-AB, Criticality Safety Evaluation (CSE) for the S-1008 Scrubber Filter Housing, Rev. 1
 CSE-1-H, Criticality Safety Evaluation (CSE) for the S-958 Solvent Extraction Scrubber, Rev. 7
 CSE-1-P, Criticality Safety Evaluation (CSE) for Fluoride Stripping Column, Rev. 2
 CSE-15-C, Criticality Safety Evaluation (CSE) for Waterglass Liquid Waste Effluent Treatment System, Rev. 6
 CSE-19-A, Criticality Safety Evaluation for Oxidation Ovens and Hoods, Rev. 3

Procedures:

COP-801016, Inspection of Building Ventilation Ducts, Rev. 13
 COP-811601, On Line Gamma Activity Monitors and Quarantine Tanks System Operation, Rev. 45
 COP-813301, UF6 Bay Gamma Activity Monitors on Conversion Wastewater to Waterglass Operation, Rev. 2
 COP-813303, UF6 Bay pH Analyzers on Conversion Wastewater to Waterglass Operation, Rev. 2
 COP-815021, S-1030 Inspection and Clean Out, Rev. 18
 MCP-202198, Conversion Rosemount pH Analyzer AIT-S-1160A1 Calibration, Rev. 3
 ROP-05-062, Radiation Survey of Ventilation Equipment, Rev. 19

Other Documents:

Work Order (WO) 740394, 26 Week OM - URRS S-958 Scrubber Ventilation Ductwork Inspection, dated September 10, 2016
 WO 773831, 26 Week OM - URRS S-958 Scrubber Ventilation Ductwork Inspection, dated August 30, 2017
 WO 768936, Quarterly OM - Gamma Surveys of Ventilation Systems, dated June 13, 2017
 WO 759002, 6 Month OM – Inspection of City Water Line Air Gap, dated April 19, 2017
 WO 787438, Monthly OM – Sample of S-958 Scrubber Liquid, dated December 11, 2017
 WO 789970, Monthly OM – Sample of S-958 Scrubber Liquid, dated January 9, 2018
 WO 793566, Monthly OM – HP Ventilation Survey, dated February 15, 2018
 WO 730538, Annual PM – Water Backflow Prevention Verification, dated May 26, 2016
 RAF-104-2, CSE-1-H review by by EHSL, CCF 16563
 703F01PI01 sheet 1 of 3, Solvent Extraction Scrubber Drawing, Rev. 12
 703F01PI01 sheet 2 of 3, Solvent Extraction Ventilation Filter Drawing, Rev. 12
 703F01PI01 sheet 3 of 3, Solvent Extraction Scrubber Drawing, Rev. 5
 306F01PI01 sheet 1 of 4, Ammonia Fume Scrubber Drawing, Rev. 17

CAPALs

100472657

100473683

100473685

100475658

IR-2018-6620

IR-2018-6623

IR-2018-6632

IR-2018-6634

IR-2018-6671

IR-2018-6654