



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200
ATLANTA, GEORGIA 30303-1200

July 6, 2020

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 INTEGRATED INSPECTION REPORT NUMBER 70-1151/2020-002

Dear Mr. Annacone:

This letter refers to a remote inspection conducted between May 11 and May 14, 2020, at the Westinghouse Columbia Fuel Fabrication Facility (CFFF) in Hopkins, SC. During this period, the NRC implemented alternative ways to complete the core inspection program for your site in response to the public health emergency declared by the Secretary of Health and Human Services on January 31, 2020, and the National Emergency declared by the President of the United States on March 13, 2020, regarding the public health risks of the novel coronavirus (COVID-19) disease. On March 19, 2020, the NRC transitioned into a mandatory telework posture for all staff (including resident inspectors) consistent with social distancing and travel recommendations issued to federal agencies. Consequently, the NRC Region II staff continues to evaluate how to best conduct inspections while balancing our determinations of reasonable assurance of adequate protection and ensuring the health and safety of inspectors and the public at large.

The enclosed report presents the results of the inspections, which were conducted through a combination of remote reviews and on-site observations. The inspectors reviewed activities as they relate to public health and safety, the common defense and security, and compliance with the Commission's rules and regulations, as well as the conditions of your license. The inspections covered the areas of radiological controls. Within these areas, regional and resident inspectors reviewed procedures and representative records remotely and conducted telephonic interviews with site personnel. The results of this inspection were discussed with members of your staff at an exit meeting held on May 14, 2020.

Based on the results of this inspection, the NRC has determined that no violations of more than minor significance were identified.

The NRC will continue evaluating the guidelines and recommendations from federal and state authorities, along with the conditions of your facility, to determine when to resume inspection activities as normal. In the interim, the NRC plans to continue to conduct a combination of remote and onsite inspections as appropriate. The NRC will also maintain frequent communications with your staff to discuss regulatory compliance matters and gather information to inform the decisions about future inspections.

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.

A copy of this letter and enclosure will also be available 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,

Suzanne K. Dennis, Chief
Projects Branch 2
Division of Fuel Facility Inspection

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

Enclosure:
NRC Inspection Report 70-1151/2020-002
w/Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

INSPECTION REPORT

Docket No.: 70-1151

License No.: SNM-1107

Report No.: 70-1151/2020-002

Enterprise Identifier: I-2020-002-0049

Licensee: Westinghouse Electric Company

Facility: Columbia Fuel Fabrication Facility

Location: Hopkins, SC 29061

Dates: May 11 through May 14, 2020

Inspectors: T. Sippel, Fuel Facility Project Inspector, (Paragraph A.1)
P. Startz, Fuel Facility Inspector, (Paragraph A.2)
G. Goff, Fuel Facility Inspector, (Paragraph A.3)

Approved by: S. Dennis, Acting Chief
Projects Branch 2
Division of Fuel Facility Inspection

EXECUTIVE SUMMARY

Westinghouse Electric Company
Columbia Fuel Fabrication Facility
Nuclear Regulatory Commission Integrated Inspection Report 70-1151/2020-002
May 11 through May 14, 2020

A remote in-office inspection was conducted by Nuclear Regulatory Commission (NRC) regional inspectors in the area of radiological controls. The inspectors performed a selective examination of license activities that were accomplished by interviews and discussions with licensee personnel, and a review of facility records. The on-site portion of this inspection will be conducted the week of September 14, 2020 and will be documented in inspection report 70-1151/2020-003. No violations of more than minor significance were identified during the inspection.

Radiological Controls

- In the area of Effluent Control and Environmental Protection, no violations of more than minor significance were identified. (Paragraph A.1)
- In the area of Radioactive Waste Processing, Handling, Storage, and Transportation, no violations of more than minor significance were identified. (Paragraph A.2)
- In the area of Radiation Protection, no violations of more than minor significance were identified. (Paragraph A.3)

Attachment:

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

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.

A. Radiological Controls

1. Effluent Control and Environmental Protection (IP 88045)

a. Inspection Scope

The inspectors reviewed portions of the licensee's effluent control and environmental protection program as part of a remote inspection to verify that the program was in compliance with Title 10 of the Code of Federal Regulations (10 CFR) Parts 20 and 70 and the license application. The inspectors reviewed environmental protection procedures listed in the Attachment that had been revised since the last inspection to verify that no safety significant changes were made without prior evaluation and approval.

The inspectors reviewed the previous two semi-annual effluent reports from 2019 to verify that the report contained the information required by 10 CFR 70.59. The inspectors interviewed licensee staff and reviewed the public dose assessment to verify that the total dose to the individual likely to receive the highest dose from the licensed operation did not exceed the regulatory limits in 2019. The inspectors reviewed calculations, source data, and calibration records of instruments used to monitor effluents to verify the accuracy of licensee source data and calculations.

The inspectors interviewed licensee staff and reviewed the licensee's list of potentially contaminated areas (Westinghouse CFFF Spill Tracking Sheet) to verify that potential new areas of contamination that have been identified in the surrounding environment or subsurface of the facility were being tracked in accordance with 10 CFR 70.25(g)(1). The inspectors interviewed licensee staff concerning remediation activities, process monitoring, and controls on radioactive contamination to verify that the licensee, to the extent practical, conducted operations to minimize the introduction of residual radioactivity into the local environment surrounding the facility, including subsurface soils and groundwater, in accordance with 10 CFR 20.1406(c).

The inspectors reviewed recent audits of external laboratories and vendors who supply environmental services to verify that the reviews were in accordance with section 10.1.8.2 of the license application. The inspectors reviewed corrective action program entries documenting the audit findings to verify that the issues identified in the audits were entered into the licensee corrective action program in accordance with CA-007, Corrective and Preventive Action. The inspectors reviewed other recent corrective action program entries related to the environmental program to determine whether the licensee was identifying environmental program issues, entering them into the corrective action program as required by CA-007. The records reviewed are listed in the attachment.

The inspectors also reviewed procedures and laboratory analyses of environmental samples to verify that the licensee was performing environmental monitoring in accordance with section 10.1.4 of the license application. Specifically, the inspectors reviewed these records to verify that the samples were being taken at the frequencies required by Figure 10.1 of the license application.

b. Conclusion

No violations of more than minor significance were identified.

2. Radioactive Waste Processing, Handling, Storage, and Transportation (Inspection Procedure 88035)

a. Inspection Scope

The inspectors reviewed portions of the radioactive waste processing, handling, storage and transportation programs as part of a remote inspection to verify that the program was in compliance with 10 CFR 20, 10 CFR 61, and the license application. The inspectors evaluated whether the licensee had established, maintained, and implemented procedures in accordance with license requirements and quality assurance programs in order to verify compliance with the license requirements as applicable to: low-level radioactive waste form, classification, stabilization, packages, labeling, storage areas, documentation of shipping preparations, and final shipping manifesting.

The inspectors interviewed licensee personnel and reviewed the licensee's procedures for labeling waste shipments and tracking radioactive waste in order to verify procedures were clearly written and delineated responsibilities were in accordance with Section 10.1.3, "Solid Waste Disposal" of the license application. Inspectors also evaluated whether procedures specified actions to be taken if radiological waste shipments did not reach the intended destination in the specified time. The inspectors reviewed waste storage logs and interviewed licensee personnel to verify that the placement, inspection, and repackaging of radioactive waste containers were performed in accordance with their procedures. The inspectors reviewed radioactive waste shipment records and a sample of photographs of waste packages loaded onto tractor trailers to verify that the licensee was labeling and tracking the waste in accordance with licensee procedures. The inspectors reviewed the quality assurance program and a licensee audit of radioactive waste management practices verify that the licensee was performing the required audits per 10 CFR 20, Appendix G. The findings from Audit EHS-AUDIT-19-8 were entered into the licensee's corrective action program for resolution as required by Section 3, "Audits and Assessments Program Implementation" of the license application.

The inspectors reviewed the licensee's program for classifying low-level radioactive waste and mixed waste in order to verify compliance with 10 CFR 61.55 and 10 CFR 20 Appendix G. Specifically, the inspectors reviewed the licensee's radiological waste handling procedures and records for significant operational changes made during the previous year for properly classifying waste containing perchloroethylene. The inspectors reviewed the licensee's waste packaging program for ensuring that waste was properly packaged and to verify that the licensee's program requirements for waste form implemented the requirements of 10 CFR 61.56 and 10 CFR 20, Appendix G. The inspectors interviewed operations personnel who are familiar with the UF6 waste storage and processing areas, the waste collection building, and the sea-land container storage yard.

The interviews included discussions of procedure compliance and programmatic functionality in the areas of correct labeling of radiological packages, periodic inspections of packages, movement of packages, inventory activities and associated logs, waste movements to/from various storage locations, radiological postings where packages are stored, and discussions of operational challenges. The inspectors reviewed samples of inventory logs and licensee inspection records of waste containers stored in sea-land shipping containers in the back of the facility to verify compliance with licensee procedures.

The inspectors reviewed procedures and interviewed operators and supervisors within the Chemical Area Manufacturing and Processing System to evaluate compliance with procedure, COP-836033, "Combustible Trash Collection Scale System." The inspectors evaluated personnel knowledge and procedure compliance regarding the segregation, control, and evaluation of various waste categories including wet trash, dry trash, metal scrap, and other types of radiological wastes. Focus areas included: the required labeling and postings for containers and container storage areas, calibration of collection scales and uranium assay equipment, and the management and transfer of waste containers around the facility. Areas reviewed included radioactive material storage areas in the UF6 Bay, waste collection building, and the sea-land container storage yard. The storage areas were reported to have all the required postings to ensure that the permitted materials were being stored in the correct areas and that the packages were safely stored in accordance with nuclear criticality safety requirements. The waste storage containers were reported to be properly labeled to reflect their contents and were in good physical condition. The inspectors interviewed waste control specialists who reported that they regularly observed production personnel placing waste into the correct disposal containers. Additionally, waste control specialists confirmed that daily checks and calibration of the dry and wet trash collection scales were being performed as required by procedure, COP-836033, "Combustible Trash Collection Scale System," (IROFS Trash-101, 102, 103, and 106; and IROFS Wet-104, 105, 106, 107, and 108).

The inspectors reviewed procedures and performed three interviews with operations and engineering staff about combustible trash collection and processing combustible radioactive trash through the incinerator to recover recycled uranium residues. The procedures and interviews were performed to evaluate compliance with COP-830210, "Incinerator Operation," and license conditions. These operations included items relied on for safety (IROFS), INCIN-105, 106, 108, 109, 128, and 129. The procedures were clearly written and included delineated responsibilities related to radioactive waste management practices and responsibilities. The inspectors verified that operators who were interviewed were familiar with their responsibilities as they performed their tasks in accordance with the on-site procedures.

The inspectors reviewed training records for radiological waste operations personnel to verify that their training addressed the various aspects radiological waste handling, packaging, storage, and preparation for shipment, were in compliance with Section 3.4.2, "Training and Qualification Structure" of the license application. The inspectors reviewed training records for select radiological waste and URRS specialists to verify that they were qualified and were maintaining training requirements.

b. Conclusion

No violations of more than minor significance were identified.

3. Radiation Protection (Inspection Procedure 88030, Appendix A)

a. Inspection Scope

The inspectors reviewed the radiation protection program as part of a remote inspection to verify that the licensee's performance in administering the program, monitoring, and implementing controls was in accordance with the requirements of 10 CFR 20 and the license requirements.

The inspectors reviewed the Annual Radiation Protection Program Review for 2018, quarterly As Low As Reasonably Achievable (ALARA) reports for 2019, recent ALARA committee meeting minutes, and interviewed the radiation protection (RP) manager and radiation safety officer to verify that of the licensee tracked doses to personnel, dose trends, and ALARA goals and metrics in accordance with license application requirements. The inspectors also performed the above reviews to verify that the RP program was documented; reviewed, at least annually, for content; and implemented in accordance with 10 CFR 20.1101(a) and 20.1101(c). The inspectors reviewed ALARA documents to also verify that the dose limits were routinely monitored, that doses were less than regulatory limits established in 10 CFR 20.1201, and that the goals and requirements established in ALARA program procedures were being implemented.

The inspectors interviewed licensee management to verify that the radiation protection program's function and responsibilities remained independent from operations and other business lines. The inspectors reviewed the latest organizational chart and noted there were no changes in the RP program management since the last inspection.

The inspectors reviewed procedures listed in the attachment, for any safety-significant changes to verify all changes complied with the license application. The inspectors also reviewed procedures to verify parameters, such as limits and set points specified in the procedures, were consistent with the license application. The inspectors also reviewed procedures to verify that changes were made in accordance with the licensee's Configuration Management program described in the license application. The inspectors interviewed the RP manager and radiation safety officer to verify that changes were reviewed and approved by the appropriate management.

The inspectors reviewed corrective action items to determine whether the licensee was identifying radiation protection issues at a conservative threshold and had entered them into the corrective action program as required by the license application. The inspectors reviewed entries written in response to surveys detecting high levels of contamination to verify that the licensee was taking appropriate action (including, posting the area, restricting access, cleaning the area, and remedying the source of the contamination) as required by procedures.

The inspectors reviewed training material and interviewed RP technicians to verify that RP workers received training at the frequency specified in the license application and as required by 10 CFR 19.12. Specifically, the inspectors reviewed training related to the handling of radioactive materials, response to contamination, and use of survey instruments. The inspectors also reviewed radiation protection training documents to verify that the training frequency and content was in accordance with 10 CFR 20, 10 CFR Part 70 Subpart H and the license application. The inspectors interviewed RP technicians to determine if workers understood radiation protection hazards and procedural changes related to their jobs and if they had any hesitancy in discussing radiation safety concerns with management.

The inspectors reviewed the procedure for radiological work permits (see the attachment) to verify compliance with the licensee application. The inspectors reviewed completed RWPs to verify that all required information was included in the paperwork as per the licensee application.

The inspectors reviewed recent calibration records of survey meters to verify that the licensee had a system to identify instruments and equipment used for quantitative radiation measurements and when they are due for periodic calibration or functional testing as per 10 CFR 20.1501(c). The inspectors reviewed licensee audits of offsite vendors providing calibration services to verify that the licensee was ensuring that the vendors were performing calibrations to NIST traceable standards.

The inspectors reviewed survey records to verify that the licensee performed scheduled radiation and contamination surveys in accordance with procedures to meet the requirements of 10 CFR 20.1501(a) and (b). The inspectors reviewed documentation pertaining to inventory and leak test of sealed sources to verify that the licensee was leak testing the sealed sources twice a year and that no sealed sources were leaking as required the license application.

Inspectors reviewed the Annual Radiation Protection Program Review for 2018 to verify that the maximum Total Effective Dose Equivalent (TEDE) results for 2018 was less than the regulatory limit of 5 rem per year. Similarly, the inspectors reviewed this document to verify that the licensee limited the soluble uranium intake to less than the 10 CFR 20.1201(e) chemical toxicity limit of 10 mg in a week. The inspectors reviewed dose records to verify that these records were being maintained in accordance with 10 CFR 20.2106.

b. Conclusion

No violations of more than minor significance were identified.

B. 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 May 14, 2020, to M. Annacone and staff. Proprietary information was discussed but not included in the report.

SUPPLEMENTAL INFORMATION

1. KEY POINTS OF CONTACT

<u>Name</u>	<u>Title</u>
E. Cauley	Waste Management
J. Jordan	Process Engineer, URRS
N. Parr	Environmental Manager
A. Pearson	RP Manager
D. Rayner	Principle Environmental Engineer
M. Reynolds	Chemical Operator, URRS
R. Ruiz	URRS Team Manager
A. Spalding	Licensing Manager
D. Wagoner	Sr. Radiation Protection Engineer

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

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

None

3. INSPECTION PROCEDURES (IP) USED

88030, Radiation Protection, Appendix A
88035, Radioactive Waste Processing, Handling, Storage, and Transportation
88045, Effluent Control and Environmental Protection

4. DOCUMENTS REVIEWED

Records:

CN-MC-19-005, CFFF Soil Baseline Activity Statistical Analysis, Rev. 0
EHS-AUDIT-19-12, Regulatory Component Audit of Unitech Services Group, dated September 4, 2019
EHS-AUDIT-19-15, Supplier Audit of General Engineering Laboratories, LLC, dated October 29, 2019
EHS-AUDIT-19-22, Westinghouse Report of Carolina Technical Services Inc. (CSTI) Supplier Audit, dated April 28, 2020
EHS-OCC-20-3, Organizational Change Control Review of URRS Operations Manager, dated March 6, 2020
LTR-EHS-19-84, Annual Radiation Protection Program Review, Calendar Year 2018, dated December 2, 2019
LTR-RAC-19-67, NRC Semi-Annual Discharge Report January - June 2019, dated August 26, 2019
LTR-RAC-20-21, NRC Semi-Annual Discharge Report July - December 2019, dated February 25, 2020
LTR-RAC-20-32, Westinghouse Fuel Fabrication Facility East Lagoon Analytical Data Comparison Consent Agreement CA-19-02-HW File #51377, dated March 23, 2020
LTR-RAC-20-47, April 2020 CA Progress Report, dated May 12, 2020
ROF-01-026-1, Tennelec Measurement Control and Calibration Form, Rev. 3, Various Completion Dates
ROF-01-041-1, iMatic Measurement Control Form, Rev. 1, Various Completion Dates
SEPS-009-16, Stack Sample Locations and Parameters, Rev. 3

Westinghouse CFFF Spill Tracking Sheet, Accessed May 11, 2020
Annual Radiation Protection Program Review for 2018
Calibration Certificates & Records for Various Portable Survey Instruments, 03-04/2020
EHS-AUDIT-18-11, Regulatory Component Audit for the Radiation Safety Program,
10/25/2018
EHS-AUDIT-20-3, Formal Compliance Audit Report, 04/16/2020
LTR-EHS-19-58 CY2019 1st Quarter ALARA Report, 07/18/2019
LTR-EHS-19-74 CY2019 2nd Quarter ALARA Report, 10/07/2019
LTR-EHS-19-76 Annual ALARA Committee Meeting Minutes, 10/14/2019
LTR-EHS-19-84, Annual Radiation Protection Program Review, 12/02/2019
LTR-EHS-19-85, 2018 Annual Radiation Protection Program Review Distribution,
12/10/2019
LTR-EHS-20-07 CY 2019 3rd Quarter ALARA Report, 01/09/2020
LTR-EHS-20-36 CY 2019 4th Quarter ALARA Report, 04/02/2020
LTR-EHS-20-37, 2019 Occupational Radiation Exposure Report–Employee,
04/10/2020
LTR-EHS-20-41, NRC Form 5 Occupational Radiation Exposure Reports–2019,
04/07/2020
LTR-EHS-20-42 Annual ALARA Committee Meeting Minutes, 04/07/2020
RAF-125-14, Environmental Health and Safety Operations HP Technician Radiation
Protection Training Checklist, Rev. 6, 11/28/2019, 03/20/2019, 01/15/2020,
04/15/2020, & 04/17/2020
ROF-01-006-1, Daily Frisking Instrument Checks, 03/09/2020 and 04/06/2020
ROF-01-032-2, Hand & Foot Operability Check Log, 03/23/2020 and 04/13/2020
ROF-01-032-6, Whole Body Monitor Operability Check Log, 03-04/2020
ROF-05-014-9, Weekly Contamination Survey of Step-Off Pads and Change Rooms,
03/12/2020
ROF-05-014-10, Bi-Weekly Contamination Survey of Operating Equipment Conversion
Area, 03/11/2020
ROF-05-014-11, Bi-Weekly Contamination Survey of Operating Equipment Pellet Area,
03/11/2020
ROF-05-014-12, Bi-Weekly Contamination Survey of Operation Equipment URRS UF6
Bay Area, 03/11/2020
ROF-05-014-13, Bi-Weekly Contamination Survey of Operating Equipment Incinerator,
Solvent Extraction, & Dissolver Areas, 03/03/2020
ROF-05-014-14, Bi-Weekly Contamination Survey of Operating Equipment IFBA Area,
03/11/2020
ROF-05-014-15, Bi-Weekly Contamination Survey of Operating Equipment ERBIA Area,
03/11/2020
ROF-05-014-16, Miscellaneous Contamination Survey, 03/10/2020
ROF-05-014-17, Daily Contamination Survey of Step-Off Pads, Rev. 2, 03/09/2020
ROF-05-014-18, Weekly Contamination Survey of Change Rooms, Rev. 3, 03/13/2020
ROF-05-046-1, Inventory and Leak Test of Sealed Sources, Rev. 1, 01/28/2020
RWP 2020-01, Change Out Sources in Rod Gamma Scanners, 03/31/2020
RWP 2020-02, Cleanout Transition Section of S-1030 Scrubber, 03/12/2020
Form 540, Shipping Manifest for UN3327, Hopkins, SC to Clive, UT, March 13, 2020
Form 540, Shipping Manifest for UN2912, Hopkins, SC to Andrews, TX, April 7, 2020
Form 540, Shipping Manifest for UN2912, Hopkins, SC to Clive, UT, April 14, 2020
Image 0476, six over-pack shipping containers loaded onto tractor trailer, with shipping
decals in place.
Drawing 610F02FS01, Waste Recovery Lagoons & Sumps, Rev. 12
Chemicals 2018, URRS Operational Flow Chart, February 26, 2020

CAO-2020-3040, (CF-85-002, "Radioactive Material Vehicle Checklist", Rev. 17), completed form set for shipment April 6, 2020

Work Order 869079, OM85049, 52 Week Sea-land container inspection, SEA-LAND # C-42, this sea-land was inspected and also taken out of service, February 21, 2020

Work Order 870943, OM85049, 52 Week Sea-land container inspection, SEA-LAND # C-60, January 8, 2020

Work Order 873390, OM85049, 52 Week Sea-land container inspection, SEA-LAND # C-53, January 28, 2020

Work Order 871947, PM20001, Weekly Discharge To River – 8 Week PM, Overall visual inspection, completed March 11, 2020

Work Order 878420, PM20001, Weekly Discharge To River – 8 Week PM, Overall visual inspection, completed April 30, 2020

SOLX Solvent Replacement, overview, perchloroethylene (PERC) is being eliminated from the site and will be replaced with dodecane in the SOLX process.

OP-URRS-113C (1) Training Course, Training Records, Columbia Site, OP-URRS-112C – SOLX Solvent Replacement, report run May 14, 2020, listed 13 operations personnel that were trained to operate new solvent extraction system after significant reconfiguration.

OP-URRS-112C Training Course, Perc Project Training Rosters, SOLX PERC REPLACEMENT, thirteen operations personnel on three shifts signed training document April 16, 2020

Procedures:

CA-007, Corrective and Preventive Action, Rev. 45

PSEDoc-0006580, Design Criteria for Sampling System for Monitoring Release of Airborne Radioactive Material from Stack and Ducts at CFFF, Rev. 0

RA-137, Decommissioning Recordkeeping, Rev. 0

RA-407, EH&S Environmental Engineering Actions, Rev. 8

RA-407, EH&S Environmental Engineering Actions, Rev. 9

RA-413, NRC Semi-Annual Effluent Discharge Report, Rev. 3

RA-433, Environmental Remediation, Rev. 1

RA-434, Environmental Data Management, Rev. 0

RA-435, Conceptual Site Model Development, Rev. 0

ROP-06-002, Roof Effluent Air Sampling and Counting, Rev. 28

ROP-06-003, Ambient Environmental Air Monitoring for Radioactivity, Rev. 14

ROP-06-006, Collection of Routine NRC-Required Environmental Samples, Rev. 30

ROP-06-006, Collection of Routine NRC-Required Environmental Samples, Rev. 31

ROP-06-007, Groundwater Well Sampling, Rev. 27

ROP-06-007, Groundwater Well Sampling, Rev. 28

ROP-06-009, Quarterly Columbia Plant Measured Discards Report, Rev. 6

ROP-06-010, Quarterly Storm Water Monitoring and Visual Inspection, Rev. 5

RA-106, Regulatory Component Audits at the Columbia Fuel Fabrication Facility, Rev. 39

RA-107, Corrective Action Process for Regulatory Events, Rev. 27

RA-108, Safety Significant Controls, Rev. 40

RA-108-9, Ventilation & Scrubbing Safety Significant Controls, Rev. 94

RA-108-10, Hoods and Containment, Rev. 15

RA-110, Identification and Reporting of Substantial Safety Hazards (10CFR21), Rev. 7

RA-120, EHS Regulatory Policies, Rev. 21

RA-120-16, Regulatory Policy – ALARA Committee, Rev. 2

RA-120-23, Open Wound Policy, Rev. 2

RA-120-24, Decontamination of Potentially Contaminated Injured Personnel, Rev. 0
RA-121, Redbook Internal Reporting System, Rev. 21
RA-125, Indoctrination, Training, and Qualification of EH&S Personnel, Rev. 25
RA-200, Radiological Protective Clothing, Rev. 38
RA-201, Contamination Control, Rev. 17
RA-203, General HP Rules and Recommendation, Rev. 32, dated March 1, 2018
RA-206, Personnel Dosimetry Program, Rev. 16
RA-207, Radiation Work Permit, Rev. 23
RA-208, Chemical Area Hazard Warning System, Rev. 9
RA-208-1, Chemical Area Hazard Warning System Information Panel Messages, Rev. 5
RA-213, Radiation Signs, Rev. 9
RA-217, Personnel Monitoring Requirements, Rev. 18
RA-219-1, ALARA Goals, Rev. 15 (CY 2019)
RA-224, Purchase/Disposition of Sealed Radioactive Sources, Rev. 6
RA-225, Control of Radiation Dose and Chemical Exposure to the Embryo/Fetus, Rev. 2
RA-226, Performing Prospective Analysis, Rev. 6
RA-229, Occupational Exposure History for Travel, Rev. 1
RAF-125-6, EH&S Radiation Protection Engineer/Analyst Training Checklist, Rev. 5
RAF-125-14, Environment, Health and Safety Operations Hp Technician Radiation Protection Training Checklist, Rev. 6
RAF-207-1, A Copy of this RWP Must Be Posted at the Work Site, Rev. 18
ROP-01-032, Source Checks for Radiation Survey/Monitoring Instruments, Rev. 22
ROP-01-062, Operation and Operability Checks of the RadEye SX Portable Survey Instrument with HP380A Alpha Probe, Rev. 4
ROP-01-038, Handling of Measurement Standards and Sealed Sources, Rev. 4
ROP-03-001, Personnel Dosimetry System, Rev. 22
ROP-03-002, Personnel Exposure System – Guide, Rev. 5
ROP-03-003, Collecting Dosimetry Badges, Rev. 0
ROP-05-001, Preparation, Analysis and Processing of In-Plant Air Samples, Rev. 20
ROP-05-002, Performing Smear Surveys, Rev. 15
ROP-002-01, Performing Smear Surveys Spreadsheet, Rev. 0
ROP-05-004, Determining Gross Alpha & Beta Activity of an Aqueous Sample, Rev. 19
ROP-05-014, Performing Contamination Surveys of the Westinghouse Facility, Rev. 33
ROP-05-046, Inventory and Leak Testing of Sealed Sources, Rev. 13
ROP-05-052, Radiation Survey for CF-252 Source Transfer, Rev. 8
ROP-05-060, Ventilation Velocity Checks, Rev. 14
ROP-05-062, Radiation Survey of Ventilation Equipment, Rev. 20
ROP-05-065, Personnel Contamination Event Response and Over Checks, Rev. 13
ROP-05-066, EH&S Operations Observations Program, Rev. 1
ROP-05-067, Radiation Surveys for Radiation Producing Machines – General Plant, Rev. 25
COP-830210, Incinerator Operation, Rev. 52
COP-830250, Qualification to Operate Assay Systems, Rev. 11
COP-831001, Handling, Processing, & Disposing LLRS, Rev. 61
COP-831006, Low Level Radioactive Scrap Low Pressure Compactor, Rev. 16
COP-831010, Shipping Low Level Radioactive Waste, Rev. 32
COP-831012, Operation of Assay 2 (Canberra Segmented Gamma Scanner), Rev. 23
COP-831017, Disposal of Dry Combustible Material, Rev. 0
COP-835510, Operation of Assay 3 (Canberra Q2 System), Rev. 26
COP-836028, Low Level Waste Solids Processing, Rev. 25
COP-836033, Combustible Trash Collection Scale System, Rev. 22
COP-841000, Low Level Radioactive Scrap Handling, Rev. 29

COP-813301, UF6 Bay Gamma Activity Monitors on Conversion Wastewater to Waterglass Operation, Rev. 2
RA-211, Low Level Radioactive Scrap, Rev. 13
TR-100, Shipment of Radioactive Materials General Guidance for Regulatory Compliance, Rev. 18

Incident Reports Written as a Result of the Inspection:

IR-2020-2870, Documented Comments/Items Identified by NRC during IP 88054 Inspection, Originated February 27, 2020
IR-2020-2879, Documented Comments/Items Identified by NRC during IP 88054 Inspection, Originated February 27, 2020
IR-2020-2793, Documented Comments/Items Identified by NRC during IP 88050 Inspection, Originated February 25, 2020

Incident Reports and Redbooks Reviewed:

IR-2019-494, IR-2019-16327, IR-2019-16336, IR-2020-1479, IR-2020-5252, IR-2019-14447, IR-2019-17707, IR-2019-17984, 2019-16336, 2019-11027, 2019-14113, 2019-14118, 2019-14119, 2019-14122, 2019-14125, 2019-14124, 2019-11027, 2019-14113, 2019-14118, 2019-14119, 2019-14122, 2019-14125, 2019-14124

Other Documents:

Announcement from Michael Annacone, dated February 3, 2020
Interim Remedial Investigation Data Summary Report, Consent Agreement #19-02-HW, dated February 2020
Re: Congaree River Analysis (Environmental Analysis) Work Order: 496096, dated December 4, 2019
Re: Congaree River Analysis (Environmental Analysis) Work Order: 506059, dated April 1, 2020
Screenshot of WestinghouseLive, MCP 202036, Tag # FT1116, taken May 8, 2020
EHS-AUDIT-19-8, completed October 31, 2019,
EHS-AUDIT-19-5, Drum Over-Pressurization, completed September 18, 2019
Image 0476, six over-pack shipping containers loaded onto tractor trailer, with shipping decals in place.