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Your ref: 70-1151/2018-002
Our ref: LTR-RAC-18-33

May 15, 2018

Subject: Reply to a Notice of Violation
Reference: Westinghouse Electric Company – Nuclear Regulatory Commission Integrated
Inspection Report Number 70-1151/2018-002 and Notice of Violation

Pursuant to the provisions of 10 CFR 2.201, Westinghouse Electric Company LLC (Westinghouse) herein provides a response to the NRC Integrated Inspection Report No. 70-1151/2018-002 and Notice of Violation, dated April 25, 2018. The inspection report addressed inspections of the Columbia Fuel Fabrication Facility (CFFF) conducted during the first quarter of calendar year 2018.

Appendix A provides the response to the Notice of Violation.

Should you have any questions or require additional information, please contact Nancy Parr of my Staff at (803) 647-3338.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Annacone", written over a horizontal line.

Mike Annacone, Vice President
Columbia Fuel Operations
Westinghouse Electric Company LLC
License SNM-1107 Docket 70-1151

cc: U. S. Nuclear Regulatory Commission
Regional Administrator, Region II
245 Peachtree Center Ave, NE Suite 1200
Atlanta, GA 30303-1257

APPENDIX A

WESTINGHOUSE RESPONSE TO NOTICE OF VIOLATION 70-1151/2018-002-01

- A. As stated by Title 10 of the Code of Federal Regulations (10 CFR) 70.61(a) requires, in part, that the license shall evaluate, in the integrated safety analysis performed in accordance with 10 CFR 70.62, its compliance with the performance requirements in paragraphs (b), (c), and (d) of this section.

10 CFR 70.61(d) states, in part, that the risk of nuclear criticality accidents must be limited by assuring that under normal and credible abnormal conditions, all nuclear processes are subcritical.

Contrary to this requirement, on or before March 15, 2018, the licensee failed to assure that under normal and credible abnormal conditions, all nuclear processes were subcritical. Specifically, the licensee failed to assure that, under the credible abnormal condition of a fissile-bearing solution leak from process vessels or piping in the solvent extraction or cylinder wash areas, movement and replacement activities for 55-gallon drums used for processing in the uranium recycle and recovery services (URRS) area would remain subcritical. This resulted in a failure to include a credible accident sequence in the licensee's integrated safety analysis.

A.1 ACKNOWLEDGEMENT OF THE VIOLATION

The violation is correct as stated in the Notice of Violation. A credible accident sequence for moving and replacing a 55-gallon drum in the URRS 706 oxidation hood operation and similar drum handling activities in the cylinder wash area were not included in the CFFF Integrated Safety Analysis (ISA).

A.2 REASON FOR THE VIOLATION

Based on the results of Westinghouse's apparent cause analysis, the reason for the violation was that there was incomplete consideration of the 55-gallon drum travel path with relation to adjacent processes involving uranium-containing solutions in the safety basis documentation. The process scope definition for the 706 hood operation and the wet combustible trash operation did not account for the manual movement of the 55-gallon drums used in those operations. Instead, the transport of movable non-favorable geometry containers was addressed broadly through training and procedures.

A.3 CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

Criticality Safety Evaluation (CSE) 4-E and associated fault tree for the 706 hood operation were revised and implemented on April 13, 2018 to include the transport accident sequence. The CSE documents the criticality safety basis for the equipment and operations within the 706 hood. The 55-gallon drum scenario was updated in the safety basis documentation to include drum handling during transport to and after removal from the 706 hood as a credible scenario. Compliance with the double contingency requirement is demonstrated in the revised CSE. Items Relied on for Safety (IROFS) were implemented for this accident sequence, and the associated Fault Tree Calculation Note, CN-SB-08-27, was revised to demonstrate compliance with the performance requirements of 10CFR70.61.

Wet combustible trash operations using a 55-gallon drum were shut down until the potential source of a solution leak from cylinder wash vessels and piping was eliminated and the uranium concentration of the residual liquid in the cylinder wash vessels was verified to be well below the minimum critical concentration limit. Cylinder wash operations will not resume until the safety basis documents (CSE 13-E and associated fault tree) are revised to add this drum movement accident sequence.

A.4 ACTIONS TO PREVENT RECURRENCE

The actions described above in Section A.3 and the completed Extent of Condition (EOC) following the event prevent recurrence of the violation. The EOC reviewed processes where Non-Favorable Geometry (NFG) containers are used in proximity to processes containing uranium solutions not under concentration control. Other than the wet combustible trash operation near cylinder wash, no potential additional credible accident sequences were identified.

Additional planned actions are being tracked to completion in the corrective action program, CAP 2018-7348. These include revision of CSE 13-E and associated fault tree for trash collection to address the specific accident sequence; revision of the inadvertent container CSE (CSE-99-G) to further address the issue of 55-gallon drums used for other processes being inadvertently taken into solution containing areas; and review of procedure RA-310, "Nuclear Criticality Safety Independent Technical Reviews" for effectiveness and robustness.

A.5 DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on March 16, 2018 when the processes were removed from service and the extent of condition was completed. Additional actions are being tracked to completion through the CAP.