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November 15, 2019

SUBJECT: WESTINGHOUSE REPORTED EVENT # EN54335 FOLLOW-UP REPORT

Westinghouse Electric Company LLC (Westinghouse) is providing the following information in accordance with 10CFR70.50. A copy of the initial notification report, Event Report #EN54335 pertaining to the Columbia Fuel Fabrication Facility (CFFF) can be found in Enclosure 1 and provides the applicable information required by 10CFR70.50(c)(1). The information required in accordance with 10CFR70.50(c)(2) is provided in Enclosure 2.

Please know that Westinghouse remains committed to compliance with all governing regulations and license requirements.

If you have any questions regarding this information, please contact me at (803) 647-2119.

Sincerely,

Gerard F. Couture
Licensing Manager, Acting
Westinghouse Columbia Fuel Fabrication Facility
Docket 70-1151 License SNM -1107

Enclosure 1: Original Event Report #EN54335 dated October 16, 2019.
Enclosure 2: 10CFR70.50(c)(2) Required Information

cc:
Ms. Marilyn Diaz
Mr. Tom Vukovinsky

ENCLOSURE 1

Original Event Report #EN54335 dated October 16, 2019.

Caller Identification and Facility Information

Gerard Couture, Licensing Manager. Call-Back Number (803) 647-2119 or (803) 727-2127. Westinghouse Electric Company LLC, Commercial Fuel Fabrication Facility, Columbia SC. Low enriched (5.0 wt. % U-235) fuel fabricator for commercial light water reactors. License: SNM-1107.

24 Hour Event Notification based on 10CFR70 Appendix A (b) (1). Any event or condition that results in the facility being in a state that was not analyzed, was improperly analyzed, or is different from that analyzed in the Integrated Safety Analysis, and which results in failure to meet the performance requirements of 10CFR70.61.

Description of the Event

As part of a review to revalidate the design of passive safety controls, on October 16, 2019 an engineering calculation was completed which demonstrates that one of two independent and redundant passive overflow devices used in the Solvent Extraction (SOLX) process was undersized for its credited safety function. This passive overflow device is an Item Relied On For Safety (IROFS) designated as SOLX -115. The IROFS prevents the potential backflow of uranium bearing solution from the SOLX process into the commercially-provided, chemical supply drums. These drums are non-favorable geometry (NFG) containers used to add chemicals to the batch process. Upon review of the calculation, the process engineer reported the issue at 3:05 pm to the Environmental Health and Safety (EH&S) department.

The design of the second, redundant passive overflow IROFS in this accident sequence (SOLX-117) has been validated and is available and reliable to perform its safety function. Under the new calculation, with no credit for SOLX-115, the overall likelihood index (OLI) for this scenario increased from -6 to -3. Therefore, the 10CFR70.61 performance requirements (OLI < -4) are not satisfied.

Immediate Corrective Actions.

The process was shut down, and the NFG chemical drums were isolated from the process until appropriate controls are established. This event has been entered into the facility Corrective Action Program (CAP).

ENCLOSURE 2

10CFR70.50(c)(2) Information:

(i) Complete applicable information required by § 70.50(c)(1);

This information has been provided in Enclosure 1 of this correspondence.

(ii) The probable cause of the event, including all factors that contributed to the event and the manufacturer and model number (if applicable) of any equipment that failed or malfunctioned;

The probable cause of this event was the failure of the original SOLX-115 design to properly size the passive overflow process considering its credited safety function. Westinghouse is committed to revalidating the design of all passive safety controls at the CFFF by November 2020.

(iii) Corrective actions taken or planned to prevent occurrence of similar or identical events in the future and the results of any evaluations or assessments;

Immediate corrective actions were put into place to isolate non-favorable geometry (NFG) chemical drums from the process until appropriate controls were established.

The event was entered into Westinghouse's corrective action program (CAP). All corrective actions developed for this event have been completed:

- Additional passive overflows have been added to solvent makeup tanks V-1092 and V-1492 to direct any overflow directly onto the floor rather than into the vent header.
- Criticality Safety Evaluation (CSE)-7-A, for the Solvent Extraction System was revised to reflect that in the scenario where special nuclear material (SNM) enters the chemical feed containers, the passive overflow discussed above is now credited in the primary contingency.
- A maintenance requirement was added in OM85252 to require annual functional testing of passive overflow devices SOLX-904 and SOLX-905 (note that SOLX-115 and SOLX-117 identified in the original event report were renumbered as SOLX-904 and SOLX-905, respectively, as they are now also credited as environmental SSCs)
- SOLX Redundant Passive Overflow training was held for URRS SOLX operators.

(iv) For licensees subject to Subpart H of this part, whether the event was identified and evaluated in the Integrated Safety Analysis.

The CFFF is subject to Subpart H, and the accident sequence is identified and evaluated in the Integrated Safety Analysis (ISA).