SUMMARY OF SITE VISIT
AT THE WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY:
RESPONSE TO GENERIC LETTER 2015-01

Date

December 8 and 9, 2015

Background

The staff from the U.S. Nuclear Regulatory Commission (NRC) met with staff from the Westinghouse Electric Company LLC (Westinghouse) at the Columbia Fuel Fabrication Facility (CFFF) in Hopkins, South Carolina. The NRC staff had issued Generic Letter 2015-01 (Ref. 1), requesting fuel cycle licensee to submit information to demonstrate that natural phenomena hazards have been addressed in the facilities' integrated safety analysis.

The NRC staff visited the CFFF to discuss documents referenced by Westinghouse in responding (Refs. 2 and 3) to the Generic Letter. For Westinghouse to prepare for the site visit, the NRC staff had informally sent a list of questions to serve as discussion topics (Enclosure 2).

Participants

NRC	Westinghouse
Margie Kotzalas[a]	Nancy Parr[g]
Jonathan Marcano[b]	Carl Snyder[h]
Annie Ramirez[c]	Robert Faris[i]
Brannen Adkins[d]	Christopher Knight[j]
Asadul Chowdhury[e]	Frank Hand[k]
John Stamatakos[f]	

Notes
a. Chief, Programmatic Oversight & Regional Support Branch, Fuel Cycle Safety, Safeguards and Environmental Review, Office of Nuclear Material Safety and Safeguards
b. Structural Engineer, Programmatic Oversight & Regional Support Branch
c. Chemical Engineer, Programmatic Oversight & Regional Support Branch
d. Inspector, NRC Region II
e. Southwest Research Institute, Center for Nuclear Waste Regulatory Analysis
f. Southwest Research Institute, Center for Nuclear Waste Regulatory Analysis
g. Environmental Health and Safety, Licensing Manager
h. Criticality Safety Engineering Manager
i. Integrated Safety Analysis Project Manager
j. Plant Systems Engineering
k. Professional Engineer, Contract Technical Leader

Discussion

The NRC staff discussed both the methodology used for the seismic structural evaluation (question 4 of Enclosure 2) and the Integrated Safety Analysis (ISA). In particular, the NRC

staff discussed the frequency of initiating events used in the seismic portion of the ISA. Westinghouse stated that the building structure of the CFFF was evaluated using DOE-STD-1020 (Ref. 4) to determine the performance category of the structure; the CFFF is a performance category 2 facility. As such, International Building Code (IBC) 2012 was used to evaluate the main manufacturing building and selected equipment. The use of the IBC 2012 with the new Risk-Targeted seismic maps provides a target risk of structural collapse equal to 1 percent in 50 years based on a generic structural fragility. The 1 percent exceedance in 50 years is achieved by use of a uniform-hazard with a 2 percent probability of exceedance in 50 years.

The NRC staff asked about the methodology used for the evaluation of equipment at the CFFF and how the results were incorporated in the ISA. Westinghouse stated that select equipment was evaluated to determine if the equipment would survive the loads from a seismic event. In the context of the ISA, the consequences of equipment failure from the seismic event was determined. Westinghouse will provide additional information on the basis for the different assumptions used to characterize the risk of accident sequences under seismic events.

Westinghouse stated that enhanced analyses of high winds, tornadoes and precipitation events are being performed and are expected to be completed to update the ISA. The analyses are expected to be completed early 2016. The NRC staff will be informed when the evaluation is available for review before being formally submitted.

Westinghouse intends to update the flooding assessment in the ISA to describe recent flooding experience gained from a severe storm in October 2015. The water levels during the storm had no impacts to safety at the CFFF.

References

1. U.S. Nuclear Regulatory Commission, “NRC Generic Letter 2015-01: Treatment Of Natural Phenomena Hazards In Fuel Cycle Facilities”, June 22, 2015. ADAMS accession number ML14328A029.

2. Letter from N. Parr, Westinghouse Electric Company LLC, “Westinghouse Response To NRC Generic Letter 2015-01, “Treatment Of Natural Phenomena Hazards In Fuel Cycle Facilities (Docket 70-1151)”, August 26, 2015. ADAMS accession number ML15239A314.

3. Letter from N. Parr, Westinghouse Electric Company LLC, “Seismic Report Submittal”, February 11, 2014. ADAMS accession number ML14042A169.

4. U.S. Department of Energy, “Natural Phenomena Hazards Design and Evaluation Criteria for Department of Energy Facilities”, DOE-STD-1020 Rev. 2002.