May 28, 2010

MEMORANDUM TO: Joseph Shea, Director
Division of Fuel Facility Inspection
Region II

THROUGH: Peter Habighorst, Chief **/RA/**
Fuel Manufacturing Branch
Fuel Facility Licensing Directorate
Division of Fuel Cycle safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

FROM: Christopher Ryder, Licensing Project Manager **/RA/**
Fuel Manufacturing Branch
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Office of Nuclear Material Safety
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SUBJECT: RECOMMENDATIONS FOR THE INTEGRATED SAFETY ANALYSIS ANNUAL UPDATE FOR CALENDAR YEAR 2009 FACILITY INSPECTION: WESTINGHOUSE COLUMBIA FUEL FABRICATION FACILITY

On May 25, 2010, the Fuel Manufacturing Branch completed a review of the changes made to the Westinghouse Fuel Fabrication Facility in Columbia, South Carolina during calendar year 2009. Enclosed is a list of numbered changes that may be considered by the inspection team as part of inspection planning.

If you have any questions regarding these recommendations, please contact Christopher Ryder at 301-492-3189 or via email to Christopher.Ryder@nrc.gov.

Enclosure: As stated

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PROPOSED NUMBERED CHANGES

Items 9205, 9206, 9207, 9208, and ISA-03 ADU Conversion. Added two, 3-way valves and a spring-loaded valve to FL-112A/B. The 3-way valves direct either process solution or nitrogen to FL-112A/B. The spring-loaded valve is on the nitrogen valve. The valves alleviate the need for two administrative SSCs. The valves are credited in Criticality Safety Evaluation (CSE) CSE-03-E. Region II: While hardware is preferable to administrative actions, values can leak. Review the changes to determine that the values do not create a potential for other events.

Item 9310, ISA-18 Laboratories. Temporary Sample Storage for 2009 Inventory. Free-standing temporary shelf units were placed in the Chem Lab's main hallway to provide temporary storage for inventory samples. The temporary shelves are needed to prevent criticality spacing violations and to provide a means of organizing the inventory samples. Region II: Ensure that the temporary shelf units do not give rise to a potential for samples to be inadvertently discarded as UF_6 samples were inadvertently discarded in February 2008.

Item 8577, ISA-03 (ADU) Conversion. Added 3-inch passive overflow lines and local Dial Thermometers to ADU Q-Tanks. The Dial Thermometers on each of the V-216 A, B and C tanks allow operators to monitor the Q-Tanks. Region II: Given the events that occurred in January 2010, review the changes. Ensure that the changes were properly made.

Item 9594, ISA-03 ADU Conversion. Q-tank A and C manifolds. This system feeds the discharge to the A-tank. The manifold was modified. A line passing ADU can be quickly diverted to the diversion tank for temporary isolation, providing improved response time for the Q-tank filtration to restore level control. Region II: Given the events that occurred with the Q-tanks in January 2010, review the changes. Ensure that the changes were properly made.

Item 7130, ISA-13 Low Level Radioactive Waste Processing. Redesign incinerator conveyer discharge to improve criticality safety and operation. The change was made because the discharge frequently plugged. Region II: Review the changes, ensuring that the modification improves criticality safety and does not cause other problems.

Item 8202, ISA-03 ADU Conversion. Line 5 Decanter Replacement. The geometry of the existing decanters did not meet the improved standards of the Nuclear Criticality Safety Improvement Project for establishing double contingency. The decanters were replaced with smaller diameter models. Region II: Determine that the replacements were correctly made to provide double contingency.

Item 8249, ISA-03 ADU Conversion. Vent deflection for the portable ventilation unit. The deflector keeps the moderator from dripping into the vent. Region II: Determine where the water would be deflected. Ensure that deflected water will not cause another type of event.

Item 9432, ISA-20 (ERBIA). ERBIA Freight Elevator Sump. The non-favorable 1-ft^3 sump at the bottom of the ERBIA freight elevator pit was modified to make it a favorable geometry. Region II: Verify that the change was correctly made.

Items 8670, 8671, 8672, 8673, 8674, and ISA-03 ADU Conversion. Passive drains per CSE-3-J in the Fitzmill Enclosure/Product Hood and Calciner Product Hood on Conversion Line #5. The passive drains are safety-significant controls included in CSE-3-J. CSE-3-J includes safety-significant controls that are necessary to meet the June 2009 criticality updates. Region II: Ensure that the drains do not give rise to a potential for other problems, such as a non-favorable geometry where the drains are routed or places where nuclear material might accumulate.

Items 9446, 9448, 9495, and ISA-01 Plant Ventilation System. Tank V-747 758, and 767, Passive Overflows Addition. A passive overflow was installed on the 4-inch nozzle to the Process Vent Scrubber on Tank V-747 in the Solvent Extraction Area. The overflow is a U-tube configuration that can be filled with water from a removable top flange. A passive overflow is required on Tank V-747 to prevent nuclear material from going to the non-favorable geometry Process Vent Scrubber. This is a CSE requirement that was completed by June 2009. Region II: Review the change to ensure that it functions as stated. Determine the means to ensure that the U-tube remains filled, such as after maintenance.