UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 27, 2009

Mr. James A. Spina, Vice President
Calvert Cliffs Nuclear Power Plant, Inc.
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION CONCERNING THE RISK EVALUATION FOR THE FOURTH 10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN FOR CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 (TAC NOS. ME0298 AND ME0299)

Dear Mr. Spina:

By letter dated December 29, 2008, Calvert Cliffs Nuclear Power Plant, Inc. requested Nuclear Regulatory Commission (NRC) approval for the proposed Fourth 10-Year Interval Inservice Inspection (ISI) Program Plan.

The NRC staff has reviewed the information provided and has determined that additional information is needed to complete its review. Enclosed is the staff's request for additional information (RAI). As discussed with your staff, we understand that you intend to respond to this RAI within 45 days of the date of this letter..

Please contact me at 301-415-1364 if you have any questions.

Sincerely,

Douglas V. Pickett

Douglas V. Pickett, Senior Project Manager
Plant Licensing Branch I-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosure:
As stated

cc w/encl: Distribution via Listserv

PROBABILISTIC RISK ASSESSMENT (PRA) LICENSING BRANCH (APLA) REQUEST

FOR ADDITIONAL INFORMATION REGARDING

CALVERT CLIFFS NUCLEAR POWER PLANT

REQUEST FOR APPROVAL OF FOURTH 10-YEAR INTERVAL

INSERVICE INSPECTION PROGRAM PLAN

1. Code Case N-716 relies on American Society of Mechanical Engineers (ASME) flooding analysis. Enclosure (1) of the submittal dated December 29, 2008, states reviews were conducted by SAIC Inc. of the Calvert Cliffs Probabilistic Risk Assessment (PRA) flooding model as part of an update to Electric Power Research Institute guidance. This flooding model was determined to be of high quality. Describe what Standard or other documents SAIC used to review the Calvert Cliffs PRA flooding model.

2. Please provide a description of outstanding issues proposed by SAIC's evaluation of Calvert Cliffs PRA flooding model and describe how these issues have been resolved.

3. The supporting requirement (SR), IF-C3, in ASME PRA Standard RA-Sb-2005 identifies the failure mechanisms that shall be evaluated to determine the susceptibility of each safety-related structure, system, and component (SSC) in a flood area to flood-induced failures. Capability Category II identifies failure by submergence and spray as requiring detailed analysis. Capability Category III includes jet impingement, pipe whip, and humidity, condensation, and temperature concerns. Risk informed inservice inspection (RI-ISI) requires that all SSC failures induced by a pipe break be considered. Please demonstrate that all SSC failures that are induced by a pipe break are adequately addressed in your analysis.

4. Were new examination locations identified, if so, were the new examination locations included in the change in risk estimate? Using an upper-bound estimate for new locations would be non-conservative. Please demonstrate that this non-conservative approach, if corrected, would not exceed the delta risk guidelines.

5. The SR, IF-C6, permits screening out of flood areas based on, in part, the success of human actions to isolate and terminate the flood. The endorsed RI-ISI methods require determination of the flood scenario with and without human intervention which corresponds to the Capability Category III, i.e. scenarios are not screened out based on human actions. Therefore, a Category III analysis would be acceptable and is preferable. To provide confidence that scenarios that might exceed the quantitative Core Damage Frequency and Large Early Release Frequency guideline are identified, please describe how credit is given to human actions.

6. The SR, IF-D5a, addresses the development of flood initiating (pipe rupture) frequencies for use during the scenario development. RI-ISI is premised on inspecting locations with the highest risk, driven mostly by failure frequency. The plant-specific information collected and used should include experience related to degradation mechanisms that could indicate increased likelihood of pipe failure at particular locations. Please describe how plant-specific operating experience was used to identify experience related to degradation mechanisms and how this experience was incorporated into the development of pipe failure frequencies.

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/RA/

Douglas V. Pickett, Senior Project Manager
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OFFICE	GE/LPL1-1	PM/LPL1-1	LA:LPL1-1	BC/APLA	BC/LPL1-1(A)
NAME	JGall	DPickett	SLittle	AHowe by memo dated	RGuzman
DATE	04 /20/ 09	04 /23/ 09	04 /12/ 09	04 / 03 / 09	04 /27/ 09

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