October 15, 2008

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 RE: LICENSE AMENDMENT FOR MEASUREMENT UNCERTAINTY RECAPTURE POWER UPRATE - CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 - (TAC NOS. MD9554 AND MD9555)

Dear Mr. Spina:

By letter dated August 29, 2008, Calvert Cliffs Nuclear Power Plant, Inc. requested Nuclear Regulatory Commission (NRC) approval to increase the core thermal power rating of the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 by 1.38 percent from 2700 megawatt-thermal (MWt) to 2737 MWt.

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 by December 31, 2008.

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

Sincerely,

/RA/

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

October 15, 2008

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 RE: LICENSE AMENDMENT FOR MEASUREMENT UNCERTAINTY RECAPTURE POWER UPRATE - CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 - (TAC NOS. MD9554 AND MD9555)

Dear Mr. Spina:

By letter dated August 29, 2008, Calvert Cliffs Nuclear Power Plant, Inc. requested Nuclear Regulatory Commission (NRC) approval to increase the core thermal power rating of the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2 by 1.38 percent from 2700 megawatt-thermal (MWt) to 2737 MWt.

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 by December 31, 2008.

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

Sincerely,
/RA/
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

Distribution:

PUBLIC	LPL1-1 r/f	RidsOgcRp	RidsAcrsAcnwMailCenter
RidsNrrDciCvib	RidsNrrDorlLpl1-1	RidsNrrPMDPickett	RidsNrrLASLittle
DWidrevitz	GDentel, R1		

ADAMS Accession No. ML082810220

OFFICE	PM/LPL1-1	LA:LPL1-1	BC/CVIB	BC/LPL1-1
NAME	DPickett	SLittle	MMitchell by memo dated	MKowal
DATE	10 /14/ 08	10 /14/ 08	9 / 30 / 08	10 /15/ 08

OFFICIAL RECORD COPY

REQUEST FOR ADDITIONAL INFORMATION

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 & 2

MEASUREMENT UNCERTAINTY RECAPTURE (MUR) POWER UPRATE

1. Section IV.5 of the submittal lists the extended license surface fluence for Calvert Cliffs, Unit 1 as 5.09 x 10^{19} n/cm^2 (E > 1.0 MeV) and for Calvert Cliffs, Unit 2 as 5.74 x 10^{19} n/cm^2 (E > 1.0 MeV). The corresponding surface fluence values, cited in the safety evaluation report dated December 1999 for the extended license renewal application for Calvert Cliffs, were 4.95 x 10^{19} n/cm^2 (E > 1.0 MeV) and 5.77 x 10^{19} n/cm^2 (E > 1.0 MeV) for Unit Nos. 1 and 2, respectively. Please explain the discrepancies between these numbers. In addition, please clarify whether the surface fluence values cited were at the wetted surface or at the clad to base metal interface.

2. Section IV.5 of the submittal lists the extended license fluence at the three-quarter thickness of the reactor vessel (RV) wall (3/4T) location for Calvert Cliffs, Unit 1 as 6.09 x 10^{18} n/cm^2 (E > 1.0 MeV) based on the RV surface fluence of 5.09 x 10^{19} n/cm^2 (E > 1.0 MeV). This 3/4T fluence value does not compare well to the NRC staff's independently calculated value of 1.08 x 10^{19} n/cm^2 (E > 1.0 MeV) based on an RV wall thickness from the staff's Reactor Vessel Integrity Database (RVID) of 8.625 inches. The values for Calvert Cliffs, Unit 2 and all uprated values were similarly inconsistent with the NRC staff's independent calculation. Please explain how you determined the values cited in the application for the ¾ T locations and, if inconsistent, submit new values.

3. Confirm that the RV surveillance capsule withdrawal schedules for Calvert Cliffs, Units 1 and 2 still meet the requirements of 10 CFR Part 50, Appendix H by demonstrating compliance with the guidance in the edition of ASTM E185 which is applicable to your facility after accounting for the effects of the uprate.

4. The submittal provides no information regarding your RV internals structural evaluation. Table Matrix-1 of Nuclear Regulatory Commission RS-001, Revision 0, "Review Standard for Extended Power Uprates," provides the staff's basis for evaluating the potential for extended power uprates to induce aging effects on RV internals. Depending on the magnitude of the projected RV internals fluence, Table Matrix-1 may be applicable to the MUR application. The Industry has established, among other aging issue guidelines, the neutron irradiation-related thresholds for irradiation-assisted stress-corrosion cracking (IASCC) for various pressurized-water reactor (PWR) RV internal components and is working on inspection guidelines for them. Please confirm that you have participated in the industry's initiatives on age-related degradation of PWR RV internals and will implement the industry criteria and inspection guidelines on this issue when they are approved by the NRC by factoring them into your RV internal inspections as appropriate.

Enclosure