

May 2, 2005

Mr. George Vanderheyden, Vice President
Calvert Cliffs Nuclear Power Plant, Inc.
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2
(CCNPP 1 AND 2) - REQUEST FOR ADDITIONAL INFORMATION RE:
EXEMPTION REQUEST CONCERNING PLANT PROCEDURE
REQUIREMENTS FOR HANDLING AND STORAGE OF FUEL ASSEMBLIES IN
UNBORATED WATER AT THE CCNPP 1 AND 2 SPENT FUEL POOL (TAC
NOS. MC5520 AND MC5521)

Dear Mr. Vanderheyden:

In reviewing your submittal of December 21, 2004, concerning the subject request for exemption from the requirements specified in Section 50.68(b)(1) of Title 10 of the *Code of Federal Regulations* concerning plant procedure requirements for handling and storage of fuel assemblies in unborated water at the CCNPP 1 and 2, the Nuclear Regulatory Commission (NRC) staff has determined that additional information contained in the enclosure to this letter is needed to complete its review. The NRC staff discussed the issue with your staff on April 25, 2005. As agreed to by your staff, we request you respond within 30 days of the date of this letter.

If you have any questions, please contact me at 301-415-1030.

Sincerely,

/RA/

Richard V. Guzman, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosure: As stated

cc w/encl: See next page

May 2, 2005

Mr. George Vanderheyden, Vice President
Calvert Cliffs Nuclear Power Plant, Inc.
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2
(CCNPP 1 AND 2) - REQUEST FOR ADDITIONAL INFORMATION RE:
EXEMPTION REQUEST CONCERNING PLANT PROCEDURE
REQUIREMENTS FOR HANDLING AND STORAGE OF FUEL ASSEMBLIES IN
UNBORATED WATER AT THE CCNPP 1 AND 2 SPENT FUEL POOL (TAC
NOS. MC5520 AND MC5521)

Dear Mr. Vanderheyden:

In reviewing your submittal of December 21, 2004, concerning the subject request for exemption from the requirements specified in Section 50.68(b)(1) of Title 10 of the *Code of Federal Regulations* concerning plant procedure requirements for handling and storage of fuel assemblies in unborated water at the CCNPP 1 and 2, the Nuclear Regulatory Commission (NRC) staff has determined that additional information contained in the enclosure to this letter is needed to complete its review. The NRC staff discussed the issue with your staff on April 25, 2005. As agreed to by your staff, we request you respond within 30 days of the date of this letter.

If you have any questions, please contact me at 301-415-1030.

Sincerely,

/RA/

Richard V. Guzman, Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosure: As stated

cc w/encl: See next page

DISTRIBUTION:

PUBLIC PDI-1 R/F RLaufer RGuzman SLittle
OGC ACRS SJones JTrapp, RI
DLPM DPR

ACCESSION NUMBER: ML051170332 *RAI provided. No major changes made.

OFFICE	PDI-1/PM	PDI-1/LA	SPLB/SC*	PDI-1/SC
NAME	RGuzman	SLittle	SJones	RLaufer
DATE	4/28/05	4/28/05	3/23/05	4/29/05

OFFICIAL RECORD COPY

REQUEST FOR ADDITIONAL INFORMATION RE:
EXEMPTION REQUEST CONCERNING PLANT PROCEDURE REQUIREMENTS
FOR HANDLING AND STORAGE OF FUEL ASSEMBLIES IN UNBORATED WATER
CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2 (CCNPP 1 AND 2)
DOCKET NOS. 50-317 AND 50-318

1. Page 7 of your exemption request provides a description of the spent fuel pool (SFP) layout. The description does not include information about the configuration of the cask laydown area relative to the SFP. Please provide a description of the cask laydown area that adequately conveys the location, size and physical separation between this area and the SFP. In addition, provide a description of the SFP cooling system and supporting information that explains how the cask laydown area is supplied with adequate mixing and cooling. Please include drawings that complement your description.
2. Page 7 of your exemption request indicates that there is a slot in the dividing wall that has removable gates, which allow movement of fuel assemblies between the two halves of the pool. Please provide the size and location of this gate as well as its configuration (open or closed) whenever the dry storage canister (DSC) is in the SFP.
3. On Page 9 of your exemption request it is stated:

Where stratification has occurred (Robinson 2 - December 20, 1988 and San Onofre 1 - January 23, 1989), it was observed that the diluted water floated on top of the more highly borated water. This suggests that if stratification does occur, the water with the higher boron concentration will tend to be in the lower level of the SFP where the fuel assemblies are located.

While reviewing previous similar exemptions for other plants (e.g. Sequoyah exemption request dated February 20, 2002 (Agency Documents Access and Management System, Accession No. ML040550203), the Nuclear Regulatory Commission staff evaluated boron dilution analyses which assume that addition of cold water directly to the cask pit, which is denser than the warm borated pool water, could fill the bottom of the cask pit with water having a low boron concentration.

Please provide specific information that demonstrates that, if a direct dilution with cold water to the cask laydown area at CCNPP'S SFP occurs, it would be expected that the water with the higher boron concentration would tend to remain in the lower level of the cask laydown area, where the fuel assemblies are located, thereby minimizing the possibility of localized boron dilution.

Enclosure

4. On Page 14 of your exemption request, it is stated that the operators perform comprehensive training and testing on the alarm manuals during initial qualification and re-qualification every 2 years. Please state whether this training will provide awareness to the operators of the additional requirements for higher boron concentrations that apply during loading, unloading and handling operations using the NUHOMS-32P® DSC.

Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2

cc:

President
Calvert County Board of
Commissioners
175 Main Street
Prince Frederick, MD 20678

Patricia T. Birnie, Esquire
Co-Director
Maryland Safe Energy Coalition
P.O. Box 33111
Baltimore, MD 21218

Carey Fleming, Esquire
Sr. Counsel - Nuclear Generation
Constellation Generation Group, LLC
750 East Pratt Street, 17th floor
Baltimore, MD 21202

Mr. Loren F. Donatell
NRC Technical Training Center
5700 Brainerd Road
Chattanooga, TN 37411-4017

Lou Larragoite
Calvert Cliffs Nuclear Power Plant
1650 Calvert Cliffs Parkway
Lusby, MD 20657-4702

Resident Inspector
U.S. Nuclear Regulatory
Commission
P.O. Box 287
St. Leonard, MD 20685

Mr. R. I. McLean, Administrator
Radioecology Environ Impact Prog
Department of Natural Resources
Nuclear Evaluations
580 Taylor Avenue
Tawes State Office Building
Annapolis, MD 21401

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Kristen A. Burger, Esquire
Maryland People's Counsel
6 St. Paul Centre
Suite 2102
Baltimore, MD 21202-1631