

December 7, 2000

Mr. Charles H. Cruse
Vice President - Nuclear Energy
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 -
RE: VENTILATION FILTER TESTING PROGRAM (TAC NOS. MA7222 AND
MA7223)

Dear Mr. Cruse:

The Commission has issued the enclosed Amendment No. 238 to Renewed Facility Operating License No. DPR-53 and Amendment No. 212 to Renewed Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, respectively. The amendments are in response to your application transmitted by letter dated November 22, 1999, as supplemented November 24, 1999, and September 12, 2000.

The amendments revise Technical Specification (TS) 5.5.11, "Ventilation Filter Testing Program" for laboratory testing of charcoal in engineered safety feature ventilation systems to reference American Society for Testing and Materials D 3803-1989 "Standard Test Method for Nuclear-Grade Activated Carbon."

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly *Federal Register* notice.

Sincerely,

/RA/

Alexander W. Dromerick, Sr. Project Manager, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-317 and 50-318

Enclosures: 1. Amendment No. 238 to DPR-53
2. Amendment No. 212 to DPR-69
3. Safety Evaluation

cc w/encls: See next page

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cc w/encls: See next page

ACCESSION NUMBER: ML003760203

*See previous concurrence

OFC	PDI-1/PM	PDI-1/LA	PDI-1/SC	OGC*	SPLB*
NAME	ADromerick	SLittle	PTam for MGamberoni	JEuchner	EWeiss
DATE	12/5/00	12/5/00	12/5/00	11/28/00	11/2/00

Official Record Copy

DATED: December 7, 2000

AMENDMENT NO. 238 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-53-CALVERT CLIFFS UNIT 1
AMENDMENT NO. 212 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-69-CALVERT CLIFFS UNIT 2

PUBLIC

PDI-1 Reading

RidsNrrDlpmLpdi

RidsNrrDlpmLpdi1

A. Dromerick

S. Little

RidsOgcRp

RidsAcrsAcnwMailCenter

G. Hill (2), T-5 C3

W. Beckner, 013H3

RidsRgn2MailCenter

cc: Plant Service list

CALVERT CLIFFS NUCLEAR POWER PLANT, INC.

DOCKET NO. 50-317

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 1

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 238
Renewed License No. DPR-53

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Calvert Cliffs Nuclear Power Plant, Inc. (the licensee) dated November 22, 1999, as supplemented November 24, 1999, and September 12, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2. of Renewed Facility Operating License No. DPR-53 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 238 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/ P Tam for

Marsha Gamberoni, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 7, 2000

CALVERT CLIFFS NUCLEAR POWER PLANT, INC.

DOCKET NO. 50-318

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NO. 2

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No.212
Renewed License No. DPR-69

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Calvert Cliffs Nuclear Power Plant, Inc. (the licensee) dated November 22, 1999, as supplemented November 24, 1999, and September 12, 2000, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2. of Renewed Facility Operating License No. DPR-69 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 212 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/ P. Tam for

Marsha Gamberoni, Chief, Section 1
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 7, 2000

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 238 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-53

AMENDMENT NO. 212 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-69

DOCKET NOS. 50-317 AND 50-318

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contain marginal lines indicating the areas of change.

Remove Page

5.0-25

Insert Page

5.0-25

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 238 TO RENEWED
FACILITY OPERATING LICENSE NO. DPR-53
AND AMENDMENT NO. 212 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-69
CALVERT CLIFFS NUCLEAR POWER PLANT, INC.
CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-317 AND 50-318

1.0 INTRODUCTION

By letter dated November 22, 1999, as supplemented November 24, 1999, and September 12, 2000, Baltimore Gas and Electric Company (the then licensee) requested an amendment to revise Technical Specification (TS) 5.5.11, "Ventilation Filter Testing Program" for laboratory testing of charcoal in the engineered safety features (ESF) ventilation systems to reference the latest charcoal testing standard (American Society for Testing and Materials (ASTM) D 3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon"). This change was requested in Generic Letter (GL) 99-02 "Laboratory Testing of Nuclear-Guide Activated Charcoal." TS Section 5.5.11 covers the following systems: (1) Control Room Emergency Ventilation System (CREVS), (2) Emergency Core Cooling System (ECCS) Pump Room Exhaust Filtration System (PREFS), (3) Penetration Room Exhaust Ventilation System (PREVS), (4) Spent Fuel Pool Exhaust Ventilation System (SFPEVS), and (5) Iodine Removal System (IRS), for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2.

By letter dated September 12, 2000, Calvert Cliffs Nuclear Power Plant, Inc., who currently holds the operating license of the Calvert Cliffs Nuclear Power Plant, Units 1 and 2 from BGE, submitted additional information clarifying the face velocities and test temperature and relative humidity parameters for the ventilation systems. The proposed changes would revise the TS surveillance testing of the safety related ventilation system charcoal to meet the requested actions of GL 99-02. The November 24, 1999, and September 12, 2000, submittals provided clarifying information that did not change the original proposed no significant hazards consideration determination.

2.0 BACKGROUND

Safety-related air-cleaning units used in the ESF ventilation systems of nuclear power plants reduce the potential onsite and offsite consequences of a radiological accident by filtering radioiodine. Analyses of design-basis accidents assume particular safety-related charcoal adsorption efficiencies when calculating offsite and control room operator doses. To ensure that the charcoal filters used in these systems will perform in a manner that is consistent with

the licensing basis of a facility, licensees have requirements in their TSs to periodically perform a laboratory test to determine charcoal adsorption efficiency (in accordance with a test standard) of charcoal samples taken from these ventilation systems.

In GL 99-02, the NRC staff alerted licensees that testing nuclear-grade activated charcoal to standards other than ASTM D3803-1989, "Standard Test Method for Nuclear-Grade Activated Carbon," does not provide assurance for complying with their current licensing basis with respect to the dose limits of General Design Criterion 19 of Appendix A to Part 50 of Title 10 of the *Code of Federal Regulations* (10 CFR Part 50) and Subpart A of 10 CFR Part 100.

GL 99-02 requested that all licensees determine whether their TSs reference ASTM D3803-1989 for charcoal filter laboratory testing. Licensees whose TSs do not reference ASTM D3803-1989 were requested to either amend their TSs to reference ASTM D3803-1989 or propose an alternative test protocol.

3.0 EVALUATION

The NRC staff, with technical assistance from Brookhaven National Laboratory (BNL), has reviewed the licensee's submittals. The current and proposed TS surveillance requirements for laboratory charcoal sample testing for the REVS, the PREFS, the PREVS, SFPEVS, and the IRS are shown in Tables 1 and 2, respectively, of the attached BNL Technical Evaluation Report (TER).

The proposed use of ASTM D3803-1989 is acceptable because it provides accurate and reproducible test results. The proposed test temperature of 30°C for all five systems is acceptable because it is consistent with ASTM D3803-1989. The proposed test relative humidity (RH) of 70 percent for the CREVS is acceptable, because the licensee has stated in its September 12, 2000, letter that air entering the charcoal is maintained less than or equal to 70 percent RH under worst-case accident conditions. The proposed RH of 95 percent for the remaining PREFS, PREVS, SFPEVS, and IRS is consistent with ASTM D3803-1989. This is consistent with the actions requested in GL 99-02.

The credited removal efficiencies for radioactive organic iodine for CREVS, PREFS, PREVS, SFPEVS, and IRS are 90 percent, 0 percent, 30 percent, 70 percent, and 30 percent, respectively. The proposed test penetrations for radioactive methyl iodide for CREVS, PREFS, PREVS, SFPEVS, and IRS are 5 percent, 50 percent, 35 percent, 15 percent, and 35 percent respectively and result in a safety factor of 2 for each of these systems. The proposed safety factor of 2 is acceptable because it ensures that the efficiency credited in the accident analysis is still valid at the end of the surveillance interval. This is consistent with the minimum safety factor of 2 specified in GL 99-02.

Further, the licensee has stated that the five system face velocities (for air running through the systems) will be consistent with the face velocities specified in GL 99-02 and are less than 110 percent of 90 ft/min (44⁵⁺/min), and in accordance with GL 99-02, the proposed TSs need not specify face velocities for testing. The proposed use of ASTM D3803-1989 is acceptable because it provides accurate and reproducible test results. The licensee's proposed TS changes are consistent with the actions requested in GL 99-02. On this basis, the TER concludes that the licensee's proposed TS changes are acceptable.

The staff has reviewed the BNL TER regarding the proposed TS changes for Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2. Based on its review, the staff adopts the TER. In view of the above, and because the staff considers ASTM D3803-1989 to be the most accurate and most realistic protocol for testing charcoal in safety-related ventilation systems, the NRC staff finds that the proposed TS changes satisfy the actions requested in GL 99-02, and are acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Maryland State official was notified of the proposed issuance of the amendments. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (64 FR 73085). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Attachment: As stated

Principal Contributor: A. W. Dromerick

Date: December 7, 2000

Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 and 2

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

James P. Bennett, Esquire
Counsel
Constellation Energy Group
P.O. Box 1475
Baltimore, MD 21203

Jay E. Silberg, Esquire
Shaw, Pittman, Potts, and Trowbridge
2300 N Street, NW
Washington, DC 20037

Mr. Bruce S. Montgomery, Director
NRM
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. Richard I. McLean, Manager
Nuclear Programs
Power Plant Research Program
Maryland Dept. of Natural Resources
Tawes State Office Building, B3
Annapolis, MD 21401

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

Mr. Joseph H. Walter, Chief Engineer
Public Service Commission of
Maryland
Engineering Division
6 St. Paul Centre
Baltimore, MD 21202-6806

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

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

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