



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

October 30, 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: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT NOS. 1 AND 2, CALVERT CLIFFS INDEPENDENT SPENT FUEL STORAGE INSTALLATION – ISSUANCE OF CONFORMING AMENDMENTS RE: CALVERT CLIFFS NUCLEAR POWER PLANT INC. TO LLC (TAC NOS. ME0443 AND ME0444)

Dear Mr. Spina:

The Commission has issued the enclosed Amendment No. 295 to Renewed Facility Operating License No. DPR-53 and Amendment No. 271 to Renewed Facility Operating License No. DPR-69 for the Calvert Cliffs Nuclear Power Plant, Unit Nos. 1 and 2, and Amendment No. 8 to Material License SNM-2505 for the Calvert Cliffs Independent Spent Fuel Storage Installation, in response to your application dated January 22, 2009, as supplemented by letters dated February 26, April 8, June 25, July 27, October 15, October 19, October 25 (2 letters), October 26, and October 28, 2009.

The amendments conform the subject licenses to reflect the new licensee due to the transfer of Calvert Cliffs Nuclear Power Plant, Inc. to Calvert Cliffs Nuclear Power Plant, LLC.

A publicly available version of the Nuclear Regulatory Commission (NRC) staff's safety evaluation can be found in the Agencywide Documents Access and Management System at Accession No. ML093010003.

The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

J. Spina

- 2 -

Enclosure 3 contains a copy of the Indemnity Agreement Amendment for your records: No. B-70 for Calvert Cliffs Nuclear Power Plant, LLC. The agreement amendment is required in connection with the direct transfer of the operating licenses.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard V. Guzman", with a long horizontal flourish extending to the right.

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

Docket Nos. 50-317, 50-318, and 72-8

Enclosures:

1. Amendment No. 295 to DPR-53 and
Amendment No. 271 to DPR-69
2. Amendment No. 8 to SNM-2505
3. Indemnity Agreement Amendment

cc w/encls: Distribution via ListServ

Enclosure 1
License Amendment No. 295 to
DPR-53
License Amendment No. 271 to
DPR-69



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

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. 295
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 January 22, 2009, as supplemented by letters dated February 26, April 8, June 25, July 27, October 15, October 19, October 25 (2 letters), October 26, and October 28, 2009, 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 as indicated in the attachment to this license amendment.

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

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Eric J. Leeds". The signature is fluid and cursive, with a large initial "E" and "L".

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License

Date of Issuance: October 30, 2009

ATTACHMENT TO LICENSE AMENDMENT NO. 295
TO RENEWED FACILITY OPERATING LICENSE NO. DPR-53
DOCKET NO. 50-317

Replace the following pages of the Facility Operating License with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
Cover page	Cover page
2	2
3	3
4	4
Cover page (Appendix C)	Cover page (Appendix C)
Page 4 (Appendix C)	Page 4 (Appendix C)



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RENEWED FACILITY OPERATING LICENSE

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 1

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

DOCKET NO. 50-317

Renewed License No. DPR-53

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-53 issued on July 31, 1974, has now found that:
 - A. The application to Renewed License No. DPR-53 filed by Baltimore Gas and Electric Company* 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Calvert Cliffs Nuclear Power Plant, Unit 1 (facility), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - C. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter I, except as exempted from compliance;
 - D. The Calvert Cliffs Nuclear Power Plant, LLC (the licensee) has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements";
 - E. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and

*By Order dated October 9, 2009, as superseded by Order dated October 30, 2009, the transfer of this license to Calvert Cliffs Nuclear Power Plant, LLC, was approved.

- F. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-53, issued on July 31, 1974, is superseded by Renewed Facility Operating License No. DPR-53, which is hereby issued to Calvert Cliffs Nuclear Power Plant, LLC to read as follows:
- A. This license applies to the Calvert Cliffs Nuclear Power Plant, Unit 1, a pressurized water reactor and associated equipment (the facility), owned by Calvert Cliffs Nuclear Power Plant, LLC. The facility is located in Calvert County, Maryland, and is described in the licensee's Final Safety Analysis Report (FSAR), as supplemented and amended, and the licensee's Environmental Report, as supplemented and amended.
- B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Calvert Cliffs Nuclear Power Plant, LLC.
- (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Calvert County, Maryland, in accordance with the procedures and limitations set forth in this license;
 - (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, and described in the Final Safety Analysis Report, as supplemented and amended;
 - (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, at any time, any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, in amounts as required, any byproduct, source, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 - (5) Pursuant to the Act and 10 CFR Parts 30 and 70 to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.
- C. This license is deemed to contain and is subject to the conditions set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act, and the

rules, regulations, and orders of the Commission, now or hereafter applicable; and is subject to the additional conditions specified and incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at steady-state reactor core power levels not in excess of 2737 megawatts-thermal in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 295, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

- (a) For Surveillance Requirements (SRs) that are new, in Amendment 227 to Facility Operating License No. DPR-53, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 227. For SRs that existed prior to Amendment 227, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 227.

(3) Additional Conditions

The Additional Conditions contained in Appendix C as revised through Amendment No. 295 are hereby incorporated into this license. Calvert Cliffs Nuclear Power Plant, LLC shall operate the facility in accordance with the Additional Conditions.

(4) Secondary Water Chemistry Monitoring Program

The Calvert Cliffs Nuclear Power Plant, LLC, shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

- a. Identification of a sampling schedule for the critical parameters and control points for these parameters;
- b. Identification of the procedures used to quantify parameters that are critical to control points;

- c. Identification of process sampling points;
- d. Procedure for recording and management of data;
- e. Procedures defining corrective actions for off control point chemistry conditions; and
- f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.

(5) Mitigation Strategy

The Calvert Cliffs Nuclear Power Plant, LLC, shall develop and maintain strategies for addressing large fires and explosions that include the following key areas:

(a) Fire fighting response strategy with the following elements:

- 1. Pre-defined coordinated fire response strategy and guidance
- 2. Assessment of mutual aid fire fighting assets
- 3. Designated staging areas for equipment and materials
- 4. Command and control
- 5. Training of response personnel

(b) Operations to mitigate fuel damage considering the following:

- 1. Protection and use of personnel assets
- 2. Communications
- 3. Minimizing fire spread
- 4. Procedures for implementing integrated fire response strategy
- 5. Identification of readily available pre-staged equipment
- 6. Training on integrated fire response strategy
- 7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

- 1. Water spray scrubbing
- 2. Dose to onsite responders

- D. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and to the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Calvert Cliffs Nuclear Power Plant Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 1" submitted May 19, 2006.

Appendix C

Additional Conditions

Facility Operating License No. DPR-53

Calvert Cliffs Nuclear Power Plant, LLC (the licensee or Company) shall comply with the following conditions on the schedule noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
227	Baltimore Gas and Electric Company (BGE) is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this Amendment shall include the relocation of these requirements to the appropriate documents as described in the licensee's application dated December 4, 1996, as supplemented by letters dated March 27, June 9, June 18, July 21, August 14, August 19, September 10, October 6, October 20, October 23, November 5, 1997, and January 12, January 28, and March 16, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented by August 31, 1998.
228	BGE is authorized to incorporate in the UFSAR certain changes regarding Main Steam Line Break, Steam Generator Tube Rupture, Seized Rotor, and Boron Dilution Analyses.	The updated UFSAR shall be implemented within 6 months after restart from the spring 1998 refueling outage.
237	The decommissioning trust agreement for Calvert Cliffs, Unit 1 at the time the license transfer to the licensee from BGE is effected, is subject to the following: (a) The decommissioning trust agreement must be in a form acceptable to the NRC.	To be implemented at time the license transfer to the licensee from BGE is effected.

<u>Amendment No.</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
246	This amendment requires the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) changes associated with the aircraft hazards analysis which was evaluated by the staff in the Safety Evaluation dated August 29, 2001.	Next update of the UFSAR
248	This amendment requires the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) changes associated with the loss of feedwater flow analysis which was evaluated by the staff in the safety evaluation dated February 26, 2002.	Next update of the UFSAR
267	This amendment requires the licensee develop a long-term coupon surveillance program for the Carborundum samples. This program must verify that the Carborundum degradation rates assumed in the licensee's analyses to prove subcriticality, as required by 10 CFR 50.68, remain valid over the seventy-year life span of the Unit 1 spent fuel pool. The licensee must submit this modified coupon surveillance program to the NRC under the 10 CFR 50.90 requirements for its review and approval.	3 years after approval of this amendment
295	CCNPP, LLC may no longer rely exclusively on an external sinking fund as its decommissioning funding assurance mechanism and will be required to implement an alternate decommissioning funding assurance mechanism, acceptable per NRC requirements outlined in 10 CFR 50.75(e)(1), which will be used to provide decommissioning funding assurance.	To be implemented at time the license transfer to the licensee from CCNPP, Inc. is effected.



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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. 271
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 January 22, 2009, as supplemented by letters dated February 26, April 8, June 25, July 27, October 15, October 19, October 25 (2 letters), October 26, and October 28, 2009, 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 as indicated in the attachment to this license amendment.

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

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Eric J. Leeds". The signature is fluid and cursive, with a large initial "E" and "L".

Eric J. Leeds, Director
Office of Nuclear Reactor Regulation

Attachment:
Changes to the License

Date of Issuance: October 30, 2009

ATTACHMENT TO LICENSE AMENDMENT NO. 271
TO RENEWED FACILITY OPERATING LICENSE NO. DPR-69
DOCKET NO. 50-318

Replace the following pages of the Facility Operating License with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
Cover page	Cover page
2	2
3	3
4	4
5	5
Cover page (Appendix C)	Cover page (Appendix C)
Page 4 (Appendix C)	Page 4 (Appendix C)



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RENEWED FACILITY OPERATING LICENSE

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2

CALVERT CLIFFS NUCLEAR POWER PLANT, LLC

DOCKET NO. 50-318

Renewed License No. DPR-69

1. The U.S. Nuclear Regulatory Commission (Commission), having previously made the findings set forth in License No. DPR-69 issued on November 30, 1976, has now found that:
 - A. The application to Renewed License No. DPR-69 filed by Baltimore Gas and Electric Company* 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, and all required notifications to other agencies or bodies have been duly made;
 - B. Actions have been identified and have been or will be taken with respect to (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 CFR 54.21(a)(1), and (2) time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c), such that there is reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis, as defined in 10 CFR 54.3, for the Calvert Cliffs Nuclear Power Plant, Unit 2 (facility), and that any changes made to the plant's current licensing basis in order to comply with 10 CFR 54.29(a) are in accord with the Act and the Commission's regulations;
 - C. There is reasonable assurance: (i) that the activities authorized by this renewed license can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the applicable regulations set forth in 10 CFR Chapter I, except as exempted from compliance;
 - D. The Calvert Cliffs Nuclear Power Plant, LLC (the licensee) has satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements";
 - E. The renewal of this license will not be inimical to the common defense and security or the health and safety of the public; and

*By Order dated October 9, 2009, as superseded by Order dated October 30, 2009, the transfer of this license to Calvert Cliffs Nuclear Power Plant, LLC, was approved.

- F. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs, and considering available alternatives, the renewal of this license is in accordance with 10 CFR Part 51 and all applicable requirements have been satisfied.
2. On the basis of the foregoing findings regarding this facility, Facility Operating License No. DPR-69, issued on November 30, 1976, is superseded by Renewed Facility Operating License No. DPR-69, which is hereby issued to Calvert Cliffs Nuclear Power Plant, LLC to read as follows:
- A. This license applies to the Calvert Cliffs Nuclear Power Plant, Unit 2, a pressurized water reactor and associated equipment (the facility), owned by Calvert Cliffs Nuclear Power Plant, LLC. The facility is located in Calvert County, Maryland, and is described in the licensee's Final Safety Analysis Report (FSAR), as supplemented and amended, and the licensee's Environmental Report, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses Calvert Cliffs Nuclear Power Plant, LLC:
 - (1) Pursuant to Section 104b of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, use, and operate the facility at the designated location in Calvert County, Maryland, in accordance with the procedures and limitations set forth in this license;
 - (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess, and use at any time, special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, and described in the Final Safety Analysis Report, as supplemented and amended;
 - (3) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, at any time, any byproduct, source, and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 - (4) Pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use, in amounts as required, any byproduct, source, and special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 - (5) Pursuant to the Act and 10 CFR Parts 30 and 70 to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license is deemed to contain and is subject to the conditions set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act, and the rules, regulations, and orders of the Commission, now and hereafter applicable; and is subject to the additional conditions specified and incorporated below:

(1) Maximum Power Level

The licensee is authorized to operate the facility at reactor steady-state core power levels not in excess of 2737 megawatts-thermal in accordance with the conditions specified herein.

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 271 are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications.

(a) For Surveillance Requirements (SRs) that are new, in Amendment 201 to Facility Operating License No. DPR-69, the first performance is due at the end of the first surveillance interval that begins at implementation of Amendment 201. For SRs that existed prior to Amendment 201, including SRs with modified acceptance criteria and SRs whose frequency of performance is being extended, the first performance is due at the end of the first surveillance interval that begins on the date the Surveillance was last performed prior to implementation of Amendment 201.

(3) Less Than Four Pump Operation

The licensee shall not operate the reactor at power levels in excess of five (5) percent of rated thermal power with less than four (4) reactor coolant pumps in operation. This condition shall remain in effect until the licensee has submitted safety analyses for less than four pump operation, and approval for such operation has been granted by the Commission by amendment of this license.

(4) Environmental Monitoring Program

If harmful effects or evidence of irreversible damage are detected by the biological monitoring program, hydrological monitoring program, and the radiological monitoring program specified in the Appendix B Technical Specifications, the licensee will provide to the staff a detailed analysis of the problem and a program of remedial action to be taken to eliminate or significantly reduce the detrimental effects or damage.

(5) Additional Conditions

The Additional Conditions contained in Appendix C as revised through Amendment No. 271 are hereby incorporated into this license. Calvert Cliffs Nuclear Power Plant, LLC shall operate the facility in accordance with the Additional Conditions.

(6) Secondary Water Chemistry Monitoring Program

The Calvert Cliffs Nuclear Power Plant, LLC, shall implement a secondary water chemistry monitoring program to inhibit steam generator tube degradation. This program shall include:

- a. Identification of a sampling schedule for the critical parameters and control points for these parameters;
- b. Identification of the procedures used to quantify parameters that are critical to control points;
- c. Identification of process sampling points;
- d. Procedure for recording and management of data;
- e. Procedures defining corrective actions for off control point chemistry conditions; and
- f. A procedure identifying the authority responsible for the interpretation of the data and the sequence and timing of administrative events required to initiate corrective action.

(7) Mitigation Strategy

The Calvert Cliffs Nuclear Power Plant, LLC, shall develop and maintain strategies for addressing large fires and explosions that include the following key areas:

- (a) Fire fighting response strategy with the following elements:
 1. Pre-defined coordinated fire response strategy and guidance
 2. Assessment of mutual aid fire fighting assets
 3. Designated staging areas for equipment and materials
 4. Command and control
 5. Training of response personnel
- (b) Operations to mitigate fuel damage considering the following:
 1. Protection and use of personnel assets
 2. Communications
 3. Minimizing fire spread

4. Procedures for implementing integrated fire response strategy
5. Identification of readily available pre-staged equipment
6. Training on integrated fire response strategy
7. Spent fuel pool mitigation measures

(c) Actions to minimize release to include consideration of:

1. Water spray scrubbing
2. Dose to onsite responders

- D. The licensee shall fully implement and maintain in effect all provisions of the Commission-approved physical security, training and qualification, and safeguards contingency plans, including amendments made pursuant to provisions of the Miscellaneous Amendments and Search Requirements revisions to 10 CFR 73.55 (51 FR 27817 and 27822) and the authority of 10 CFR 50.90 and 10 CFR 50.54(p). The combined set of plans, which contain Safeguards Information protected under 10 CFR 73.21, is entitled: "Calvert Cliffs Nuclear Power Plant Security Plan, Training and Qualification Plan, and Safeguards Contingency Plan, Revision 1" submitted dated May 19, 2006.
- E. The Calvert Cliffs Nuclear Power Plant, LLC, shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Final Safety Analysis Report for the facility and as approved in the SER dated September 14, 1979, and Supplements dated October 2, 1980; March 18, 1982; and September 27, 1982; and Exemptions dated August 16, 1982; April 21, 1983; March 15, 1984; August 22, 1990; and April 7, 1999 subject to the following provision: The Calvert Cliffs Nuclear Power Plant, LLC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.
- F. At the time of the next scheduled update to the FSAR required pursuant to 10 CFR 50.71(e)(4) following the issuance of this renewed license, the licensee shall update the FSAR to include the FSAR supplement submitted pursuant to 10 CFR 54.21(d), as amended and supplemented by the program descriptions in Appendix E to the Safety Evaluation Report, NUREG-1705. Until that FSAR update is complete, the licensee may make changes to the programs described in Appendix E without prior Commission approval, provided that the licensee evaluates each such change pursuant to the criteria set forth in 10 CFR 50.59 and otherwise complies with the requirements in that section.
- G. Any future actions listed in Appendix E to the Safety Evaluation Report, NUREG-1705, shall be included in the FSAR. The licensee shall complete these actions by August 13, 2016.

Appendix C

Additional Conditions

Facility Operating License No. DPR-69

Calvert Cliffs Nuclear Power Plant, LLC (the licensee or Company) shall comply with the following conditions on the schedule noted below:

<u>Amendment Number</u>	<u>Additional Condition</u>	<u>Implementation Date</u>
201	Baltimore Gas and Electric Company (BGE) is authorized to relocate certain Technical Specification requirements to licensee-controlled documents. Implementation of this Amendment shall include the relocation of these requirements to the appropriate documents as described in the licensee's application dated December 4, 1996, as supplemented by letters dated March 27, June 9, June 18, July 21, August 14, August 19, September 10, October 6, October 20, October 23, November 5, 1997, and January 12, January 28, and March 16, 1998, evaluated in the NRC staff's Safety Evaluation enclosed with this amendment.	This amendment is effective immediately and shall be implemented by August 31, 1998.
202	BGE is authorized to incorporate in the UFSAR certain changes regarding Main Steam Line Break, Steam Generator Tube Rupture, Seized Rotor, and Boron Dilution Analyses.	The updated UFSAR shall be implemented within 6 months after restart from the spring 1998 refueling outage.
211	The decommissioning trust agreement for Calvert Cliffs, Unit 1 at the time the license transfer to the licensee from BGE is effected, is subject to the following: (a) The decommissioning trust agreement must be in a form acceptable to the NRC.	To be implemented at time the license transfer to the licensee from BGE is effected.

<u>Amendment No.</u>	<u>Additional Conditions</u>	<u>Implementation Date</u>
221	This amendment requires the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) changes associated with the aircraft hazards analysis which was evaluated by the staff in the Safety Evaluation dated August 29, 2001.	Next update of the UFSAR
224	This amendment requires the licensee to incorporate in the Updated Final Safety Analysis Report (UFSAR) changes associated with the loss of feedwater flow analysis which was evaluated by the staff in the safety evaluation dated February 26, 2002.	Next update of the UFSAR
271	CCNPP, LLC may no longer rely exclusively on an external sinking fund as its decommissioning funding assurance mechanism and will be required to implement an alternate decommissioning funding assurance mechanism, acceptable per NRC requirements outlined in 10 CFR 50.75(e)(1), which will be used to provide decommissioning funding assurance.	To be implemented at time the license transfer to the licensee from CCNPP, Inc. is effected.

Enclosure 2
License Amendment 8
SNM-2505



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

CALVERT CLIFFS NUCLEAR POWER PLANT, INC.

DOCKET NO. 72-8

CALVERT CLIFFS INDEPENDENT SPENT FUEL STORAGE INSTALLATION

AMENDMENT TO MATERIALS LICENSE NO. SNM-2505

Amendment No. 8
License No. SNM-2505

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The amendment application dated January 22, 2009, as supplemented by letters on February 26, April 8, June 25, July 27, October 15, October 19, October 25 (2 letters), October 26, and October 28, 2009, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I;
 - B. The Calvert Cliffs Independent Spent Fuel Storage Installation will continue to operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance that (i) the activities authorized by this amendment can be conducted without endangering public health and safety, and (ii) 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 public health and safety; 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 the enclosed changes to Materials License No. SNM-2505, indicated by margin notations.
3. This license amendment is effective as of the date of its issuance and shall be implemented within 30 days of the date of issuance.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Steven Baggett, Acting Chief
Licensing Branch
Division of Spent Fuel Storage and Transportation
Office of Nuclear Material Safety
and Safeguards

Enclosure: Amended License

Date of Issuance: October 30, 2009

ATTACHMENT TO LICENSE AMENDMENT NO. 8

TO MATERIALS LICENSE NO. SNM-2505

DOCKET NO.72-8

Replace the following pages of the Materials License with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

1

2

3

Page 13 of 13

Insert

1

2

3

4

Page 13 of 13

LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 (Public Law 93-438), and Title 10, Code of Federal Regulations, Chapter 1, Part 72, and in reliance on statements and representations heretofore made by the licensee, a license is hereby issued authorizing the licensee to receive, acquire, and possess the power reactor spent fuel and other radioactive materials associated with spent fuel storage designated below; to use such material for the purpose(s) and at the place(s) designated below; and to deliver or transfer such material to persons authorized to receive it in accordance with the regulations of the applicable Part(s). This license shall be deemed to contain the conditions specified in Section 183 of the Atomic Energy Act of 1954, as amended, and is subject to all applicable rules, regulations, and orders of the Nuclear Regulatory Commission now or hereafter in effect and to any conditions specified herein.

Licensee		3. License No.	SNM-2505
1. Calvert Cliffs Nuclear Power Plant, LLC		Amendment No.	8
2. 100 Constellation Way Baltimore, MD 21202		4. Expiration Date	November 30, 2012
		5. Docket or Reference No.	72-8

6. Byproduct, Source, and/or Special Nuclear Material	7. Chemical or Physical Form	8. Maximum Amount That Licensee May Possess at Any One Time Under This License
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- | | | |
|--|--|--|
| <p>A. Spent fuel assemblies from Calvert Cliffs Nuclear Station Units 1 and 2 reactor using natural water for cooling and enriched not greater than 4.5 percent U-235 and associated radioactive materials related to receipt, storage, and transfer of fuel assemblies.</p> | <p>A. As UO₂ clad with zirconium or zirconium alloys.</p> | <p>A. 1,111.68 TeU of spent fuel assemblies.</p> |
|--|--|--|

9. Authorized Use: For use in accordance with the conditions in this license and the attached Technical Specifications. The basis for this license was submitted in the Safety Analysis Report application dated December 21, 1989, and supplemented April 26, June 29, November 1, and December 20, 1990; February 1, February 12, September 30, October 18, December 19, and December 27, 1991; August 18 and September 4, 1992; July 29 and October 20, 1994; March 31, 1995; November 22, 1999; May 19, June 20, October 4, November 10 and 16, 2000; May 18, and July 26, 2001; December 12, 2003, May 12, 2004 and June 7, 2005; May 16, September 29, October 28, 2005, January 22, February 26, April 8, June 25, July 27, October 15, October 19, October 25 (2 letters), October 26, and October 28, 2009.

The material identified in 6.A and 7.A above is authorized for receipt, possession, storage, and transfer.

10. Authorized Place of Use: The licensed material is to be received, possessed, transferred, and stored at the Calvert Cliffs ISFSI located on the Calvert Cliffs Nuclear Power Plant site in Calvert County, Maryland. This site is described in Chapter 2 of the licensee's Safety Analysis Report (SAR) for the Calvert Cliffs ISFSI.
11. The Technical Specifications contained in Appendix A attached hereto are incorporated into the license. The licensee shall operate the installation in accordance with the Technical Specifications in Appendix A.

NRC FORM 588A (10-2000) 10 CFR 72	U. S. NUCLEAR REGULATORY COMMISSION		PAGE 2 OF 4 PAGES
	License No.	Amendment No.	
	SNM-2505	8	
LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE SUPPLEMENTARY SHEET		Docket or Reference No.	72-8

12. The licensee shall fully implement and maintain in effect all provisions of the Independent Spent Fuel Storage Installation (ISFSI) physical security, guard training and qualification, and safeguards contingency plans previously approved by the Commission and all amendments made pursuant to the authority of 10 CFR 72.56, 10 CFR 72.44(e), and 72.186.
13. The Technical Specifications for Environmental Protection contained in Appendix A attached hereto are incorporated into the license.

Specifications required pursuant to 10 CFR 72.44(d), stating limits on the release of radioactive materials for compliance with limits of 10 CFR Part 20 and "as low as is reasonably achievable objective" for effluents are not applicable. Dry Shielded Canister (DSC) external surface contamination within the limits of Technical Specification 3.2.3.1 ensures that the offsite dose will be inconsequential. In addition, there are no normal or off-normal releases or effluents expected from the double-sealed storage canisters of the ISFSI.

Specifications required pursuant to 10 CFR 72.44(d)(1) for operating procedures, for control of effluents, and for the maintenance and use of equipment in radioactive waste treatment systems to meet the requirements of 10 CFR 72.104 are not applicable. There are, by the design of the sealed storage canisters at the ISFSI, no effluent releases. Also, all Calvert Cliffs site DSC and Transfer Cask (TC) loading and unloading operations and waste treatment therefrom will occur at the Calvert Cliffs Nuclear Power Plant under the specifications of its operating licenses.

14. No spent nuclear fuel shall be allowed to be loaded until such time as the following preoperational license conditions are satisfied:
 - A. A training exercise (dry run) of all DSC, TC, and horizontal storage module (HSM) loading and handling activities shall be held and include but not be limited to, those listed below and need not be performed in the order listed:
 1. Loading DSC in cask.
 2. DSC (length may be truncated) drying, welding, and cover gas backfilling operations.
 3. Moving cask to and aligning and docking with HSM on the storage pad.
 4. Insertion of DSC in HSM.
 5. Withdrawal of DSC from HSM.
 6. Returning the cask to the decontamination pit.
 7. Removing the cask lid and cutting open the DSC (length may be truncated) assuming fuel cladding failure.
 8. Removing the DSC from the cask.
 9. All dry run activities shall be done using written procedures.
 10. The activities listed above shall be performed to show that each activity can be successfully executed prior to actual fuel loading.

NRC FORM 588A (10-2000) 10 CFR 72	U. S. NUCLEAR REGULATORY COMMISSION		PAGE 3 OF 4 PAGES
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LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE SUPPLEMENTARY SHEET		Docket or Reference No.	72-8

- B. The Calvert Cliffs Nuclear Power Plant Emergency Plan shall be reviewed and modified as required to include the ISFSI.
 - C. A training module shall be developed for the Calvert Cliffs Nuclear Power Plant Training Program establishing an ISFSI Training and Certification Program which will include the following:
 - 1. DSC, TC, and HSM Design (overview)
 - 2. ISFSI Facility Design (overview)
 - 3. ISFSI Safety Analysis (overview)
 - 4. Fuel loading and DSC and TC handling procedures and abnormal procedures
 - 5. ISFSI License (overview).
 - D. The Calvert Cliffs Nuclear Power Plant health physics procedures shall be reviewed and modified as required to include the ISFSI.
 - E. The Calvert Cliffs Nuclear Power Plant Administrative Procedures shall be reviewed and modified as required to include the ISFSI.
 - F. A procedure shall be developed and implemented for the documentation of the characterizations performed to select spent fuel to be stored in the canisters and modules. Such procedure shall include independent verification of fuel assembly selection by an individual other than the original individual making the selection.
 - G. A procedure shall be developed and implemented for two independent determinations (two samples analyzed by different individuals) of the boron concentration in the water used to fill the DSC cavity for fuel loading and unloading activities.
 - H. Written procedures shall be implemented to describe actions to be taken during operation and abnormal/emergency conditions.
15. The design, construction, and operation of the ISFSI shall be accomplished in accordance with the NRC regulations specified in Title 10 of the U.S. Code of Federal Regulations. All commitments to the applicable NRC Regulatory Guides and to engineering and construction codes shall be carried out.
 16. The double closure seal welds at the bottom end of the DSC shall satisfy the Liquid Penetrant Acceptance Standards of ASME B&PV Code Section III, Division 1, Subsection NB-5350 (1983). Additionally, these seal welds at the bottom of the DSC shall be leak tested in accordance with ANSI N14.5 (1987).
 17. Fuel and TC movement and handling activities which are to be performed in the Calvert Cliffs Nuclear Power Plant Auxiliary Building will be governed by the requirements of the Calvert Cliffs Nuclear Power Plant Facility Operating Licenses (DRP-53 and -69) and associated Technical Specifications.
 18. Pursuant to 10 CFR 72.7, the licensee is hereby exempted from the provisions of 10 CFR 72.122(i) with respect to providing instrumentation and control systems for the DSC and HSM during storage operations.

NRC FORM 588A (10-2000) 10 CFR 72	U. S. NUCLEAR REGULATORY COMMISSION		PAGE	4	OF	4	PAGES
	LICENSE FOR INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE SUPPLEMENTARY SHEET		License No.	Amendment No.			
			SNM-2505	8			
		Docket or Reference No.	72-8				

19. This license is effective as of the date of issuance shown below.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Steven Baggett, Acting Chief
Licensing Branch
Spent Fuel Storage and Transportation Division
Office of Nuclear Material Safety
and Safeguards
Washington, DC 20555

Date of Issuance: November 30, 1992

Amendment No. 8 dated ~~October 30~~, 2009

Attachment: Technical Specifications

5.0 DESIGN FEATURES

5.1 GENERAL

The Calvert Cliffs ISFSI design approval was based upon review of specific design drawings, some of which have been deemed appropriate for inclusion in the Calvert Cliffs ISFSI Safety Evaluation Report (SER). Drawings listed in Section 1.5 of the Calvert Cliffs ISFSI SER have been reviewed and approved by the NRC. These drawings may be revised under the provisions of 10 CFR 72.48 as appropriate.

5.2 NUHOMS-32P DRY SHIELDED CANISTER (DSC)

The NUHOMS-32P DSC poison plates shall have a minimum B10 areal density of 0.0100g/cm².

6.0 ADMINISTRATIVE CONTROLS

6.1 GENERAL

The Calvert Cliffs ISFSI is located on the Calvert Cliffs Nuclear Power Plant site and will be managed and operated by the Calvert Cliffs Nuclear Power Plant, LLC, staff. The administrative controls shall be in accordance with the requirements of the Calvert Cliffs Nuclear Power Plant Facility Operating Licenses (DPR-53, and -69) and associated Technical Specifications as appropriate.

6.2 ENVIRONMENTAL MONITORING PROGRAM

The licensee shall include the Calvert Cliffs ISFSI in the environmental monitoring for Calvert Cliffs Nuclear Power Plant. An environmental monitoring program is required pursuant to 10 CFR 72.44(d)(2).

6.3 ANNUAL ENVIRONMENTAL REPORT

The annual radioactive effluent release reports under 10 CFR 50.36(a)(2) license requirements for the Calvert Cliffs Nuclear Power Plant shall also specify the quantity, if any, of each of the principal radionuclides released to the environment in liquid and gaseous effluents during the ISFSI operation and such other information as may be required by the Commission to estimate maximum potential radiation dose commitment to the public resulting from effluent releases. Copies of these reports shall be submitted to the NRC Region I office and to the Director, Office of Nuclear Material Safety and Safeguards. The report under this specification is required pursuant to 10 CFR 72.44(d)(3).

**Enclosure 3
Indemnity Agreement**



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

Docket Nos. 50-317
50-318

AMENDMENT TO INDEMNITY AGREEMENT NO. B-70

AMENDMENT NO. 12

Effective October 30, 2009, Indemnity Agreement No. B-70, between Calvert Cliffs Nuclear Power Plant, Inc. and the Atomic Energy Commission, dated August 23, 1973, as amended, is hereby further amended as follows:

Substitute the name "Calvert Cliffs Nuclear Power Plant, LLC" for the name "Calvert Cliffs Nuclear Power Plant, Inc."

FOR THE UNITED STATES NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "Robert D. Carlson", with a long horizontal flourish extending to the right.

Robert D. Carlson, Chief
Financial, Policy and Rulemaking Branch
Division of Policy and Rulemaking
Office of Nuclear Reactor Regulation

Accepted _____, 2009

Accepted _____, 2009

By _____
Calvert Cliffs Nuclear Power Plant, Inc.

By _____
Calvert Cliffs Nuclear Power Plant, LLC

J. Spina

- 2 -

Enclosure 3 contains a copy of the Indemnity Agreement Amendment for your records: No. B-70 for Calvert Cliffs Nuclear Power Plant, LLC. The agreement amendment is required in connection with the direct transfer of the operating licenses.

Sincerely,

/ra/

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

Docket Nos. 50-317, 50-318, and 72-8

Enclosures:

1. Amendment No. 295 to DPR-53 and Amendment No. 271 to DPR-69
2. Amendment No. 8 to SNM-2505
3. Indemnity Agreement Amendment

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 S. Baggett, NMSS

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NAME	RGuzman	SLittle/MO'Brien	SUttal	NSalgado (JBoska for)
DATE	10/29/09	9/28/09; 10/29/09	10/30/09	10/30/09

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