

January 14, 2000

FOR: The Commissioners
FROM: William D. Travers /RA/
Executive Director for Operations
SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNITS 1 AND 2 - RENEWAL OF FULL-POWER OPERATING LICENSE

- **PURPOSE:**
- **BACKGROUND:**
- **DISCUSSION:**
- **COORDINATION:**
- **RECOMMENDATION:**

PURPOSE:

To -- (1) inform the Commission of the results of the NRC staff's review of the Calvert Cliffs license renewal application submitted by the Baltimore Gas and Electric Company; (2) request that the Commission authorize the Director of NRR to make the appropriate findings and renew the operating licenses for the Calvert Cliffs Nuclear Power Plant Units 1 and 2 for an additional 20 years; and (3) request that the Commission authorize the Director of NRR to issue subsequent uncontested operating license renewals without prior Commission authorization.

BACKGROUND:

By letter dated April 8, 1998, the Baltimore Gas and Electric Company (BGE) submitted its application to renew the operating licenses (Reference 1) for Calvert Cliffs Nuclear Power Plant (CCNPP) Units 1 and 2 in accordance with 10 CFR Parts 51 and 54. In its submittal, BGE requested renewal of the operating licenses DPR-53 and DPR-69, which were initially issued under Section 104b of the Atomic Energy Act, for a period of 20 years beyond the current license expirations of midnight, July 31, 2014, and midnight, August 13, 2016, respectively.

DISCUSSION:

The staff performed its safety review of the Calvert Cliffs license renewal application in accordance with 10 CFR Part 54, using guidance in NRR Office Letter 805, "License Renewal Application Review Process," and the draft "Standard Review Plan for the Review of License Renewal Applications for Nuclear Power Plants," dated September 1997. NUREG-1705, "Safety Evaluation Report Related to the License Renewal of Calvert Cliffs Nuclear Power Plant, Units 1 and 2" (Reference 2), describes the results of the staff's review of the scoping and screening, aging management programs, and time-limited aging analyses, in accordance with the requirements of 10 CFR Part 54.

The Calvert Cliffs renewal application included a supplement to the Final Safety Analysis Report (FSAR), as required by 10 CFR 54.21(d). NUREG-1705 includes, as Appendix E, a summary listing of the programs, maintenance activities, and inspection procedures that form a significant basis for the staff's conclusion. This list represents those commitments that warrant regulatory control. BGE will incorporate appropriate changes to the next update of the Calvert Cliffs updated FSAR, which will occur after the issuance of a renewed license. The FSAR will be updated for each item in Appendix E in accordance with the guidance for 10 CFR 50.71(e). Since future changes to the FSAR will be made in accordance with 10 CFR 50.59, the NRC is assured that these programs, maintenance activities, and inspection procedures will be adequately controlled. Until the FSAR update is complete, a condition in the proposed renewed licenses ([Attachment !\[\]\(cf531ed27e91483460120fcc057b3901_img.jpg\)](#)) requires that any changes to the items on the list be made in accordance with 10 CFR 50.59. The listing in Appendix E also identifies future actions. Throughout NUREG-1705, the staff has described various schedules for future actions. The staff has determined that the future actions are not required for operation during the existing license term; however, all but one of these future actions (the volumetric inspections of the Unit 1 control element drive mechanisms to be completed by 2029 as described in Section 3.2.3.2.1.C (6) of NUREG-1705) are required to be completed before entering the period of extended operation to effectively manage aging. The proposed renewed licenses include license conditions for the completion of these future actions. BGE can change the schedules for these actions without prior NRC approval, so long as the actions are completed in accordance with the license condition.

Following the completion of the safety evaluation report (SER) for the Calvert Cliffs renewal application, a new issue emerged from an operating reactor event at another plant related to aging effects applicable to medium-voltage cables that are either inaccessible or direct-buried and exposed to moisture. The issue concerned the need to address the effects on cable insulation due to appreciable wetting or submergence. This issue was discussed with BGE and, in a letter dated January 12, 2000, BGE committed to evaluate the root cause of the event for applicability to the most susceptible cables at Calvert Cliffs and take appropriate corrective action to modify the cable aging management program, if necessary. The staff finds this commitment acceptable. The staff will supplement the SER and the commitments in Appendix E, as appropriate, to reflect this additional commitment.

On the basis of its safety evaluation, as described in NUREG-1705, the staff, as provided by 10 CFR 54.29, concludes that --

- (1) actions have been identified and have been or will be taken with respect to managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require an aging management review under 10 CFR 54.21(a)(1) and
- (2) actions have been identified and have been or will be taken with respect to time-limited aging analyses that have been identified to require review under 10 CFR 54.21(c).

Accordingly, the staff finds 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 for Calvert Cliffs Units 1 and 2.

To support the review of BGE's license renewal application, Region I conducted three inspections at Calvert Cliffs with support from Region II and NRR. The inspections were conducted in accordance with Inspection Manual Chapters 2515, "Light-Water Reactor Inspection Program - Operations Phase"; 2516, "Policy and Guidance for the License Renewal Inspection Programs"; and inspection procedure 71002, "License Renewal Inspection." As described in the memorandum from H. J. Miller, dated January 13, 2000 (Reference 3), the results of these three inspections verified that there is reasonable assurance the contents of the application, aging management programs, implementation, and other activities related to the license renewal of Calvert Cliffs are in accordance with docketed commitments and regulatory requirements.

Following issuance of the SER with open and confirmatory items on March 21, 1999 (Reference 4), the staff and BGE briefed the ACRS Subcommittee on Plant License Renewal on April 28 and 29, 1999, and briefed the ACRS Full Committee on May 5, 1999, on the SER. On May 19, 1999, the ACRS issued its "Interim Letter on the Safety Aspects of the Baltimore Gas and Electric Company's License Renewal Application for Calvert Cliffs Nuclear Power Plant, Units 1 and 2." In its interim letter, the ACRS noted that while a number of open issues still needed to be resolved, it appeared that BGE had developed and implemented adequate processes to identify the structures, systems, and components (SSCs) that are subject to an aging management review and will be able to demonstrate that aging-induced degradation will be adequately managed during the period of extended operation. Following resolution of the open and confirmatory items, the staff forwarded a report summarizing their closure to the ACRS on November 3, 1999. Subsequently, on November 18, 1999, the staff briefed the ACRS Subcommittee on Plant License Renewal regarding resolution of the open and confirmatory items. On December 2, 1999, the staff and BGE briefed the ACRS Full Committee. On December 10, 1999, the ACRS issued its recommendation to the Commission regarding the renewal of the Calvert Cliffs license based on its review of the license renewal application and SER, "Report on the Safety Aspects of the License Renewal Application for Calvert Cliffs Nuclear Power Plant Units 1 and 2." In its report (included in Chapter 5 of NUREG-1705, Reference 2), the ACRS stated that, on the basis of its review of the BGE license renewal application, the final SER, and the resolution of the open and confirmatory items identified in the SER, it concluded that BGE has properly identified the SSCs that are subject to aging management programs. Furthermore, the ACRS concluded that the programs instituted to manage aging-related degradation of the identified SSCs are appropriate and provide reasonable assurance that Calvert Cliffs Units 1 and 2 can be operated in accordance with its current licensing basis for the period of the extended license without undue risk to the health and safety of the public.


The staff performed its environmental review of the Calvert Cliffs license renewal application in accordance with 10 CFR Part 51, using the guidelines described in a draft of the "Standard Review Plans for Environmental Reviews for Nuclear Power Plants, Supplement 1: Operating License Renewal," NUREG-1555, Supplement 1 (February 1999 prepublication copy). On June 10, 1998, the staff published a Notice of Intent (63 FR 31813) to prepare an environmental impact statement (EIS) and conduct scoping, initiating a 60-day scoping period. The EIS, prepared by the staff for the plant-specific review, is a supplement to the Generic Environmental Impact Statement (GEIS), [NUREG-1437](#) that was codified in 10 CFR Part 51 for license renewal; for Calvert Cliffs, the EIS is Supplement 1 to the GEIS (SEIS). Two public scoping meetings were held in July 1998 in Solomons, Maryland. The staff also visited the CCNPP site in July 1998, reviewed the comments received during scoping, reviewed related documents, and consulted with Federal, State, and local agencies. On February 24, 1999, the staff issued a draft of the SEIS (Supplement 1 to NUREG-1437), which contained the preliminary results of the staff's evaluation and recommendation. With the publication of the EPA Notice of Filing of the draft SEIS (64 FR 10662, March 5, 1999), the NRC initiated a 75-day public comment period on the preliminary results of the staff's review. During this comment period, two public meetings were held in Solomons, Maryland, in April 1999. In these meetings, the staff described the approach and results of the NRC environmental review and answered questions to give members of the public information to assist them in formulating their comments. The comment period for the draft SEIS ended on May 20, 1999. The staff evaluated the comments received on the draft SEIS and completed its analysis, considering and weighing the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and the alternatives available for reducing or avoiding adverse effects. The final version of the SEIS regarding CCNPP was issued on October 5, 1999 (Reference 5). Disposition of the comments from members of the public are addressed in the SEIS. As discussed in Section 9.3 of the SEIS, the staff determined that, on the basis of (1) the analysis and findings in the *Generic Environmental Impact Statement for License Renewal of Nuclear Power Plants*, NUREG-1437; (2) the ER [Environmental Report] submitted by BGE; (3) consultation with other Federal, State, and local agencies; (4) its own independent review; and (5) its consideration of public comments, the adverse environmental impacts of license renewal for Calvert Cliffs Unit 1 and Unit 2 are not so great that preserving the option of license renewal for energy planning decisionmakers would be unreasonable.

In accordance with 10 CFR 54.19(b), license renewal applications include "conforming changes to the standard indemnity agreement, 10 CFR 140.92, Appendix B, to account for the expiration term of the proposed renewed license." BGE stated in its renewal application that:

The current indemnity agreement (B-70) for licenses DPR-53 and DPR-69 does not contain a specific expiration term. Expiration is expressed in terms of the time of the expiration of the licenses specified. Therefore, conforming changes to account for the expiration term of the proposed renewed licenses are unnecessary.

The staff notes that the current indemnity agreement for Calvert Cliffs states in Article VII that the agreement shall terminate at the time of expiration of that license specified in Item 3 of the attachment to the agreement. Item 3 of the attachment to the indemnity agreement lists two license numbers. By maintaining the license numbers on issuance of the renewed license, conforming changes need not be made to the indemnity agreement. Therefore, the requirements of 10 CFR 54.19(b) have been met.

The National Whistleblower Center (NWC), requested a hearing and petitioned for leave to intervene in the proceeding on BGE's license renewal application. On October 16, 1998, the Atomic Safety and Licensing Board (ASLB) denied the intervention petition and hearing request and dismissed the proceeding. NWC appealed the ASLB's denial to the Commission and the Commission upheld the ASLB's decision on December 23, 1998. NWC filed an appeal with the United States Court of Appeals for the District of Columbia Circuit. Although the Court on November 12, 1999, initially ruled 2-1 against the NRC, the Court, on its own motion, vacated its November 12 decision on November 22, 1999. On December 7, 1999, the Court issued an order for briefs and argument in the case. Briefs are to be filed on January 21, 2000, and the case is to be argued on January 26, 2000. The Court did not stay further NRC action on the application pending resolution of the appeal.

As a result of the staff's review of BGE's license renewal application, the staff recommends that the Commission authorize the Director of NRR to make the appropriate findings, and once he has made those findings, to issue renewed operating licenses for the Calvert Cliffs Nuclear Power Plants Unit 1 and Unit 2 for an additional 20 years of operation in accordance with the attached renewed licenses ([Attachment](#) ) .

In this paper, the staff is also seeking Commission guidance on the issue of the Commission's role in the issuance of future uncontested licenses. Pursuant to Management Directive 9.27, the Director of NRR is authorized and directed to take action to:

issue, renew, and amend licenses for manufacture, construction, possession, use, acquisition, and operation of utilization and production facilities other than fuel reprocessing plants and isotopic enrichment plants required by the Atomic Energy Act of 1954, as amended; sections 201(1), 202(2), and 203 of the Energy Reorganization Act of 1974; and 10 CFR Part 50, including amendments to such licenses with respect to safeguards matters and transportation within the site boundary.

An apparent limitation of the Director's authority, which does not appear in Management Directive 9.27, is contained in a 1981 policy statement, "Statement of Policy on Issuance of Uncontested Fuel-Load and Low-Power Testing Operating Licenses," 48 *FR* 47906 (September 30, 1981). According to this Policy Statement, which in very broad terms addresses the issuance of operating licenses:

In future uncontested cases, full-power operation will be authorized by the Commission. However, in such cases the Director shall authorize fuel-loading and low-power testing without the need to obtain prior Commission approval.

A comparable provision limiting the Director's authority in contested proceedings is found in 10 CFR 2.764 (f)(2). This raises the question of whether the Policy Statement limits the Director's authority to issue renewed licenses. With the issuance of the initial license, there normally issued a fuel-load/low-power license, followed by a full-power license; however, the effect of license renewal is to continue to permit full-power operation of a facility that was previously authorized to operate at full-power for a period of forty years. The Policy Statement predated any license renewal regulations, so the staff concludes that the Policy Statement did not address the specific question of who would issue a renewed license. The Policy Statement appears to be concerned solely with the issuance of the initial license for a facility (because of the clear distinction between fuel-loading/low-power testing, and full-power operation). On the basis of the foregoing and, in the absence of other guidance, it is not clear whether the Commission wants to reserve for itself the authorization for the issuance of a renewed license. In light of the existence of the Policy Statement, the staff is seeking clarification of the role of the Commission in the issuance of future uncontested license renewals. Additionally, the staff recommends that the Commission clarify its 1981 Policy Statement to permit the Director of NRR, upon making the appropriate findings, to issue renewed licenses without prior Commission approval.

COORDINATION:

The Office of the General Counsel has reviewed this paper and has no legal objections.

The Office of the Chief Financial Officer has reviewed this paper for resource implications and has no objections.

RECOMMENDATION:

That the Commission:

1. Authorize the Director of NRR to renew the operating licenses for the Calvert Cliffs Nuclear Power Plants Units 1 and 2 upon making the appropriate findings on safety and environmental matters.
2. Require the staff to revise the 1981 Policy Statement, "Statement of Policy on Issuance of Uncontested Fuel-Load and Low Power Testing Operating Licenses," to make it clear that the Director of NRR is authorized to issue renewed licenses in uncontested proceedings after a briefing to the Commission, if requested. The staff will continue to request

Commission authorization for subsequent renewals until these actions are taken.

3. Note that the staff will make any necessary conforming changes to the renewed licenses as a result of any pending licensing actions while the Commission is considering the staff's recommendations.

/RA/

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Attachment: [Renewed License for Calvert Cliffs Nuclear Power Plant Units 1 and 2](#) 

References:

1. "Calvert Cliffs Nuclear Power Plant Units 1 and 2 License Renewal Application," Accession Number 9804100416
2. "NUREG-1705, Safety Evaluation Report Related to the License Renewal of Calvert Cliffs Nuclear Power Plant, Units 1 and 2," dated December 1999, Accession Number ML003674053
3. "Regional Administrator Letter on License Renewal for Calvert Cliffs Nuclear Power Plant, Units 1 and 2," Accession Number ML003674284
4. "Safety Evaluation Report Related to the License Renewal of Calvert Cliffs Nuclear Power Plant, Units 1 and 2," dated March 21, 1999, Accession Number 9903290122
5. "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 1, Regarding the Calvert Cliffs Plant, Final Report," Accession Number 9910290240