



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

50-317/318

January 7, 1999

Mr. Charles H. Cruse, Vice President  
Nuclear Energy Division  
Baltimore Gas and Electric Company  
1650 Calvert Cliffs Parkway  
Lusby, MD 20657-4702

SUBJECT: SPECIFIC INFORMATION NEEDED FOR THE STAFF EVALUATION OF  
ENVIRONMENTAL QUALIFICATION FOR LICENSE RENEWAL

Dear Mr. Cruse:

On October 22, 1998, the staff met with representatives of Baltimore Gas and Electric Company (BGE) to discuss its license renewal application (LRA) for the Calvert Cliffs Nuclear Power Plant (CCNPP) as the application relates to the staff's position on environmental qualification (EQ). The staff had documented its position on EQ in guidance enclosed with a letter to Nuclear Energy Institute, dated September 23, 1998. During the October 22 meeting, BGE representatives described five options for ensuring equipment remains qualified in accordance with 10 CFR 50.49 which would constitute the aging management program during the period of extended operation. In addition, BGE representatives identified specific text within the LRA which describes the procedures for complying with §50.49.

The staff reviewed this information and found some areas where a clarification of the EQ options will assist the staff in developing a safety evaluation basis which describes how the procedures for compliance with §50.49 adequately manage EQ time-limited aging analyses pursuant to §54.21(c)(1)(iii). For example, the LRA contains a description of activities by which equipment qualified to §50.49 would be replaced, and discusses an alternate approach when there are "sound reasons to the contrary." However, the staff also found the need for more specific information to assess the "sound reasons to the contrary," as well as procedural aspects for the other options available. Accordingly, we request that BGE provide the following information for the options discussed during the October 22, 1998, meeting:

1. Describe the procedures that are used to control the use of the "sound reasons to the contrary" alternative for equipment replacement, or commit to maintain such procedures in accordance with Regulatory Guide 1.89, Revision I.
2. The LRA does not contain a discussion on refurbishment. Rather, the LRA states that "[t]he only corrective action currently taken by CCNPP 50.49 Program is replacement with new equipment, ... This same corrective action will be used during the period of extended operation." Describe the process for refurbishment as it applies to EQ, and describe the procedural controls that BGE relies upon that ensure that replacement components or groups of devices are returned to their original qualified condition.

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3. The LRA contains a statement that an approach for ongoing qualification does not currently exist at CCNPP. During the October 22, 1998 meeting, BGE stated that it sought to keep this option open for EQ components and groups of items during the period of extended operation. To apply this option, the staff would expect the licensing basis to include a testing program that conforms to the guidance in IEEE 323-1974, Section 6.6 (1) or (2). Describe how BGE would intend to incorporate such an ongoing qualification program into the licensing basis for Calvert Cliffs at some time in the future.
4. The attributes of re-analyses that need to be specifically provided for the EQ device types listed in Table 6.3-1 include the following: analytical methods; data collection (including a description of the method used to monitor service conditions) and reduction methods; underlying assumptions; acceptance criteria; corrective actions if acceptance criteria are not met; and the period of time prior to the end of qualified life when the re-analyses will be completed. The LRA currently discusses analytical methods, underlying assumptions, and corrective actions. However, clarifications with respect to data collection and reduction methods and underlying assumptions are needed for the staff to develop a technical basis for the adequacy of the aging management aspects of re-analysis methods.

The LRA contains the following information: *devices that are exposed to temperatures well below the maximum normal design value may be re-evaluated using a bounding value that envelopes the maximum temperatures experienced instead of the maximum design temperature. There is no need to maintain the excess conservatism that exists in the current qualification just because the maximum design temperature was used as the basis for the current qualified life. This concept holds for all equipment qualification parameters, including temperature, pressure, radiation ...* Identify if any changes have been made to the underlying assumptions affecting equipment qualified life related to the normal thermal, radiation, mechanical, electrical, and chemical environment in which the equipment operates, and describe the process by which such changes will be made in the future. Any changes made to underlying assumptions should be identified. Data collection and reduction methods, such as the degradation-weighted average temperature techniques that will be used to re-evaluate qualified life, should be provided as part of the description of the process by which continued compliance with §50.49 will adequately manage EQ re-analysis through the period of extended operation.

In addition, the application is not clear whether there will be any changes in the use of the currently-approved methodology and acceptance criteria. If BGE has made any changes to analytical methods or acceptance criteria, describe those changes so that they may be evaluated as they were at the time of initial licensing and describe the procedures that will be used to make such changes in the future. If no changes have been made or are planned, please so state.

January 7, 1998

Please provide a schedule by letter, electronic mail, or telephonically for the submittal of your response to these additional questions within 30 days of the receipt of this letter. Additionally, the staff would be willing to meet again with BGE prior to the submittal of the responses to provide clarifications of the staff's requests for additional information.

Sincerely,

**Original Signed By**

Christopher I. Grimes, Project Director  
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Docket Nos. 50-317 and 50-318

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