



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

ENCLOSURE 1

SAFETY EVALUATION

OFFICE OF NUCLEAR REACTOR REGULATION

CALVERT CLIFFS UNIT 1

DOCKET NO. 50-317

ENVIRONMENTAL QUALIFICATION OF ELECTRIC EQUIPMENT IMPORTANT TO SAFETY

INTRODUCTION

Equipment which is used to perform a necessary safety function must be demonstrated to be capable of maintaining functional operability under all service conditions postulated to occur during its installed life for the time it is required to operate. This requirement, which is embodied in General Design Criteria 1 and 4 of Appendix A and Sections III, XI, and XVII of Appendix B to 10 CFR 50, is applicable to equipment located inside as well as outside containment. More detailed requirements and guidance relating to the methods and procedures for demonstrating this capability for electrical equipment have been set forth in 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants," NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment" (which supplements IEEE Standard 323 and various NRC Regulatory Guides and industry standards), and "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines).

BACKGROUND

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On February 8, 1979, the NRC Office of Inspection and Enforcement (IE) issued to all licensees of operating plants (except those included in the systematic evaluation program (SEP)) IE Bulletin (IEB) 79-01, "Environmental Qualification of Class IE Equipment." This Bulletin, together with IE Circular 78-08 (issued on May 31, 1978), required the licensees to perform reviews to assess the adequacy of their environmental qualification programs.

On January 14, 1980, NRC issued IEB 79-01B which included the DOR Guidelines and NUREG-0588 as attachments 4 and 5, respectively. Subsequently, on May 23, 1980, Commission Memorandum and Order CLI-80-21 was issued and stated that the DOR Guidelines and portions of NUREG-0588 form the requirements that licensees must meet regarding environmental qualification of safety-related electrical equipment in order to satisfy those aspects of 10 CFR 50, Appendix A, General Design Criterion (GDC) 4. Supplements to IEB 79-01B were issued for further clarification and definition of the staff's needs. These supplements were issued on February 29, September 30, and October 24, 1980.

In addition, the staff issued orders dated August 29, 1980 (amended in September 1980) and October 24, 1980 to all licensees. The August order required that the licensees provide a report, by November 1, 1980, documenting the qualification of safety-related electrical equipment. The October order required the establishment of a central file location for the maintenance of all equipment qualification records. The central file was mandated to be established by December 1, 1980. The staff subsequently issued a Safety Evaluation Report (SER) on environmental qualification of safety-related electrical equipment to the licensee on May 28, 1981. This SER directed the licensee to "either provide documentation of the missing qualification information which demonstrates that safety-related equipment meets the DOR Guidelines or NUREG-0588 requirements or commit to a corrective action (requalification, replacement (etc.))." The licensee was required to respond to NRC within 90 days of receipt of the SER. In response to the staff SER issued in 1981, the licensee submitted additional information regarding the qualification of safety-related electrical equipment. This information was evaluated for the staff by the Franklin Research Center (FRC) in order to: 1) identify all cases where the licensee's response did not resolve the significant qualification issues, 2) evaluate the licensee's qualification documentation in accordance with established criteria to determine which equipment had adequate documentation and which did not, and 3) evaluate the licensee's qualification documentation for

safety-related electrical equipment located in harsh environments required for TMI Lessons Learned Implementation. A Technical Evaluation Report (TER) was issued by FRC on October 13, 1982. A Safety Evaluation Report was subsequently issued to Baltimore Gas and Electric Company on December 16, 1982, with the FRC TER as an attachment.

A final rule on environmental qualification of electric equipment important to safety for nuclear power plants became effective on February 22, 1983. This rule, Section 50.49 of 10 CFR 50, specifies the requirements to be met for demonstrating the environmental qualification of electrical equipment important to safety located in a harsh environment. In accordance with this rule, equipment for Calvert Cliffs Unit 1 may be qualified to the criteria specified in either the DOR Guidelines or NUREG-0588, except for replacement equipment. Replacement equipment installed subsequent to February 22, 1983 must be qualified in accordance with the provisions of 10 CFR 50.49, using the guidance of Regulatory Guide 1.89, unless there are sound reasons to the contrary.

A meeting was held with each licensee of plants for which a TER had been prepared for the staff by FRC in order to discuss all remaining open issues regarding environmental qualification, including acceptability of the environmental conditions for equipment qualification purposes, if this issue had not yet been resolved. On March 16, 1984, a meeting was held to discuss BG&E's proposed method to resolve the environmental qualification deficiencies identified in the December 16, 1982 SER and October 13, 1982 FRC TER. Discussions also included BG&E's general methodology for compliance with 10 CFR 50.49, and justification for continued operation for those equipment items for which environmental qualification is not yet completed. The minutes of the meeting and proposed method of resolution for each of the environmental qualification deficiencies are documented in May 14 and July 9, 1984 submittals from the licensee.

EVALUATION

The evaluation of the acceptability of the licensee's electrical equipment environmental qualification program is based on the results of an audit review performed by the staff of: (1) the licensee's proposed resolutions of the environmental qualification deficiencies identified in the December 16, 1982 SER and October 13, 1982 FRC TER; (2) compliance with the requirements of 10 CFR 50.49; and (3) justification for continued operation (JCO) for those equipment items for which the environmental qualification is not yet completed.

Proposed Resolutions of Identified Deficiencies

The proposed resolutions for the equipment environmental qualification deficiencies, identified in the December 16, 1982 SER, and the FRC TER enclosed with it, are described in the licensee's May 14 and July 9, 1984 submittals. During the March 16, 1984 meeting with the licensee, the staff discussed the proposed resolution of each deficiency for each equipment item identified in the FRC TER and found the licensee's approach for resolving the identified environmental qualification deficiencies acceptable. The majority of deficiencies identified were documentation, similarity, aging, qualified life and replacement schedule. All open items identified in the SER dated December 16, 1982 were also discussed and the resolution of these items has been found acceptable by the staff.

The approach described by the licensee for addressing and resolving the identified deficiencies includes replacing equipment, performing additional analyses, utilizing additional qualification documentation beyond that reviewed by FRC, obtaining additional qualification documentation, and determining that some equipment is outside the scope of 10 CFR 50.49, and therefore not required to be environmentally qualified, e.g., located in a mild environment. We discussed the proposed resolutions

in detail on an item by item basis with the licensee during the March 16, 1984 meeting. Replacing or exempting equipment, for an acceptable reason, are clearly acceptable methods for resolving environmental qualification deficiencies. The more lengthy discussions with the licensee concerned the use of additional analyses or documentation. Although we did not review the additional analyses or documentation, we discussed how analysis was being used to resolve deficiencies identified in the FRC TER, and the content of the additional documentation in order to determine the acceptability of these methods. The licensee's equipment environmental qualification files will be audited by the staff during follow-up inspections to be performed by Region I, with assistance from IE Headquarters and NRR staff as necessary. Since a significant amount of documentation has already been reviewed by the staff and Franklin Research Center, the primary objective of the file audit will be to verify that they contain the appropriate analyses and other necessary documentation to support the licensee's conclusion that the equipment is qualified. The inspections will verify that the licensee's program for surveillance and maintenance of environmental qualified equipment is adequate to assure that this equipment is maintained in the as analyzed or tested condition. The method used for tracking periodic replacement parts, and implementation of the licensee's commitments and actions, e.g. regarding replacement of equipment, will also be verified.

Based on our discussions with the licensee and our review of its submittal, we find the licensee's approach for resolving the identified environmental qualification deficiencies acceptable.

Compliance With 10 CFR 50.49

In its May 14 and July 9, 1984 submittals, the licensee has described the approach used to identify equipment within the scope of paragraph (b)(1) of 10 CFR 50.49, equipment relied upon to remain functional during and following design basis events. The licensee states that the flooding and environmental effects resulting from all postulated design-basis accidents documented in the Calvert Cliffs Final Safety Analysis Report (FSAR), including the Loss-of-Coolant Accident (LOCA) and the High Energy Line Break (HELB) Accidents were considered in the identification of safety-related electrical equipment which was to be environmentally qualified. The flooding and environmental effects resulting from High-Energy Line Breaks (HELBs) outside containment, as documented in

Appendix 10A of the FSAR, were also considered in the identification of this equipment. That analysis provided an assessment of the dynamic effects, including flooding, of pipe ruptures in various high energy fluid systems outside containment and concluded that adequate protection from flooding is provided by floor drains, water tight doors, pressure retaining walls and other design features. Therefore, all design-basis events including accidents at Calvert Cliffs were considered in the identification of electrical equipment within the scope of paragraph (b)(1) of 10 CFR 50.49 (i.e., "Safety-related electric equipment . . .").

The licensee's approach for identifying equipment within the scope of paragraph (b)(1) is in accordance with the requirements of that paragraph, and therefore acceptable.

The method used by the licensee for identification of electrical equipment within the scope of paragraph (b)(2) of 10 CFR 50.49, nonsafety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions, is summarized below:

1. A list was generated of safety-related electric equipment as defined in paragraph 50.49(b)(1) required to remain functional during or following the design-basis loss of coolant accident (LOCA) or high energy line break (HELB). For equipment located inside containment, the LOCA was identified as the accident resulting in the most severe accident environmental conditions. Outside containment, the main steam line break (MSLB) was identified as the only design basis accident that would result in a significantly adverse environment. The selection of these accidents and the development of the list of safety-related

electric equipment was based upon a review of the following Calvert Cliffs documents:

- Updated Final Safety Analysis Report
- Electrical Circuit and Raceway Schedule
- Instrument Index
- Q-List
- P&IDs
- Electrical Schematics

The actual location of safety-related electric equipment was established using cable tray and conduit layout drawings and later confirmed by plant walkdown.

2. As a result of electrical system design and installation practices employed during the construction of Calvert Cliffs, all auxiliary devices (such as automatic trips) which are electrically connected to the control or power circuitry of safety-related equipment are treated as safety-related and have thus been qualified to the extent that they are exposed to a potentially harsh environment. It should be noted, however, that the vast majority of such devices are located in the control room, the switchgear rooms, or the cable spreading rooms, all of which are considered mild environment areas and outside the scope of 10 CFR 50.49.
3. Electrical components required for the operation of auxiliary systems which are directly mechanically connected to, and required for the proper operation of safety-related equipment have been qualified to the extent that they are located in a potentially harsh environment. This is due to the fact that during plant construction these components were treated in a manner consistent with the classification of the system they supported. Consequently, the review of the document discussed in Item (1), above, included identification of electrical equipment supporting required auxiliary systems.

4. Electrical design practices employed at Calvert Cliffs minimize the likelihood of either physical or electric interactions between safety-related and non-safety related electrical equipment. These practices include the use of properly coordinated protective relays, circuit breakers, and fuses for fault protection. In addition, physical separation is provided where it is desirable to provide additional assurance that mechanically induced interactions will not degrade the function of safety-related electric equipment.

We find the methodology used by the licensee is acceptable since it provides reasonable assurance that equipment within the scope of paragraph (b)(2) of 10 CFR 50.49 has been identified.

With regard to paragraph (b)(3) of 10 CFR 50.49, the licensee discusses the program in its July 9, 1984 letter for identification of instrumentation and sampling equipment which requires environmental qualification to meet the intent of Regulatory Guide 1.97. The staff has not yet completed its review for conformance to Regulatory Guide 1.97. The licensee program for evaluating electrical equipment within the scope of 10 CFR 50.49 (b)(3) will consider all Regulatory Guide 1.97 Category 1 and 2 equipment. The final identification of equipment requiring qualification pursuant to paragraph 50.49(b)(3) will occur as a part of the R.G. 1.97 implementation program in accordance with commitments made in response to Supplement 1 to NUREG-0737.

We find the licensee's approach to identifying equipment within the scope of paragraph (b)(3) of 10 CFR 50.49 acceptable since it is in accordance with the requirements of that paragraph.

Justification for Continued Operation

The licensee has provided, in its May 14, 1984 submittal, justification for continued operation addressing each item of equipment for which the environmental qualification is not yet completed (see enclosure for the JCO equipment list).

We have reviewed each JCO provided by the licensee in its May 14, 1984 submittal and find them acceptable since they are based on essentially the same criteria that were used by the staff and its contractor to review JCO's previously submitted by licensees. These criteria, listed below, are also essentially the same as those contained in 10 CFR 50.49(i).

- a. The safety function can be accomplished by some other designated equipment that is qualified, and failure of the principal equipment as a result of the harsh environment will not degrade other safety functions or mislead the operator.
- b. Partial test data that does not demonstrate full qualification but provides a basis for concluding the equipment will perform its function. If it cannot be concluded from the available data that the equipment will not fail after completion of its safety function, then that failure must not result in significant degradation of any safety function or provide misleading information to the operator.
- c. Limited use of administrative controls over equipment that has not been demonstrated to be fully qualified. For any equipment assumed to fail as a result of the accident environment, that failure must not result in significant degradation of any safety function or provide misleading information to the operator.

CONCLUSIONS

Based on the above evaluation, we conclude the following with regard to the qualification of electric equipment important to safety within the scope of 10 CFR 50.49.

- o Baltimore Gas and Electric's electrical equipment environmental qualification program complies with the requirements of 10 CFR 50.49.
- o The proposed resolution for each of the environmental qualification deficiencies identified in the December 16, 1982 SE and FRC TER are acceptable.
- o Continued operation until completion of the licensee's environmental qualification program will not present undue risk to the public health and safety.

Justification for Continued Operation Equipment List

Plant <u>Tag No.</u>	NRC <u>TER No.</u>	<u>Description</u>
MOV6902	15	FMC Motor Operator
MCC104R	-	Gould-Brown Boveri Motor Control Center
NB122	-	Westinghouse Power Supply
NB422	-	Westinghouse Power Supply



UNITED STATES
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ENCLOSURE 2

SAFETY EVALUATION

OFFICE OF NUCLEAR REACTOR REGULATION

CALVERT CLIFFS UNIT 2

DOCKET NO. 50-318

ENVIRONMENTAL QUALIFICATION OF ELECTRIC EQUIPMENT IMPORTANT TO SAFETY

INTRODUCTION

Equipment which is used to perform a necessary safety function must be demonstrated to be capable of maintaining functional operability under all service conditions postulated to occur during its installed life for the time it is required to operate. This requirement, which is embodied in General Design Criteria 1 and 4 of Appendix A and Sections III, XI, and XVII of Appendix B to 10 CFR 50, is applicable to equipment located inside as well as outside containment. More detailed requirements and guidance relating to the methods and procedures for demonstrating this capability for electrical equipment have been set forth in 10 CFR 50.49, "Environmental Qualification of Electric Equipment Important to Safety for Nuclear Power Plants," NUREG-0588, "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment" (which supplements IEEE Standard 323 and various NRC Regulatory Guides and industry standards), and "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines).

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In addition, the staff issued orders dated August 29, 1980 (amended in September 1980) and October 24, 1980 to all licensees. The August order required that the licensees provide a report, by November 1, 1980, documenting the qualification of safety-related electrical equipment. The October order required the establishment of a central file location for the maintenance of all equipment qualification records. The central file was mandated to be established by December 1, 1980. The staff subsequently issued a Safety Evaluation Report (SER) on environmental qualification of safety-related electrical equipment to the licensee on May 28, 1981. This SER directed the licensee to "either provide documentation of the missing qualification information which demonstrates that safety-related equipment meets the DOR Guidelines or NUREG-0588 requirements or commit to a corrective action (requalification, replacement (etc.))." The licensee was required to respond to NRC within 90 days of receipt of the SER. In response to the staff SER issued in 1981, the licensee submitted additional information regarding the qualification of safety-related electrical equipment. This information was evaluated for the staff by the Franklin Research Center (FRC) in order to: 1) identify all cases where the licensee's response did not resolve the significant qualification issues, 2) evaluate the licensee's qualification documentation in accordance with established criteria to determine which equipment had adequate documentation and which did not, and 3) evaluate the licensee's qualification documentation for

safety-related electrical equipment located in harsh environments required for TMI Lessons Learned Implementation. A Technical Evaluation Report (TER) was issued by FRC on October 13, 1982. A Safety Evaluation Report was subsequently issued to the Baltimore Gas and Electric Company on December 16, 1982, with the FRC TER as an attachment.

A final rule on environmental qualification of electric equipment important to safety for nuclear power plants became effective on February 22, 1983. This rule, Section 50.49 of 10 CFR 50, specifies the requirements to be met for demonstrating the environmental qualification of electrical equipment important to safety located in a harsh environment. In accordance with this rule, equipment for Calvert Cliffs Unit 2 may be qualified to the criteria specified in either the DOR Guidelines or NUREG-0588, except for replacement equipment. Replacement equipment installed subsequent to February 22, 1983 must be qualified in accordance with the provisions of 10 CFR 50.49, using the guidance of Regulatory Guide 1.89, unless there are sound reasons to the contrary.

A meeting was held with each licensee of plants for which a TER had been prepared for the staff by FRC in order to discuss all remaining open issues regarding environmental qualification, including acceptability of the environmental conditions for equipment qualification purposes, if this issue had not yet been resolved. On March 16, 1984, a meeting was held to discuss Baltimore Gas & Electric's proposed method to resolve the environmental qualification deficiencies identified in the December 16, 1982 SER and October 13, 1982 FRC TER. Discussions also included Baltimore Gas & Electric's general methodology for compliance with 10 CFR 50.49, and justification for continued operation for those equipment items for which environmental qualification is not yet completed. The minutes of the meeting and proposed method of resolution for each of the environmental qualification deficiencies are documented in May 14 and July 9, 1984 submittals from the licensee.

EVALUATION

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The approach described by the licensee for addressing and resolving the identified deficiencies includes replacing equipment, performing additional analyses, utilizing additional qualification documentation beyond that reviewed by FRC, obtaining additional qualification documentation, and determining that some equipment is outside the scope of 10 CFR 50.49, and therefore not required to be environmentally qualified, e.g., located in a mild environment. We discussed the proposed resolutions in detail on an item by item basis with the licensee during

the March 16, 1984 meeting. Replacing or exempting equipment, for an acceptable reason, are clearly acceptable methods for resolving environmental qualification deficiencies. The more lengthy discussions with the licensee concerned the use of additional analyses or documentation. Although we did not review the additional analyses or documentation, we discussed how analysis was being used to resolve deficiencies identified in the FRC TER, and the content of the additional documentation in order to determine the acceptability of these methods. The licensee's equipment environmental qualification files will be audited by the staff during follow-up inspections to be performed by Region I, with assistance from IE Headquarters and NRR staff as necessary. Since a significant amount of documentation has already been reviewed by the staff and Franklin Research Center, the primary objective of the file audit will be to verify that they contain the appropriate analyses and other necessary documentation to support the licensee's conclusion that the equipment is qualified. The inspections will verify that the licensee's program for surveillance and maintenance of environmental qualified equipment is adequate to assure that this equipment is maintained in the as analyzed or tested condition. The method used for tracking periodic replacement parts, and implementation of the licensee's commitments and actions, e.g., regarding replacement of equipment, will also be verified.

Based on our discussions with the licensee and our review of its submittal, we find the licensee's approach for resolving the identified environmental qualification deficiencies acceptable.

Compliance With 10 CFR 50.49

In its May 14 and July 9, 1984 submittals, the licensee has described the approach used to identify equipment within the scope of paragraph (b)(1) of 10 CFR 50.49, equipment relied upon to remain functional during and following design basis events. The licensee states that the flooding and environmental effects resulting from all postulated design-basis accidents documented in of the Calvert Cliffs Final Safety Analysis Report (FSAR), including the Loss-of-Coolant Accident (LOCA) and the High Energy Line Break (HELB) Accidents were considered in the identification of safety-related electrical equipment which was to be environmentally qualified. The flooding and environmental effects resulting from High-Energy Line Breaks (HELBs) outside containment, as documented in Appendix 10A of the FSAR, were also considered in the

identification of this equipment. That analysis provided an assessment of the dynamic effects, including flooding, of pipe ruptures in various high energy fluid systems outside containment and concluded that adequate protection from flooding is provided by floor drains, water tight doors, pressure retaining walls and other design features. Therefore, all design-basis events including accidents at Calvert Cliffs were considered in the identification of electrical equipment within the scope of paragraph (b)(1) of 10 CFR 50.49 (i.e., "Safety-related electric equipment...").

The licensee's approach for identifying equipment within the scope of paragraph (b)(1) is in accordance with the requirements of that paragraph, and therefore acceptable.

The method used by the licensee for identification of electrical equipment within the scope of paragraph (b)(2) of 10 CFR 50.49, nonsafety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions, is summarized below:

1. A list was generated of safety-related electric equipment as defined in paragraph 50.49(b)(1) required to remain functional during or following the design-basis loss of coolant accident (LOCA) or high energy line break (HELB). For equipment located inside containment, the LOCA was identified as the accident resulting in the most severe environmental conditions. Outside containment, the main steam line break (MSLB) was identified as the only design basis accident that would result in a significantly adverse environment. The selection of these accidents and the development of the list of safety-related electric equipment was based upon a review of the following Calvert Cliffs documents:

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The actual location of safety-related electric equipment was established using cable tray and conduit layout drawings and later confirmed by plant walkdown.

2. As a result of electrical system design and installation practices employed during the construction of Calvert Cliffs, all auxiliary devices (such as automatic trips) which are electrically connected to the control or power circuitry of safety-related equipment are treated as safety-related and have thus been qualified to the extent that they are exposed to a potentially harsh environment. It should be noted, however, that the vast majority of such devices are located in the control room, the switchgear rooms, or the cable spreading rooms, all of which are considered mild environment areas and outside the scope of 10 CFR 50.49.

3. Electrical components required for the operation of auxiliary systems which are directly mechanically connected to, and required for the proper operation of safety-related equipment have been qualified to the extent that they are located in a potentially harsh environment. This is due to the fact that during plant construction these components were treated in a manner consistent with the classification of the system they supported. Consequently, the review of the documents discussed in Item (1), above, included identification of electrical equipment supporting required auxiliary systems.

4. Electrical design practices employed at Calvert Cliffs minimize the likelihood of either physical or electric interactions between safety-related and non-safety related electrical equipment. These practices include the use of properly coordinated protective relays, circuit breakers, and fuses for fault protection. In addition, physical separation is provided where it is desirable to provide additional assurance that mechanically induced interactions will not degrade the function of safety-related electric equipment.

We find the methodology used by the licensee is acceptable since it provides reasonable assurance that equipment within the scope of paragraph (b)(2) of 10 CFR 50.49 has been identified.

With regard to paragraph (b)(3) of 10 CFR 50.49, the licensee discusses the program in its July 9, 1984 letter for identification of instrumentation and sampling equipment which requires environmental qualification to meet the intent of Regulatory Guide 1.97. The staff has not yet completed its review for conformance to Regulatory Guide 1.97. The licensee program for evaluating electrical equipment within the scope of 10 CFR 50.49(b)(3) will consider all Regulatory Guide 1.97 Category 1 and 2 equipment. The final identification of equipment requiring qualification pursuant to paragraph 50.49(b)(3) will occur as a part of the R.G. 1.97 implementation program in accordance with commitments made in response to Supplement 1 to NUREG-0737.

We find the licensee's approach to identifying equipment within the scope of paragraph (b)(3) of 10 CFR 50.49 acceptable since it is in accordance with the requirements of that paragraph.

Justification for Continued Operation

The licensee has provided, in its May 14, 1984 submittal, justification for continued operation addressing each item of equipment for which the environmental qualification is not yet completed (see enclosure for the JCO equipment list).

We have reviewed each JCO provided by the licensee in its May 14, 1984 submittal and find them acceptable since they are based on essentially the same criteria that were used by the staff and its contractor to review JCOs previously submitted by licensees. These criteria, listed below, are also essentially the same as those contained in 10 CFR 50.49(i).

- a. The safety function can be accomplished by some other designated equipment that is qualified, and failure of the principal equipment as a result of the harsh environment will not degrade other safety functions or mislead the operator.
- b. Partial test data that does not demonstrate full qualification but provides a basis for concluding the equipment will perform its function. If it cannot be concluded from the available data that the equipment will not fail after completion of its safety function, then that failure must not result in significant degradation of any safety function or provide misleading information to the operator.
- c. Limited use of administrative controls over equipment that has not been demonstrated to be fully qualified. For any equipment assumed to fail as a result of the accident environment, that failure must not result in significant degradation of any safety function or provide misleading information to the operator.

CONCLUSIONS

Based on the above evaluation, we conclude the following with regard to the qualification of electric equipment important to safety within the scope of 10 CFR 50.49.

- o Baltimore Gas and Electric's electrical equipment environmental qualification program complies with the requirements of 10 CFR 50.49.
- o The proposed resolution for each of the environmental qualification deficiencies identified in the December 16, 1982 SER and FRC TER are acceptable.
- o Continued operation until completion of the licensee's environmental qualification program will not present undue risk to the public health and safety.

Justification for Continued Operation Equipment List

Plant <u>Tag No.</u>	NRC <u>TER No.</u>	<u>Description</u>
MOV 6902	15	FMC Motor Operator
MCC 104R	-	Gould-Brown Baveri Motor Control Center
NB 122	-	Westinghouse Power Supply
NB 422	-	Westinghouse Power Supply