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BGE

A Member of the
Constellation Energy Group

November 19, 1999

U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Document Control Desk

SUBJECT: Calvert Cliffs Nuclear Power Plant
Unit Nos. 1 & 2; Docket Nos. 50-317 & 50-318
License Amendment Request: Unreviewed Safety Question - Turbine Missiles

Pursuant to 10 CFR 50.90, Baltimore Gas & Electric Company (BGE) hereby requests amendments to Operating License Nos. DPR-53 and DPR-69 for approval of changes to the Updated Final Safety Analysis Report (UFSAR) that constitute an unreviewed safety question (USQ) as described in 10 CFR 50.59. Specifically, these changes would be an increase in the probability of occurrence of malfunction. Additionally, these changes were not previously evaluated in the UFSAR. However, under the "new" 10 CFR 50.59 rule, these changes would be a "negligible" increase and "would result in less than a minimal increase," and, therefore, would not require a license amendment.

Regulations require that structures, systems, and components important to safety be appropriately protected against the effects of missiles that might result from equipment failures. Failures that could occur in the large turbines of the main turbine-generator sets have the potential for producing large high-energy missiles (hereinafter called "turbine missiles"). Both of our turbine-generator suppliers studied the failure of the rotating elements of their turbine-generators. The UFSAR only addresses a turbine missile hitting the Containment Building, Control Room, Switchgear Room, and Waste Processing Area. As result of revising the Unit 1 and Unit 2 turbine missile analysis, we determined that the discussion of turbine missiles in Section 5.3.1 of the UFSAR was incomplete. Specifically, it did not discuss the probability of a missile from the Unit 1 turbine-generator striking: 1) the refueling water tanks; 2) the No. 11 Fuel Oil Storage Tank; or 3) plant equipment through various roof slabs or through non-missile-proof openings in the missile-proof walls. When these additional targets are included, the total target area is increased. If the target area increases, the probability of a turbine missile causing equipment damage increases. It is this increase in probability that leads to an USQ for a turbine missile from Unit 1. Note that by using methodologies previously approved by NRC, the revised analysis concludes there is no USQ for turbine missiles from the Unit 2 turbine-generator. These methodologies are discussed in Attachment (1).

A001

UNREVIEWED SAFETY QUESTION

The UFSAR change is considered a USQ for Units 1 and 2 because the results of the revised Unit 1 turbine missile analysis for the following unprotected rooms or components show an increase in probability of occurrence of malfunction not previously evaluated in the UFSAR:

- the Refueling Water Tanks;
- the No. 11 Fuel Oil Storage Tank (non-missile-proof);
- the saltwater pumps through roof hatches in the Intake Structure roof;
- the roof slabs over the Refueling Water Tank Pump Room, the Control Room Heating, Ventilation, and Air Conditioning (HVAC) Equipment Room, the Spent Fuel Pool Area Ventilation Equipment Room, and a portion of 118' level roof over the fuel cask handling area;
- the Control Room HVAC Room through its non-missile-proof door; and
- the Unit 1 Auxiliary Building 45' Switchgear Room through the its non-missile-proof doors.

The probability of a missile from the Unit 1 turbine-generator striking them is a negligible increase in the probability of occurrence of malfunction of equipment associated with Units 1 and 2. Upon approval of this request, the UFSAR will be revised to reflect the proposed turbine missile description. There is no USQ associated with the Unit 2 turbine-generator. Additional information concerning these determinations is contained in Attachment (1).

REQUESTED CHANGES

Per 10 CFR 50.92(2)(c), we request the NRC review and approve the USQ and its supporting information in Attachment (1). We request approval through an amendment to our operating license that concludes the negligible increase in the probability of occurrence of malfunction for Unit 1 turbine missiles is acceptable.

SCHEDULE

The 2000 refueling outage is currently expected to begin in March 2000 and end in April 2000. Given this schedule, the next annual update to UFSAR will be due in October 2000. To support the UFSAR annual update schedule, we request that this change be approved by August 31, 2000.

ASSESSMENT AND REVIEW

We have evaluated the significant hazards considerations associated with this proposed amendment, as required by 10 CFR 50.92, and have determined that there are none (see Attachment 2 for a complete discussion). We have also determined that operation with the proposed amendment will not result in any significant change in the types or significant increases in the amounts of any effluents that may be released offsite, and no significant increases in individual or cumulative occupational radiation exposure. Therefore, the proposed amendment is eligible for categorical exclusion as set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment is needed in connection with the approval of the proposed change. The Plant Operations and Safety Review Committee and the Offsite Safety Review Committee have reviewed this proposed change and concur that operation with the proposed change will not result in an undue risk to the health and safety of the public.

Should you have questions regarding this matter, we will be pleased to discuss them with you.

Very truly yours,

STATE OF MARYLAND :
: **TO WIT:**
COUNTY OF CALVERT :

I, Charles H. Cruse, being duly sworn, state that I am Vice President, Nuclear Energy Division, Baltimore Gas and Electric Company (BGE), and that I am duly authorized to execute and file this License Amendment Request on behalf of BGE. To the best of my knowledge and belief, the statements contained in this document are true and correct. To the extent that these statements are not based on my personal knowledge, they are based upon information provided by other BGE employees and/or consultants. Such information has been reviewed in accordance with company practice and I believe it to be reliable.

Subscribed and sworn before me, a Notary Public in and for the State of Maryland and County of Calvert, this 19 day of November, 1999.

WITNESS my Hand and Notarial Seal: Michelle D. Hall
Notary Public

My Commission Expires: February 1, 2002
Date

CHC/JMO/dlm

Attachments: (1) Summary Description and Safety Analysis
(2) Determination of Significant Hazards

cc: R. S. Fleishman, Esquire
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ATTACHMENT (1)

SUMMARY DESCRIPTION AND SAFETY ANALYSIS

Baltimore Gas and Electric Company
Calvert Cliffs Nuclear Power Plant
November 19, 1999

ATTACHMENT (1)

SUMMARY DESCRIPTION AND SAFETY ANALYSIS

SUMMARY DESCRIPTION OF THE NEED FOR THE CHANGE

General Design Criterion 4, "Environmental and Missile Design Bases," of Appendix A, "General Design Criteria for Nuclear Power Plants," to 10 CFR Part 50, "Licensing of Production and Utilization Facilities," requires, in part, that structures, systems, and components important to safety be appropriately protected against the effects of missiles that might result from equipment failures. Failures that could occur in the large turbines of the main turbine-generator sets have the potential for producing large high-energy missiles (hereinafter called turbine missiles). Currently, our Updated Final Safety Analysis Report (UFSAR) only evaluates turbine missiles hitting the Containment Building, Control Room, Switchgear Room, and Waste Processing Area. As a result of revising the Unit 1 and Unit 2 turbine missile analysis to include additional structures, we determined that the discussion of turbine missiles in Section 5.3.1 of the UFSAR was incomplete in that the effects of turbine missiles on all appropriate plant equipment were not previously evaluated in the UFSAR. Specifically, it did not discuss the probability of a missile from the Unit 1 turbine-generator striking: 1) the refueling water tanks; 2) the No. 11 Fuel Oil Storage Tank; or 3) plant equipment through various roof slabs or through non-missile-proof openings in the missile-proof walls. The UFSAR Chapter 1 drawings correctly depict the location of these plant structures and components, including the thickness of and the openings in the missile-proof wall between the Turbine Building and the Auxiliary Building (the K-Line Wall). Therefore, no drawing changes were required as a result of revising the turbine missile analysis.

Now that the appropriate structures and components have been evaluated for low-trajectory missiles (LTM) and high-trajectory missiles (HTM), we have determined that these previously unanalyzed turbine missiles constitute an unreviewed safety question (USQ) as described in 10 CFR 50.59. Specifically, the results of the revised turbine missile analysis for unprotected rooms and components show an increase in probability of occurrence of malfunction not previously evaluated in the UFSAR. The increase is described below.

The proposed change will allow appropriately revising the turbine missile analysis described in the UFSAR.

SAFETY ANALYSIS SUPPORTING THE NEED FOR THE CHANGE

The proposed activity does not involve modification to any system, structure, or component. The proposed activity involves a change to the UFSAR. From the existing UFSAR description in Section 5.3.1, it is not clear that all appropriate structures and components were included in the original turbine missile analysis. The probability that a turbine will overspeed and generate a missile that penetrates the turbine casing is different for the Unit 1 and Unit 2 turbine-generators. Therefore, the revised turbine missile analysis is described separately for Unit 1 and 2.

A. Unit 1 Turbine Missile Analysis

The following safety-related structures were evaluated for both HTMs and LTMs from the General Electric (i.e., Unit 1) turbine-generator:

- Containment Cylinder;
- Containment Dome;
- Intake Structure 28.5' roof slab;
- Intake Structure 10' roof slab;
- Turbine Building Auxiliary Feedwater (AFW) Pump Room roof slab at the 27' elevation;

- Turbine Building AFW Pump Room Walls;
- Turbine Building AFW Pump Room 6' by 6' door opening;
- Auxiliary Building 69' roof slab (Except Refueling Tank Pump Room);
- Auxiliary Building 91.5' roof slab (except the roof area over the Control Room HVAC and Spent Fuel Pool Area Ventilation Equipment Room);
- Auxiliary Building 118.5' roof slab not over Spent Fuel Pool;
- Auxiliary Building 118.5' roof slab over Spent Fuel Pool;
- Auxiliary Building missile-proof wall between the Turbine Building and the Auxiliary building (the K-line wall - including the Control Room HVAC Equipment Room);
- Auxiliary Building wall at the East face of the Cask Handling Structure;
- Auxiliary Building, 3' Service Water Pump Room;
- Auxiliary Building 27' Switchgear Room;
- Auxiliary Building 45' Switchgear Room;
- Yard Structures: Safety-Related Diesel Generator Duct Banks/Manholes; and
- Other Safety-Related Yard Structures.

Results

High-Trajectory Missile (HTM)

High-trajectory missiles have nearly vertical trajectories. Missiles ejected more than a few degrees from the vertical either have sufficient speed that they land beyond the plant offsite, or their speed is low enough that their impact on most plant structures is not a significant hazard. NUREG 0800, Revision 2, Standard Review Plan, Section - 3.5.1.3, is only used as guidance for evaluating the risk from HTMs. Its use is not a commitment to the Standard Review Plan and does not incorporate the Standard Review Plan into our licensing basis. This guidance states that the probability of a turbine missile landing within a few hundred feet of the turbine-generator is in the order of 10^{-7} per square foot of horizontal target area. It states that the risk from HTMs is insignificant unless the vulnerable target area is on the order of 10,000 ft^2 or more.

Using the Standard Review Plan guidance, we assumed that the risk from an HTM is insignificant if the aggregate area of the safety-related structures, not protected by a sufficient thickness of concrete, is less than 10,000 ft^2. Per the guidance, the calculated aggregate area is calculated on a per unit basis. The design calculation lists the vulnerable Unit 1 structures and target areas that could be impacted by an HTM. This includes structures such as the refueling water tank, the fuel oil storage tank, and the roof hatches over the saltwater pumps. Certain roof slabs are also considered vulnerable to an HTM because the slab thickness was not sufficient to stop penetration. Since Units 1 and 2 are essentially mirror images, the target areas for Unit 1 and 2 are essentially equal. For Unit 1 turbine missiles, these include the roof slabs over the Unit 1 and 2 Refueling Tank Pump Rooms, the Control Room HVAC Equipment Room, Spent Fuel Pool Area Ventilation Equipment Room, and one third of the total area of the 118' level roof over the cask handling area. The total target area considered vulnerable to an HTM is less than 10,000 ft^2 for each unit. Therefore, the risk from an HTM is insignificant. Note that all of the Unit 1, 2 and Common structures listed above are equally vulnerable to a Unit 1 HTM. Therefore, any risk increase to these plant structures constitutes a USQ for Units 1 and 2.

Most of the safety-related equipment is protected from HTM by thick concrete barriers. A 2.33' thick concrete missile barrier located at elevation 69' protects the Control Room, Switchgear Room, and Waste Processing Area from an HTM (Chapter 1). A 2' thick concrete missile barrier positioned at elevation 118' protects the Spent Fuel Pool from an HTM. An 11.5" thick concrete roof slab and 1' thick wall at elevation 27' protects the AFW Pump Room. One- and two-foot thick concrete roof slabs protect the Intake Structure at the 28.5' and 10' roofs, respectively.

Low-Trajectory Missile (LTM)

Protection for the Auxiliary Building against an LTM is provided by a concrete missile-proof wall between the Turbine Building and the Auxiliary building (the K-line wall). This wall is 3' thick below elevation 69', and 2' thick above elevation 69' for areas protecting safety-related equipment. The design calculation evaluates the protection of Unit 1 equipment from a Unit 1 LTM.

The AFW Pump Room has 1' thick concrete walls with a 6' by 6' door opening. However, the room is completely protected from an LTM by the concrete turbine-generator pedestal at the 45' level.

The Auxiliary Building 27' Switchgear Room doors are not missile-proof. However, the doors are protected from an LTM by the 11.5" turbine deck slab at the 45' elevation. The shallow angle does not give the LTM sufficient energy to penetrate this slab.

The Auxiliary Building 45' Switchgear Room and 69' Control Room HVAC Equipment Room are protected by the 3' thick and 2' thick, respectively, concrete missile-proof walls except for the openings at their non-missile-proof doors. A turbine missile that hits one of these doors is assumed to go through them, strike safety-related equipment in the room, and cause it to fail. Recall that the Control Room HVAC Equipment is shared by both units. Therefore, any increase in risk of failure of equipment in this room affects both Units 1 and 2.

The risk associated with the a turbine missile striking the Switchgear Room or Control Room HVAC Equipment Room door is calculated using guidance in Regulatory Guide 1.115. This guidance states that the turbine missile hazard should be less than 10^{-7}. The hazard rate is calculated as the product of 3 probabilities: P1, P2, and P3.

P1 = Probability that a turbine will overspeed and generate a missile that penetrates the turbine casing (missile generation probability).

P2 = Probability that missile will strike safety-related equipment (strike probability).

P3 = Probability that the high energy turbine missile strike will cause unacceptable damage to the safety-related equipment (damage probability).

P4 = missile hazard rate = P1 x P2 x P3.

P1 for Unit 1 is calculated by General Electric. P1 is based partly on low pressure turbine inspection results, valve failure rates, in-service time, and valve/turbine control testing interval. Values of P1 are provided for various valve testing intervals, and years of additional service before the next inspection.

P2 is calculated in the revised risk analysis. It is a relatively simple calculation based on the total area of the doors as a fraction of the total area possible for a missile strike.

P3 is conservatively assumed to be 1.0 (i.e., if a missile strikes a piece of equipment, it is assumed to fail).

A detailed calculation for P4 in the revised risk analysis shows that the risk from LTMs from the Unit 1 General Electric turbine-generator to the Control Room HVAC Equipment Room and the 45' Unit 1 Switchgear Room through the doors is less than 10^{-7}. Regulatory Guide 1.115 states that this is an acceptable risk rate for the loss of an essential system from a single event. Therefore, the risk from the non-missile-proof 45' Switchgear Room and 69' Control Room HVAC Equipment Room doors is acceptable.

For Unit 1 and 2, there is a USQ for the following unprotected rooms or components due to an increase in probability of occurrence of malfunction not previously evaluated in the UFSAR (i.e., an HTM or LTM from the Unit 1 turbine as noted):

- the Refueling Water Tanks (HTM);
- the No. 11 Fuel Oil Storage Tank (non-missile-proof) (HTM);
- the Saltwater Pumps through roof hatches in the Intake Structure Roof (HTM);
- the roof slabs over the Refueling Water Tank Pump Room, the Control Room HVAC Equipment Room, Spent Fuel Pool Area Ventilation Equipment Room, and a portion of 118' level roof over the cask handling area (HTM); and
- the Control Room HVAC Room through its non-missile-proof door (LTM).

In addition to the above items, for Unit 1 only, there is a USQ for the Unit 1 Auxiliary Building 45' Switchgear Room through its non-missile-proof doors due to an increase in probability of occurrence of malfunction (i.e., an LTM) not previously evaluated in the UFSAR. In all cases, the probability of a missile from the Unit 1 turbine-generator striking the structures or components is a negligible increase in the probability of occurrence of malfunction of equipment associated with Units 1 and 2. Note that per construction period field quality control records, the actual concrete strength is at least 26% greater than that assumed in the design calculation. This conservatism is not credited in the USQ determination.

B. Unit 2 Turbine Missile Analysis

For Unit 2, the Westinghouse turbine-generator, the guidance in a letter to the Westinghouse Electric Corporation, dated February 2, 1987, was used *[USNRC correspondence from C. E. Rossi to J. A. Martin, Safety Evaluation Report February 2, 1987, Approval for Referencing of Licensing Topical Reports: March 1974 Report; WSTG-2-P, May 1981; and WSTG-3-P, July 1984]*. In that letter, the NRC staff stated that maintaining a small probability of turbine missile generation through testing and inspection is a reliable means of ensuring safety-related structures, systems, and components are adequately protected from such missiles. This approach simplifies and improves procedures for evaluation of turbine missile risks by eliminating from consideration factors such as missile trajectory and damage probability. The guidance uses the philosophy that turbine missile risk can be effectively managed by maintaining the turbine missile generation probabilities P1, less than 10^{-5} for unfavorably oriented turbine-generators. When this method is used, it is not necessary to calculate strike and damage probability (P2 x P3 [described above]).

The missile generation probability is calculated by Westinghouse in WCAP-14732, "Probabilistic Analysis of Reduction in Turbine Valve Test Frequency for Nuclear Plants with Westinghouse BB-296 Turbines with Steam Chests," dated June 1997. In the report, Westinghouse performed an evaluation of the probability of generating turbine missiles as a direct function of the testing frequency for the turbine governor valves and throttle valves. The report focuses on the probability of turbine missile ejection due to destructive overspeed (runaway speed in excess of approximately 180 percent). The turbine missile ejection frequencies in WCAP-14732 were calculated following the same basic methodology as is described in WCAP-11525 "Probabilistic Evaluation of Reduction in Turbine Valve Test Frequency," June 1987. In a supplemental safety evaluation dated November 2, 1989, issued to Westinghouse [i.e., the Chairman of the Turbine Valve Test Frequency Evaluation Subgroup, Mr. D. M. Musolf, Manager, Nuclear Support Services, Northern States Power Company], the NRC staff accepted the WCAP-11525 methodology for use in the determination of the probability of turbine missile generation. The BB-296 turbine generator failure rates used in WCAP-14732 for turbine governor and throttle valves were based on plant operating experience over a data collection period from 1990 through and including 1995. This time period provided failure rates based on current valve design and maintenance practices while retaining adequate time for rare events to occur. Westinghouse added an allowance to cover any model uncertainties and to account for the probability of missile ejection from design and intermediate overspeed events. The destructive overspeed model was constructed assuming that a loss of load or system separation occurred. The frequency of system separation was calculated to be 0.29 per year; however, a more conservative value of 0.4 per year was used in the Westinghouse analysis. The conditional probability of missile ejection (e.g., the probability of valve failures) was then multiplied by the frequency of system separation to obtain the probability of missile ejection per year from destructive overspeed. The probability of turbine missile ejection due to destructive overspeed was calculated for turbine valve test intervals of 1 week, 1 month, 3 months, 6 months, and 12 months.

Values for P1 are given in WCAP-14732 for various valve test intervals and are below 10^{-5}. Maintaining an initial small value of the probability of a turbine failure as discussed above simplifies and improves procedures for evaluation of turbine missile risks and ensures that the public health and safety is maintained. In addition, maintaining P1 at a low value is the NRC preferred method for controlling turbine missile risk per the February 2, 1987 and November 2, 1989 NRC letters noted above. By focusing on the missile generation probability, we avoid the numerous modeling approximations that often must be made to incorporate interactions of missiles with obstacles, their trajectories as they deflect off barriers, and the identification and location of safety-related targets.

The analysis for turbine missiles from the Unit 2 turbine is based on the current missile generation probabilities provided by Westinghouse and our current testing interval. The analysis shows that we meet current acceptance criteria.

CONCLUSION

The proposed activity has been determined to constitute a USQ for Units 1 and 2 as defined in 10 CFR 50.59. The safety significance of the change, as explained above, is minimal. Based on the above, we feel that the UFSAR should be revised to include a summary of the above description of the revised turbine missile analysis. Therefore, per 10 CFR 50.90(2)(c), we request review and approval of this USQ through an amendment to our operating licenses.

ATTACHMENT (2)

DETERMINATION OF SIGNIFICANT HAZARDS

Baltimore Gas & Electric Company
Docket Nos. 50-317 & 50-318
November 19, 1999

ATTACHMENT (2)

DETERMINATION OF SIGNIFICANT HAZARDS

The proposed amendment revises the operating licenses to approve changes to the Updated Final Safety Analysis Report (UFSAR) that constitute an unreviewed safety question (USQ) for Units 1 and 2. The USQ is the result of revising the turbine missile analysis for the Unit 1 turbine generator.

The proposed change has been evaluated against the standards in 10 CFR 50.92 and has been determined to not involve a significant hazards consideration, in that operation of the facility in accordance with the proposed amendments:

1. *Would not involve a significant increase in the probability or consequences of an accident previously evaluated.*

   Regulations require that structures, systems, and components important to safety be appropriately protected against the effects of missiles that might result from equipment failures. Failures that could occur in the large turbines of the main turbine-generator sets have the potential for producing large high-energy missiles (hereinafter called turbine missiles). Both of our turbine-generator suppliers studied the failure of the rotating elements of their turbine-generators. The UFSAR only addresses turbine missile hitting the Containment Building, Control Room, Switchgear Room, and Waste Processing Area. As result of revising the Unit 1 and Unit 2 turbine missile analysis, we determined that the discussion of turbine missiles of the UFSAR was incomplete. From the revised analysis, we determined Unit 1 and 2 USQs exist for the following unprotected rooms or components (i.e., there is an increase in probability of occurrence of malfunction not previously evaluated in the UFSAR):

   - the Refueling Water Tanks;
   - the No. 11 Fuel Oil Storage Tank;
   - the Saltwater Pumps through roof hatches in the Intake Structure Roof;
   - the roof slabs over the Refueling Water Tank Pump Room, the Control Room Heating, Ventilation, and Air Conditioning (HVAC) Equipment Room, Spent Fuel Pool Area Ventilation Equipment Room, and a portion of 118' level roof over the cask handling area;
   - the Control Room HVAC Room through its non-missile-proof door; and,
   - the Unit 1 Auxiliary Building 45' Switchgear Room through the its non-missile-proof doors.

   The probability of a missile from the Unit 1 turbine-generator striking them is a negligible, but greater than zero, increase in the probability of occurrence of malfunction of equipment associated with Units 1 and 2.

   For Unit 1 High Trajectory Missiles (HTM), the guidance of NUREG 0800, Standard Review Plan, is used as one acceptable method for evaluating the risk. Use of this method is not a commitment to the Standard Review Plan and does not incorporate the Standard Review Plan into our licensing basis. The revised analysis shows that the total target area considered vulnerable to an HTM is less than the Standard Review Plan limit of 10,000 ft^2 for each unit. Therefore, the risk from an HTM is insignificant. Note that all of the Units 1, 2, and Common structures listed above are equally vulnerable to a Unit 1 HTM. Therefore, any risk increase to these plant structures constitutes a USQ for Units 1 and 2.

For Unit 1 Low-Trajectory Missiles (LTMs), protection for the Auxiliary Building is provided by a 3' thick, concrete, missile-proof wall between the Turbine Building and the Auxiliary building (the K-line wall). This wall is 3' thick below the 69' elevation and 2' thick above 69' for areas protecting safety-related equipment. The revised analysis evaluates the protection of Unit 1 equipment from a Unit 1 LTM. The 69' Control Room HVAC Equipment Room and Unit 1 Auxiliary Building 45' Switchgear Room are protected by the missile-proof walls except for the openings at their non-missile-proof doors. A turbine missile that hits one of these doors is assumed to go through them, strike safety-related equipment in the room, and cause it to fail. Recall that the Control Room HVAC equipment is shared by both units. Therefore, any increase in risk of failure of equipment in this room affects both Units 1 and 2.

The risk associated with a turbine missile to either of these doors is calculated using guidance in Regulatory Guide 1.115, Revision 1, "Protection Against Low-Trajectory Turbine Missiles." This guidance states that the turbine missile hazard should be less than 10^{-7}. The missile hazard rate in the revised risk analysis shows that the risk from LTMs from the Unit 1 General Electric turbine-generator to the 69' Control Room HVAC Equipment Room and Unit 1 Auxiliary Building 45' Switchgear Room through these non-missile-proof doors is less than 10^{-7}.

Based on the above, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. *Would not create the possibility of a new or different type of accident from any accident previously evaluated.*

The proposed change makes no physical changes to the plant. Specifically, the proposed change does not add new or modify existing plant equipment such that it could become an accident initiator different from its current role as an accident initiator. The only change made by this activity is the revision of the UFSAR to include the revised turbine missile analysis. The UFSAR Chapter 1 drawings correctly depict the location of plant structures and components, including the thickness of and the openings in the missile-proof wall between the Turbine Building and the Auxiliary building (the K-Line Wall). Therefore, the possibility of a new or different type of accident is not created by this proposed change.

3. *Would not involve a significant reduction in a margin of safety.*

The regulations require an evaluation of turbine missiles to ensure that structures, systems, and components important to safety be appropriately protected from them. Revised turbine missile analysis have been performed consistent with appropriate regulatory guidance (Regulatory Guide 1.115 and the Standard Review Plan). The results of the revised analysis meet the acceptance criteria of the guidance. Therefore, the proposed change does not involve a significant reduction in a margin of safety.