

10 CFR 50.90

April 7, 2006  
5928-06-20440

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

Three Mile Island, Unit 1 (TMI Unit 1)  
Facility Operating License No. DPR-50  
NRC Docket No. 50-289

Subject: Response To Request For Additional Information –  
Emergency License Amendment Request No. 332 – Emergency Diesel  
Generator

This letter provides additional information in response to the NRC draft request for additional information received via NRC email, dated April 7, 2006, regarding TMI Unit 1 Emergency License Amendment Request No. 332, submitted to NRC for review on April 6, 2006. The additional information is provided in the Enclosure.

If any additional information is needed, please contact David J. Distel at (610) 765-5517.

I declare under penalty of perjury that the foregoing is true and correct.

Respectfully,

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4/7/06  
Executed On

  
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Pamela B. Cowan  
Director - Licensing & Regulatory Affairs  
AmerGen Energy Company, LLC

Enclosure: Response to Request for Additional Information

cc: S. J. Collins, USNRC Administrator, Region I  
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File No. 06017

A001

**ENCLOSURE**

**TMI UNIT 1**

**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION  
EMERGENCY LICENSE AMENDMENT REQUEST No. 332  
EMERGENCY DIESEL GENERATOR**

1. **NRC Question**

The licensee's submittal did not address the external events, particularly the fire. Also, provide a brief discussion on PRA quality for the DG/AC power modeling without getting into the ASME /RG1.200 details.

**Response**

**External Events**

Seismic risks are not a significant contributor to the incremental risk associated with EG-Y-1A unavailability. First, seismic events are of low frequency. Secondly, while seismic events can cause loss of offsite power, the two remaining emergency power sources (EG-Y-1B and the SBO Diesel) would be sufficient to provide the station's AC power needs. In the case of seismically induced failures of EG-Y-1B and the SBO Diesel, the risk is unaffected by the unavailability of the EG-Y-1A Emergency Diesel Generator (EDG), since the fragilities of all three diesels are correlated. Therefore, the seismic risk associated with the requested extension of the AOT represents negligible impact on the reported incremental risks.

The risks from high winds, external floods, and other external events are also negligible. The key safety function of the EG-Y-1A EDG is to provide emergency AC power in the event normal offsite power supplies are lost. The likelihood of severe weather causing a loss of offsite power is already explicitly accounted for in the data supporting the internal events PRA. While other damage conditions could be envisioned, these are very unlikely, as these events are of low frequency and the two remaining emergency power sources (EG-Y-1B and the SBO Diesel) would be sufficient to provide the station's AC power needs. Therefore, the incremental risk associated with these other external events for the duration of the requested extension of the AOT is considered negligible.

Special consideration is given for Fire. Details on Fire related risks are provided below.

**Consideration for Fires**

The TMI Unit 1 Fire Probabilistic Risk Assessment (PRA) is currently being developed. Although still in draft format, the TMI Unit 1 Fire PRA was used to determine which rooms or scenarios might be significantly impacted by EG-Y-1A unavailability. It should be noted that no new fire scenarios are introduced when EG-Y-1A is out of service. An analysis showed that the fire risk for the following rooms are affected by the EG-Y-1A unavailability:

CB-FA-2b – "B" train ES 480V Switchgear Room

CB-FA-2e – "B" train Inverter, DC panel & Battery Charger Room

CB-FA-3b – "B" train 4160V SWGR Room

Additionally, the 6900V Switchgear Room in Turbine Building (TB) 322 Elevation and the Relay/Cable Spreading Room (CB-FA-3d) at elevation 338'-6" were qualitatively identified as potentially significant. The Non-Essential Switchgear Room contains the connections to the offsite power and the relay room includes protective relaying for the

offsite power. Therefore, a fire in either of these areas could be a significant challenge to offsite power.

#### Operational Commitments for Minimizing Fire Related Risks

The following identifies those actions committed to by AmerGen. These commitments will be in effect until EDG EG-Y-1A is restored to an Operable status. Any other actions discussed represent intended or planned actions by AmerGen, and are not regulatory commitments. The compensatory measures have been entered as regulatory commitments in the TMI Unit 1 Commitment Management System, which complies with Nuclear Energy Institute 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes."

TMI Unit 1 will increase its sensitivity to fire prevention in these areas in order to minimize risk. Currently, there are no transient combustible permits (TCP) for any of these areas. All TCP's, issued by Fire Protection during this period, will require a continuous fire watch. To increase sensitivity in these areas, hourly fire watches during this period will be implemented in the following areas: CB-FA-2b, CB-FA-2e, CB-FA-3b, CB-FA-3d, and the 6900V Switchgear Room in TB 322 Elevation.

#### PRA Quality

The TMI Unit 1 internal events PRA received a formal industry PRA Peer Review in August 2000. All significant ("A" and "B") Findings and Observations (F&O) have since been addressed in the updated PRA models, except for one "B" F&O. This F&O is associated with the need to include common cause events for DC, Instrument AC and Pressurizer Safety Valves. A sensitivity study has been done to show that the impact of not correcting this F&O has essentially no impact (less than 0.5% change) on the diesel generator importance measures.

Since the peer certification, one model issue associated with EDG has been self-identified as potentially causing a significant increase in the diesel generator importance measures. The issue is associated with the Loss of Offsite Power (LOOP) frequency used in the TMI Unit 1 PRA ( $2.6E-2$ /year). As a sensitivity, the LOOP frequency was increased to  $4.56E-2$ /year to be consistent with the NRC SPAR model for TMI. The results of the sensitivity show that the criteria for Incremental Conditional Core Damage Probability (ICCDP) and Incremental Large Early Release Probability (ICLERP) are still met for a 3-day extension to the Completion Time (ICCDP =  $2.3E-7$  and ICLERP =  $1.2E-8$ ).