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Thomas A. Marlow  
Director  
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1CAN010704

January 31, 2007

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

Subject: License Amendment Request  
Supplement to Relocation of Y-28 and C-540 Requirements from TSs to TRM  
Arkansas Nuclear One, Unit 1  
Docket No. 50-313  
License No. DPR-51

- REFERENCE:
1. Entergy Letter to the NRC dated August 31, 2006, License Amendment Request for Relocation of Inverter Y-28 and Panel C-540 Requirements from TSs to TRM (1CAN080601)
  2. NRC Letter to Mr. Jeffery S. Forbes dated January 12, 2007, Arkansas Nuclear One, Unit 1 – Request for Additional Information – Relocation of Inverter Y-28 and Panel C-540 Requirements from the Technical Specifications to the Technical Requirements Manual (TAC No. MD2982)

Dear Sir or Madam:

By letter (Reference 1), Entergy Operations, Inc. (Entergy) proposed a change to the Technical Specifications (TS) for Arkansas Nuclear One, Unit-1 (ANO-1). The proposed change relocates the TS 3.8.7 requirements associated with 120 Volt Inverter Y-28 and TS 3.8.9 requirements associated with 120 VAC electrical power distribution subsystem panel C-540 to the Technical Requirements Manual (TRM).

By letter dated January 12, 2007 (Reference 2), Entergy was notified by the members of your staff of a request for additional information (RAI). The RAI response is provided in Attachment 1 of this submittal.

The response provided in Attachment 1 of this submittal provides additional discussion and detail with regard to the aforementioned equipment and its relationship to other plant components. Entergy's response involves no technical change to the initiating document (Reference 1) and therefore, the original no significant hazards consideration included in Reference 1 is not affected by any information contained in this supplemental letter.

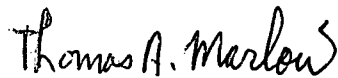
This letter contains no new commitments.

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If you have any questions or require additional information, please contact David Bice at 479-858-5338.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 31, 2007.

Very truly yours,



TAM/dbb

Attachment: Response to Request for Additional Information

cc: Dr. Bruce S. Mallett  
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NRC Senior Resident Inspector  
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**Attachment 1**

**To**

**1CAN010704**

**Response to Request for Additional Information**

**Response to Request for Additional Information Related to License Amendment Request  
to Relocate Inverter Y-28 and Panel C-540 Requirements from TSs to TRM**

Question 1

*Define the term "vital equipment." Once the requirements for the 120 volt inverter, Y-28, are moved to the technical requirements manual, will Y-28 still be considered a vital inverter?*

Entergy's Response

The term "vital equipment" is not directly defined in the Arkansas Nuclear One (ANO) licensing basis, but infers a status of importance related to the component so designated. This title can be applied to components powered from one of the two safety trains of electrical distribution following a loss of offsite power (i.e., powered from an emergency diesel generator or safety bus battery bank) and/or because the associated subcomponents are necessary to meet one or more safety functions. Inverter Y-28 and Panel C-540 are powered from the "green" safety train of electrical distribution and may be considered "vital" components. Technical Specification (TS) related equipment is also commonly referred to as vital equipment to illustrate an order of importance. The term "vital" is used abundantly in NRC and industry documents. In Generic Letter 91-11, for example, "vital instrument buses" refers to the ac buses that provide power for the instrument and controls of the engineered safety features (ESF) systems and the reactor protection system (RPS) and are designed to provide continuous power during postulated events including the loss of normal offsite power." Although titled as such in Section 3.0 of Entergy letter to NRC dated August 31, 2006, the components powered from Y-28/C-540 are not required for the actuation of RPS/ESF functions. In addition, neither the ANO – Unit 1 (ANO-1) nor ANO – Unit 2 (ANO-2) Safety Analysis Report (SAR) refers to any inverter as a "vital" component, although the four inverter-fed RPS/ESF panels are described as vital instrument buses in both SARs. C-540 is also not described in the SAR as a vital bus. Furthermore, Table 1.3-1 of the ANO-2 SAR lists the number of vital electrical buses for both ANO-1 and ANO-2, in addition to other sister plants. The vital instrument buses listed in the table for ANO-1 are the four RPS/ESF panels, with no reference to any inverter or to Panel C-540. Nevertheless, Y-28 and C-540 may or may not be referred to as "vital" at ANO based on their power source or simply to place an order of importance on their designated support function.

Accordingly, Entergy has no current plan to re-define Inverter Y-28 or Panel C-540 as vital or otherwise. Although the loads supplied by C-540 are not required to meet a safety function, this equipment is currently considered in a manner that maintains an order of importance on the relevant loads to help ensure proper attention is given to any related discrepancy or degradation noted. As described in the August 31, 2006, Entergy letter to the NRC, many of the instruments powered from C-540 result in TS entry if found to be inoperable and many are associated with compliance with 10 CFR 50, Appendix R requirements. In summary, Y-28 and C-540 will continue to be maintained commensurate with the importance of the components in which they power, regardless of any descriptive reference (i.e., "vital").

Question 2

*On Page 2 of Section 3.0 of the attachment to the amendment request dated August 31, 2006, Entergy states that panel C-540 provides power to some alternate shutdown instrumentation. Please provide detailed information on the affected alternate shutdown instrumentation. In addition, provide justification that the operator's response when establishing fire-related compensatory measures upon loss of C-540 has no adverse effects.*

Entergy's Response

The paragraph described in the question referring to "some alternate shutdown instrumentation" was separated from other instrumentation discussions in order to capture 10 CFR 50, Appendix R requirements relating to the instrumentation. No other alternate shutdown related instruments are powered from C-540 other than those individually describe in Attachment 1, Section 3.0 of Entergy's letter to the NRC dated August 31, 2006. The discussion of individual instruments provided in the August 31, 2006, letter revolved around TS implications and/or redundant instrumentation that remain available. The discussion on Page 2 of the letter was intended to state that, in addition to redundancy and other regulatory requirements (TSs), most of the instrumentation is applicable to 10 CFR 50, Appendix R. This was not intended to imply that other Appendix R related instruments were powered from Panel C-540 beyond that described in Section 3.0 of the August 31, 2006, letter. Therefore, the list provided in the August 31, 2006, Entergy submittal is complete and need not be supplemented by this response. However, one instrument, SY-6601B (steam driven emergency feedwater pump speed signal input to the plant computer), described in the August 31, 2006, Entergy letter is not related to alternate shutdown.

As discussed in the August 31, 2006, Entergy letter, site procedures require the verification of operable fire detection and suppression systems, or establishment of fire watches in the vicinity of redundant train cabling areas (control room, cable spreading room, etc.) whenever C-540 is inoperable. Such compensatory measures act to ensure a fire is quickly identified and extinguished in these redundant-channel areas during the C-540 out-of-service period. The action is consistent with standard industry compensatory measures established during degradation of Appendix R related equipment. The time in which C-540 could be removed from service is limited by specific instrumentation powered by C-540 that are required to be operable by related TSs (described in detail in the August 31, 2006, Entergy letter). The short-term unavailability of C-540 in conjunction with a fire resulting in an alternate shutdown has been previously evaluated at ANO, but is not a required design assumption for alternate shutdown or safe shutdown analyses.