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2CAN050602

May 18, 2006

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

Subject: License Amendment Request
Supplemental to Relocation of SDC OPI License Condition to TRM
Arkansas Nuclear One - Unit 2
Docket Nos. 50-368
License Nos. NPF-6

- REFERENCES:
1. Entergy letter to the NRC dated July 8, 2004, "Shutdown Cooling Automatic Closure Interlock Removal" (2CAN070401)
 2. Entergy letter to the NRC dated March 28, 2005, "Supplement to Amendment Request For Shutdown Cooling Automatic Closure Interlock Removal" (2CAN030508)
 3. NRC letter to Jeffery S. Forbes dated March 30, 2005, "Issuance of Amendment RE: Removal of Shutdown Cooling Automatic Closure Interlock (AC) (TAC No. MC3799)" (2CNA030507)
 4. Entergy letter to the NRC dated June 29, 2005, "Relocation of SDC OPI License Condition to TRM" (2CAN060501)

Dear Sir or Madam:

By letter (Reference 4), Entergy Operations, Inc. (Entergy) proposed a change to the Operating License (OL) for Arkansas Nuclear One, Unit- 2 (ANO-2). The proposed change relocates the Shutdown Cooling (SDC) suction valves Open Permissive Interlock (OPI) from the OL to the Technical Requirements Manual (TRM).

On May 11, 2006, in telephone conversation with members of your staff, Entergy agreed to provide additional information with regard to the subject matter in two areas. The first request was to provide information relating to operator simulator training on the opening and closing of SDC suction motor operated valves (MOV). The response to this request is contained in Attachment 1 of this supplement. The second request was to provide a draft TRM Bases that would represent the purpose of the OPI function and the various other controls employed at ANO to prevent inadvertent operation of the SDC suction MOVs. The portion of the TRM bases that includes the aforementioned information is provided in Attachment 2 of this supplement.

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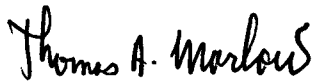
The responses provided in Attachments 1 and 2 of this supplement do not involve a technical change to the originally proposed relocation of the OPI from the OL to the TRM. Therefore, the original no significant hazards consideration included in Reference 4 is not affected by any information contained in this supplemental letter.

This letter contains no new commitments.

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 May 18, 2006.

Very truly yours,



TAM/dbb

Attachment:

1. Response to Request for Additional Information
2. Draft Technical Requirements Manual Bases (For Information Only)

cc: Dr. Bruce S. Mallett
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Attachment 1

To

2CAN050602

Response to Request for Additional Information

Response to Request for Additional Information Related to the Relocation of the SDC OPI License Condition to the TRM

A conference call was held on May 11, 2006, concerning the proposed relocation of the Shutdown Cooling (SDC) system suction valves Open Permissive Interlock (OPI) from the Operating License (OL) to the Technical Requirements Manual (TRM) for Arkansas Nuclear One, Unit 2 (ANO-2). As a result of the call, a response to the following question is being provided.

Question

How often are operators trained to use these procedures to ensure that the SDC suction isolation valves are used appropriately? Also, when the SDC suction isolation valves are manipulated using the key, does any time critical operator actions exist and are there any additional operator actions?

Response

Operators receive in-class and dynamic simulator training of the SDC system, including suction isolation valve operations, at least once per cycle, normally just before a refueling outage. The training includes placing SDC in service and removing SDC from service under normal conditions. Additional simulator scenarios include upsets and/or equipment malfunctions in order to evaluate how the operators respond to off-normal conditions. The only time-critical action when placing SDC in service (i.e., during the opening of the suction isolation valves) is a verification of Reactor Coolant System (RCS) inventory. If an unexpected drop in RCS inventory occurs when opening any SDC suction isolation valve, the valve is immediately re-closed by procedure. No time-critical actions exist for the isolation of SDC during plant heatup.

In addition to the various administrative controls described in the Entergy Operations, Inc. (Entergy) letter dated June 29, 2005, there are several supporting procedures that govern SDC system operation and subsequent upset conditions should an event occur during periods when SDC is in service, or being placed in or removed from service. Abnormal operating procedures include a Loss of SDC procedure and a Loss of RCS Inventory procedure. A Lower Mode Functional Recovery emergency procedure is also available. The latter procedure is designed to key on reactor and public safety regardless of the initiating event, symptoms, or upset conditions that may be encountered.

Additional Information

Entergy's letter dated June 29, 2005, stated that the SDC valve handswitch keys are controlled by Operation's supervision. Verbal clarification provided by Entergy during the May 11, 2006 call indicated such control included storage of the keys in a locker. This clarification was inaccurate. In fact, the keys are attached to the associated control panel. Keys cannot be installed nor handswitches manipulated without permission from Operation's supervision (an on-duty Senior Reactor Operator). After permission is granted, station "Conduct of Operations" requires a peer check before manipulation can take place. In summary, permission from the on-duty supervision must be obtained before inserting a key into a handswitch and a peer check received from another qualified operator before the key can be inserted or handswitch manipulated. Accidental insertion or manipulation is not a concern because the valves are de-energized when SDC is not in service. Even if manipulation were possible, an alarm will sound immediately if RCS pressure is greater than OPI setpoint.

Attachment 2

To

2CAN050602

Draft Technical Requirements Manual Bases

3.3 INSTRUMENTATION

TRM BASES

3/4.3.5.1 SDC OPI

The Shutdown Cooling (SDC) system is a low pressure system. Because the SDC system interfaces with a high pressure system, i.e., the Reactor Coolant System (RCS), specific controls must be established to ensure overpressurization of SDC piping does not occur. Such overpressurization could result in an inter-system Loss of Coolant Accident (ISLOCA) event with subsequent loss of RCS inventory and radiation release outside the containment building (referred to by the NRC as an Event V scenario).

The NRC Reactor Systems Branch Technical Position 5-1 recommended the installation of an Open Permissive Interlock (OPI) that would prevent inadvertent opening of SDC suction isolation valves when RCS pressure is greater than design pressure of the SDC system. Accordingly, the OPI function was installed on ANO-2. Strict administrative controls and other physical features were also provided to ensure inadvertent operation of these valves did not occur. Because of the controls and physical features encompassing the SDC suction valves (listed below), the OPI function is not credited at ANO-2 to prevent an Event V scenario. Nevertheless, the OPI function serves a last-line-of-defense function and, therefore, is currently maintained and tested to ensure its availability.

The various administrative and physical controls associated with the SDC suction motor-operated valves (MOVs) include:

1. Valves normally de-energized closed (position indication remains available)
2. Keys removed from handswitches and controlled by Operation's supervision
3. Alarm annunciates if valve leaves its closed seat with RCS pressure above setpoint
4. Valves are located inside containment and are not accessible during power operation
5. Ladder access to valve locked
6. Various procedural controls prevent opening of valves until RCS pressure is below setpoint and Low Temperature Overpressure (LTOP) relief valves are placed in service

The OPI function serves no protective function during abnormal or accident conditions, as defined in IEEE 279-1971. If the OPI function is found to be inoperable, a condition report must be initiated to determine if additional controls should be established during the period of OPI inoperability. Such additional controls, if deemed necessary, may include an additional verification of acceptable plant conditions prior to permitting the opening of an affected SDC suction isolation valve or a caution card placed on the handswitches. The OPI function will be restored to an operable status commensurate with its importance to safety.

References

1. NRC letter to Jeffery S. Forbes dated March 30, 2005, "Issuance of Amendment Re: Removal of Shutdown Cooling Automatic Closure Interlock (ACI)" (2CNA030507)
2. BTP RSB 5-1, *Design Requirements of the Residual Heat Removal System*
3. ANO-2 SAR Section 7.6.1.1