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2CAN020503

February 2, 2005

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

SUBJECT: Supplement to Amendment Request
For Shutdown Cooling Automatic Closure Interlock Removal
Arkansas Nuclear One, Unit 2
Docket No. 50-368
License No. NPF-6

REFERENCES: Entergy letter to the NRC dated July 8, 2004, "Shutdown Cooling
Automatic Closure Interlock Removal" (2CAN070401)

Dear Sir or Madam:

By letter (Reference 1), Entergy Operations, Inc. (Entergy) proposed a change to the Arkansas Nuclear One, Unit 2 (ANO-2) Technical Specifications (TSs) in support of removing the automatic closure interlock (ACI) associated with the Shutdown Cooling (SDC) system suction motor-operated valves.

Between November 2004 and February 2005, Entergy and members of your staff held several conference calls to further discuss the proposed change. It was agreed that Entergy would include a specification for the surveillance of an open permissive interlock in lieu of the ACI. Attachment 1 provides further clarifications and revisions to aid the NRC in approving the proposed amendment. A new mark-up page of the proposed TS revision is included in Attachment 2.

There are no technical changes proposed. The original no significant hazards consideration included in Reference 1 is not affected by any information contained in the supplemental letter. Furthermore, the commitments contained in Reference 1 remain unaltered.

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

A001

I declare under penalty of perjury that the foregoing is true and correct. Executed on February 2, 2005.

Sincerely,



JSF/dbb

Attachments:

1. Response to Request for Additional Information
2. Proposed Technical Specification Changes (mark-up)

cc: Dr. Bruce S. Mallett
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U. S. Nuclear Regulatory Commission
Region IV
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NRC Senior Resident Inspector
Arkansas Nuclear One
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U. S. Nuclear Regulatory Commission
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Mr. Bernard R. Bevill
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4815 West Markham Street
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Attachment 1

To

2CAN020503

Response to Request for Additional Information

**Response to Request for Additional Information Related to
License Amendment in Support Shutdown Cooling
Automatic Closure Interlock Removal**

Question 1:

It appears that the current TS surveillance requirement 4.5.2.d.1 should include the requirement for the OPI function. Your letter dated July 8, 2005 indicates that the proposed TS does not provide for the existence and testing of an OPI function. Please provide clarification in this regard.

Response 1:

As a result of several telephone conversations with one or more members of the NRC staff, Entergy Operations, Inc. (Entergy) has agreed to retain Technical Specification (TS) wording that will include surveillance provisions for the Open Permissive Interlock (OPI) function as follows:

Current TS wording:

TS 4.5.2.d.1 Verifying automatic isolation and interlock action of the shutdown cooling system from the Reactor Coolant System when the Reactor Coolant System pressure is above 300 psia.

The above phrase "and interlock" implies that once closed, the affected valves cannot be re-opened until the condition causing the closure (high pressure in this case) is cleared. At Arkansas Nuclear One – Unit 2 (ANO-2), such a function would be considered an OPI.

The associated Shutdown Cooling (SDC) motor-operated valve (MOV) logics contain a contact in both the open and the close portion of the circuitry. For any given MOV, the contacts are driven from the same Reactor Coolant System (RCS) pressure switch. When the associated pressure switch detects RCS pressure has reached a pre-determined setpoint, the pressure switch will close the contact in the MOV close circuit, which acts to close the MOV if it is open (automatic closure interlock or ACI). Simultaneously, the contact in the MOV open circuit is opened, preventing the valve from opening until the pressure condition clears (open permissive interlock or OPI). The OPI has been tested, along with the ACI function, in accordance with TS frequencies. Currently, both functions are verified under a single test supplement in ANO-2 procedure OP-2104.040, Supplement 6.

Question 1:

In accordance with the topical report, the OPI function was committed to remain in the TSs. Please revise the submittal to indicate the retaining of this function.

Response 1:

Attachment 2 includes a revised mark-up of the affected TS page, retaining the OPI function testing requirement as follows:

TS 4.5.2.d.1 Verifying Shutdown Cooling System open permissive interlock prevents the valves from being opened with a simulated or actual Reactor Coolant System pressure signal ≥ 445 psia

This wording is basically adopted from the Revised Standard TSs of NUREG 1432, Revision 3. However, the interlock is re-titled as an open permissive interlock instead of an auto-closure interlock since the OPI function does not act to close the associated SDC suction MOVs. As illustrated in Attachment 2, the new OPI setpoint to be established after ACI removal is ≤ 445 psia, equivalent to the Low Temperature Overpressure (LTOP) relief valve setpoint. Instrument uncertainty need not be included because the LTOP relief setting is well below the SDC design pressure of 575 psia (see original submittal dated July 8, 2004 for further details). Currently, Entergy intends to establish the OPI setpoint at 350 psia. This will provide a larger operating window for plant personnel for the transition to and from SDC operations during plant cooldown and heatup, while maintaining significant operating margin to both the LTOP setpoint and the SDC design pressure rating.

Attachment 2

To

2CAN020503

Proposed Technical Specification Changes (mark-up)

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

Valve Number	Valve Function	Valve Position
2CV-5101	HPSI Hot Leg Injection Isolation	Closed
2CV-5102	HPSI Hot Leg Injection Isolation	Closed
2BS26	RWT Return Line	Open

- b. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suction during LOCA conditions. This visual inspection shall be performed:
1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and
 2. At least once daily of the areas affected within containment if containment has been entered that day, and during the final entry when CONTAINMENT INTEGRITY is established.
- d. At least once per 18 months by:
1. Verifying ~~Shutdown Cooling System open permissive automatic isolation and interlock prevents the valves from being opened action of the shutdown cooling system from the Reactor Coolant System with a simulated or actual~~ when the Reactor Coolant System pressure ~~signal is above~~ ≥ 445300 psia.
 2. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.
- e. At least once per 18 months, during shutdown, by:
1. Verifying that each automatic valve in the flow path actuates to its correct position on SIAS and RAS test signals.
 2. Verifying that each of the following pumps start automatically upon receipt of a Safety Injection Actuation Test Signal:
 - a. High-Pressure Safety Injection pump.
 - b. Low-Pressure Safety Injection pump.