Entergy

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February 14, 2008

10 CFR 50.73(a)(2)(i)(B)

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

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

Licensee Event Report 07-009, Automatic Valve in Emergency Core Cooling System Inoperable in Excess of Technical Specification Requirements

Dear Sir or Madam:

Licensee Event Report (LER) 07-009 is enclosed. The LER describes the discovery that an automatic valve in the emergency core cooling system was inoperable for longer than allowed by Technical Specifications. The occurrence is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B).

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

Christopher J. Schwarz
Site Vice President
Palisades Nuclear Plant

Enclosure (1)

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

ENCLOSURE 1

LER 07-009
Automatic Valve in Emergency Core Cooling System
Inoperable in Excess of Technical Specification Requirements

3 Pages Follow

NRC FORM 366 (9-2007) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 8/31/2010

Estimated burden per response to comply with this mandatory information collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to bjs1@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
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4. TITLE

Automatic Valve in Emergency Core Cooling System Inoperable in Excess of Technical Specification Requirements

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
12	18	2007	2007	- 009 -	00	02	14	2008	FACILITY NAME	DOCKET NUMBER

9. OPERATING MODE

1

10. POWER LEVEL

100

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)

☐ 20.2201(b)	☐ 20.2203(a)(3)(i)	☐ 50.73(a)(2)(i)(C)	☐ 50.73(a)(2)(vii)
☐ 20.2201(d)	☐ 20.2203(a)(3)(ii)	☐ 50.73(a)(2)(ii)(A)	☐ 50.73(a)(2)(viii)(A)
☐ 20.2203(a)(1)	☐ 20.2203(a)(4)	☐ 50.73(a)(2)(ii)(B)	☐ 50.73(a)(2)(viii)(B)
☐ 20.2203(a)(2)(i)	☐ 50.36(c)(1)(i)(A)	☐ 50.73(a)(2)(iii)	☐ 50.73(a)(2)(ix)(A)
☐ 20.2203(a)(2)(ii)	☐ 50.36(c)(1)(ii)(A)	☐ 50.73(a)(2)(iv)(A)	☐ 50.73(a)(2)(x)
☐ 20.2203(a)(2)(iii)	☐ 50.36(c)(2)	☐ 50.73(a)(2)(v)(A)	☐ 73.71(a)(4)
☐ 20.2203(a)(2)(iv)	☐ 50.46(a)(3)(ii)	☐ 50.73(a)(2)(v)(B)	☐ 73.71(a)(5)
☐ 20.2203(a)(2)(v)	☐ 50.73(a)(2)(i)(A)	☐ 50.73(a)(2)(v)(C)	☐ OTHER Specify in Abstract below or in NRC Form 366A
☐ 20.2203(a)(2)(vi)	☒ 50.73(a)(2)(i)(B)	☐ 50.73(a)(2)(v)(D)	

12. LICENSEE CONTACT FOR THIS LER

NAME	TELEPHONE NUMBER (Include Area Code)
Daniel G. Malone	(269) 764-2463

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
X	BP	PCV	H260	Y					

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES (If yes, complete 15. EXPECTED SUBMISSION DATE) ☒ NO

15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

CV-3047 is a normally closed boundary valve associated with the emergency core cooling system (ECCS). In the event of a postulated loss of coolant accident, CV-3047 is required to close (or remain closed) on receipt of a safety injection signal to ensure that all available safety injection flow is directed to the primary coolant system (PCS).

On November 26, 2007, CV-3047 had exceeded its stroke time to close during testing. Pending further troubleshooting, administrative controls were established with the intent to maintain CV-3047 closed. Subsequently, on December 18, 2007, investigation determined that CV-3047, although indicating closed, was not fully closed.

Technical Specification (TS) Surveillance Requirements (SR) 3.5.2.2 and 3.5.2.5 require that each ECCS automatic valve in the flow path be verified to be in the correct position, and to actuate to the correct position, respectively. Since CV-3047 was not fully closed, it was incapable of meeting SRs 3.5.2.2 and 3.5.2.5.

This condition is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications.

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EVENT DESCRIPTION

On December 18, 2007, during performance of Technical Specification (TS) surveillance testing to verify the boron concentration in each safety injection tank (SIT) [TK;BP], it was observed that level and pressure in the "C" SIT lowered unexpectedly when the "B" SIT was being drained for its sample. Investigation determined that the "C" SIT pressure control valve, CV-3047 [PCV;BP], although indicating closed, was not fully closed, which allowed the "C" SIT to drain when downstream header valves were opened during the "B" SIT sample activity.

CV-3047 is a normally closed boundary valve associated with the emergency core cooling system (ECCS) [BP]. In the event of a postulated loss of coolant accident, CV-3047 is required to close (or remain closed) on receipt of a safety injection signal to ensure that all available safety injection flow is directed to the primary coolant system (PCS) [AB].

Previously, on November 26, 2007, CV-3047 had exceeded its stroke time to close during testing. The indicated closing stroke time for CV-3047 was 16.7 seconds versus a test acceptance criterion of 8.6 seconds. Pending further troubleshooting, administrative controls were established with the intent to maintain CV-3047 closed, to provide assurance that the safety function for CV-3047 was met.

However, the discovery on December 18, 2007, that CV-3047 was not fully closed in conjunction with the excessive closing stroke time identified on November 26, 2007, provides evidence that CV-3047 may not have been fully closed for that entire period.

TS Surveillance Requirements (SR) 3.5.2.2 and 3.5.2.5 require that each ECCS automatic valve in the flow path be verified to be in the correct position, and to actuate to the correct position, respectively. Since CV-3047 was not fully closed, it was incapable of meeting SRs 3.5.2.2 and 3.5.2.5. For failure to meet these SRs, SR 3.0.1 specifies that the Limiting Condition for Operation (LCO) is also not met. TS LCO 3.5.2 requires two ECCS trains to be operable. TS 3.5.2.B allows one or more ECCS trains to be inoperable for up to 72 hours. With the completion time of TS 3.5.2.B not met, TS 3.5.2.C requires the plant be in Mode 3 within 6 hours and PCS temperature reduced to < 325 degrees F within 24 hours.

Therefore, the 72-hr completion time of TS 3.5.2.B for restoring ECCS trains to operable status and the subsequent required actions of TS 3.5.2.C were not met. This condition is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by Technical Specifications.

CAUSE OF THE EVENT

Troubleshooting revealed that the air relay gasket in the positioner for CV-3047 had a small tear, which allowed sufficient air pressure to be applied to CV-3047 to hold the valve slightly off its seat. The estimated valve position was approximately 0.184 inches off the seat, with a nominal full stroke length for this valve of 1 inch. This shaft position is based on positioner signal output gauge readings.

With the position indication for CV-3047 indicating that the valve was in the closed (safety) position, the potential for CV-3047 to be partially open was not recognized. This led to a decision that it was not necessary to lock, seal or otherwise secure CV-3047 in its safety position following the failed stroke test.

CORRECTIVE ACTIONS

The CV-3047 positioner was repaired, restoring the valve to operable status.

The aspects of this occurrence regarding acceptable methods for locking valves in the correct position will be reviewed with appropriate personnel.

SAFETY SIGNIFICANCE

The event is considered to be of very low safety significance. An analysis was performed which concluded that with CV-3047 in its as-found partially open position, 100% of required ECCS flow to the PCS remained available. Therefore, the condition did not prevent the fulfillment of the safety function of the ECCS System.

PREVIOUS SIMILAR EVENTS

None