Entergy

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J. E. Pollock
Site Vice President

October 28, 2008
Indian Point Unit No. 3
Docket No. 50-286
NL-08-146

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, D.C. 20555-0001

Subject: Licensee Event Report # 2008-005-00, "Technical Specification Prohibited Condition Due to Exceeding the Allowed Completion Time for an Inoperable Isolation Valve Seal Water System Due to an Out of Position Valve Caused by Personnel Error"

Dear Sir or Madam:

Pursuant to 10 CFR 50.73(a)(1), Entergy Nuclear Operations Inc. (ENO) hereby provides Licensee Event Report (LER) 2008-005-00. The attached LER identifies an event where there was a Technical Specification prohibited condition that exceeded the Allowed Completion Time for an inoperable Isolation Valve Seal Water header, which is reportable under 10 CFR 50.73(a)(2)(i)(B) . This condition was recorded in the Entergy Corrective Action Program as Condition Report CR-IP3-2008-02095.

There are no new commitments identified in this letter. Should you have any questions regarding this submittal, please contact Mr. Robert Walpole, Manager, Licensing at (914) 734-6710.

Sincerely,

J. E. Pollock
Site Vice President
Indian Point Energy Center

cc: Mr. Samuel J Collins, Regional Administrator, NRC Region I
NRC Resident Inspector's Office, Indian Point 3
Mr. Paul Eddy, New York State Public Service Commission
INPO Record Center

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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 collection request: 50 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Service Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-I0202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an 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)

1. FACILITY NAME:	2. DOCKET NUMBER	3. PAGE
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4. TITLE: Technical Specification Prohibited Condition Due to Exceeding the Allowed Completion Time for an Inoperable Isolation Valve Seal Water System Due to an Out of Position Valve Caused by Personnel Error

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
9	01	2008	2008	005 -	00	10	28	2008		05000
									FACILITY NAME	DOCKET NUMBER
										05000

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)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☒ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☐ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

NAME	TELEPHONE NUMBER *(Include Area Code)*
Michael Ferretti, Maintenance Technical Specialist	(914) 734-5754

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

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

14. SUPPLEMENTAL REPORT EXPECTED

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

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

16. ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced type written lines)*

On September 1, 2008, during the performance of Check Off List 3-COL-CB-004, Operations discovered valve IV-1692 of the Isolation Valve Seal Water (IVSW) system out of position with a Temporary Modification (TM) tag applied and the valve closed. The required position of valve IV-1692 is open but was discovered closed rendering the associated IVSW header inoperable. Technical Specification 3.6.9, "Isolation Valve Seal Water System (IVSWS)," Condition A, One IVSWS header inoperable, required action A.1, is to restore IVSW to operable within 7 days. Investigations determined that a temporary modification installed in March 2007, required the position of the valve to be closed and during system restoration the valve was required to be opened and TM tags removed. The condition is reportable because the inoperable header exceeded the TS 3.6.9 allowed completion time. The apparent cause was procedure use and adherence and inadequate error detection practices. Corrective actions include; restoration of IV-1692 to locked open and tag removal. Maintenance personnel will also be briefed on the event and lessons learned, counseled on the expectations and standards for procedure adherence and effective use of Human Performance tools such as self checking, good verbal communications and a good questioning attitude, and coached on the TM process. Human Performance simulator high intensity training will be performed for Maintenance personnel. The event had no effect on public health and safety.

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NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

Note: The Energy Industry Identification System Codes are identified within the brackets {}.

DESCRIPTION OF EVENT

On September 1, 2008, at approximately 14:30 hours, during the performance of Check-Off-List 3-COL-CB-004 for an extent of condition (EOC) review for an NRC identified condition concerning improperly positioned components, Operations discovered Isolation Valve Seal Water (IVSW) system (IVSWS) {BD} valve IV-1692 {V} closed with a Temporary Modification (TM) tag applied, which was not in accordance with the check-off list procedure. The required position of valve IV-1692 is open during plant operating modes 1 through 4. With valve IV-1692 closed, IVSW could not be supplied between its assigned demineralized water (DW) {KC} line containment isolation valves (CIV) DW-AOV-1 and DW-AOV-2. The operability of the IVSWS is based on the system's capability to supply seal water to certain CIVs within the time assumed in the applicable safety analysis. With IVSW valve IV-1692 closed its associated IVSW header would not be capable of supplying seal water to the assigned containment isolation valves thereby rendering the associated IVSW header inoperable. Technical Specification 3.6.9, Isolation Valve Seal Water System (IVSWS), Condition A, one IVSWS header inoperable, required action A.1, is to restore IVSW to operable within 7 days. At approximately 15:20 hours on September 1, 2008, valve IV-1692 was restored to locked open per 3-COL-CB-004 with removal of TM tag completed at approximately 15:25 hours. Investigations determined that a TM installed in March 2007, required the position of the valve to be closed and during system restoration the valve was required to be opened and TM tags removed. The condition is reportable because the inoperable header exceeded the TS 3.6.9 allowed completion time. Valve IV-1692 is a globe valve manufactured by Whitey Valve Company {W159}, Model No. NBS6-G-BKP-W20.

An investigation of the event was performed and determined that valve IV-1692 was closed in March 2007 during a TM to support the replacement of check valve IA-13. After completing the TM, a Maintenance Supervisor signed off the TM package as complete in March 2007. Procedure 3-SYS-017-GEN, "Installation, Control and Removal of Support Electrical and Mechanical Equipment Powered from Bus 6 and 6A," contains step 4.18.2.6 to open valve IVSW-1692 to restore IVSW to DW-AOV-1 and DW-AOV-2, and step 4.18.2.7 to remove and return all TM Tags to operations, verify TM removal and update EN-DC-136, Attachment 9.6,"TM Tag Record Sheet." These steps of procedure 3-SYS-017-GEN were signed as complete with a note on step 4.18.2.6, "as per Operations." The investigation concluded the Maintenance Supervisor did not confirm with his work crew that the procedure actions to open valve IC-1692 and remove the TM tags were actually performed in accordance with procedural requirements. The Maintenance Supervisor who is no longer employed at IPEC may have assumed that the procedural steps were satisfactorily completed since the work was reported completed and the AOV reported operable, and signed the procedure steps and closed the package. The investigation also determined that procedure 3-SYS-017-GEN, Attachment 2 (Termination Matrix) was not used for positioning the valve and Attachment 9.6 (Temporary Modification Tag Record Sheet) of Procedure EN-DC-136, "Temporary Modifications," was not used to verify and track installation and removal of the valve tags.

As a result of the discovery of IVSW IV-1692 out of position further EOC review was performed that included the periodic audits conducted per EN-DC-136 where Operations performs audits of installed TM Packages to verify compliance with tagging and administrative controls to include the Temp Alt Log Book that is maintained and monitored in the CCR to help prevent mis-position events from occurring. A review of the TM log showed only one installed TM that was not statused correctly in the TM log. (The Log has since been updated to reflect this installation.) The condition was determined not to be a trend.

Cause of Event

The apparent cause of the event was personnel error associated with procedure use and adherence, and inadequate error detection practices. Human performance tools were not effectively used such as self checking, good verbal communications and a good questioning attitude to ensure that the tags were removed and the valve repositioned prior to signing off the procedure steps. A contributing cause was mechanics did not use the appropriate attachments in the procedure to verify and track the installation and removal of tags nor did they use the Termination Matrix to verify and track the positioning of the valve.

Corrective Actions

The following corrective actions have been or will be performed under Entergy's Corrective Action Program to address the cause and prevent recurrence:

- Valve IV-1692 was restored to locked open and its TM tag removed in accordance with 3-SYS-017-GEN and EN-DC-136.
- Maintenance personnel will be briefed on the event and lessons learned, counseled on the expectations and standards for procedure adherence and effective use of Human Performance tools such as self checking, good verbal communications and a good questioning attitude. The briefing will include coaching on the TM process. Brief is scheduled to be complete by November 14, 2008.
- Human Performance Simulator High Intensity training of I&C, Maintenance, Maintenance Support, and Performance personnel including supervisors will be performed and will include review of appropriate sections of EN-MA-101,"Conduct of Maintenance, EN-AD-102,"Procedure Adherence and Level of Use, EN-HU-102,"Human Performance Tools, and IP-SMM-OP-106,"Procedure Use and Adherence." Training is scheduled to be complete by December 1, 2008.

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NARRATIVE *(If more space is required, use additional copies of NRC Form 366A)* **(17)**

Event Analysis

The event is reportable under 10CFR50.73(a)(2)(i)(B). The licensee shall report any operation or condition which was prohibited by the plant TS. The Action Statement for the IVSW Technical Specification (TS) Limiting Condition for Operation (LCO), TS 3.6.9 requires the IVSWS to be operable. The required action A.1 for TS 3.6.9 Condition A, one IVSWS header inoperable or one IVSW automatic actuation valve inoperable, is to restore IVSWS to operable within a completion time of 7 days. This event meets the reporting criteria because IVSW valve IV-1692 was closed in March 2007, rendering its associated IVSWS header inoperable and restored to locked open per 3-COL-CB-004 on September 1, 2008, at approximately 15:20 hours. The inoperable condition during past operation exceeded the 7 day allowed completion time for TS 3.6.9 and the required TS actions were not performed. The condition was not a safety system functional failure as containment isolation capability was maintained with the two DW isolation valves. The previous periodic testing showed no valve seat leakage. In accordance with NUREG-1022, it is not necessary to assume an additional random single failure.

Past Similar Events

A review was performed of Licensee Event Reports (LERs) for the past three years for any events reporting TS prohibited conditions due to mis-positioned valves. No LERs were identified that reported events based on this cause.

Safety Significance

This event had no effect on the health and safety of the public. There were no actual safety consequences for the event because there were no accidents or transients requiring the IVSWS. In accordance with UFSAR Section 6.5, the use of the IVSWS during a loss-of-coolant accident, while not considered for analysis of the consequences of the accident, provides an additional means of conservatism in ensuring that leakage is minimized. No detrimental effect on any other safeguards systems will occur should the seal water system fail to operate. The UFSAR discussion is consistent with the basis provided in TS 3.6.9 since the containment is designed with an allowable leakage rate not to exceed 0.1% of the containment air weight per day. The maximum allowable leakage rate is used to evaluate offsite doses resulting from a Design Basis Accident (DBA). Confirmation that the leakage rate is within limits is demonstrated by the performance of a Type "A" leakage rate test in accordance with the Containment Leakage Rate Testing Program as required by Technical Specification Surveillance Requirement 3.6.1.1. During the performance of the Type "A" test, no credit was taken for the IVSW System in meeting the containment leakage rate criteria. As such, in the event of a DBA without an operable IVSWS, both the whole body and thyroid offsite doses would be within the guidelines specified in 10 CFR Part 50.67. In addition, Local leak rate testing of valves DW-AOV-1 and DW-AOV-2 sealed by IVSW was performed on March 1, 2007 by surveillance test 3-PT-R025B5. The test recorded a leak rate of zero SCCM using water as the test fluid. Valves DW-AOV-1 and DW-AOV-2 are normally closed CIVs and as such, the space in between these valves is expected to be water filled. The water would have been part of the sealing fluid during the DBA and not gas. Since the recorded test leakage was zero SCCM, the expected leakage for these CIVs during a DBA would be approximately zero SCCM even though these valves are not tested with gas in the local leak rate test. Engineering concluded that the overall containment isolation system with valves DW-AOV-1 and DW-AOV-2 not sealed with IVSW would have performed its safety function