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Site Vice President  
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NL-14-061

May 19, 2014

U.S. Nuclear Regulatory Commission  
Document Control Desk  
11545 Rockville Pike, TWFN-2 F1  
Rockville, MD 20852-2738

SUBJECT: Licensee Event Report # 2014-003-00, "Technical Specification (TS)  
Prohibited Condition Due to Mode Change with an Inoperable 22 Auxiliary  
Feedwater Pump"  
Indian Point Unit Nos. 2  
Docket No. 50-247  
DPR-26

Dear Sir or Madam:

Pursuant to 10 CFR 50.73(a)(1), Entergy Nuclear Operations Inc. (ENO) hereby provides Licensee Event Report (LER) 2014-003-00. The attached LER identifies an event where there was a Technical Specification (TS) Prohibited Condition due to a Mode change with an inoperable 22 Auxiliary Feedwater Pump, 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-IP2-2014-02149.

There are no new commitments identified in this letter. Should you have any questions regarding this submittal, please contact Mr. Robert Walpole, Manager, Regulatory Assurance at (914) 254-6710.

Sincerely,

A handwritten signature in black ink, appearing to read "John A. Ventosa".

JAV/cbr

cc: Mr. William Dean, Regional Administrator, NRC Region I  
NRC Resident Inspector's Office, IPEC  
Ms. Bridget Frymire, New York State Public Service Commission

LE22  
NRR

# LICENSEE EVENT REPORT (LER)

Estimated burden per response to comply with this mandatory 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 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-10202, (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.

**1. FACILITY NAME:** INDIAN POINT 2

**2. DOCKET NUMBER**  
05000-247

**3. PAGE**  
1 OF 4

**4. TITLE:** Technical Specification (TS) Prohibited Condition Due to a Mode Change with an Inoperable 22 Auxiliary Feedwater Pump

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
03	18	2014	2014-	003 -	00	05	19	2014	FACILITY NAME	DOCKET NUMBER <b>05000</b>
									FACILITY NAME	DOCKET NUMBER <b>05000</b>

  

<b>9. OPERATING MODE</b>  3	<b>11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:</b> (Check all that apply)										
	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> 50.73(a)(2)(vii)							
<b>10. POWER LEVEL</b>  0%	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)							
	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)							
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)							
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)							
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> OTHER							
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(v)(D)								

Specify in Abstract below or in NRC Form 366A

**12. LICENSEE CONTACT FOR THIS LER**

**NAME**  
John Ferrick, Manager, Production

**TELEPHONE NUMBER (Include Area Code)**  
(914) 254-5066

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
X	BA	P	W318	Y	X	SB	V	C684	Y

**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 March 18, 2014, Entergy identified a failure to comply with Technical Specification (TS) 3.7.5 [Auxiliary Feedwater System (AFW)] after discovery that post maintenance testing (PMT) had not been performed after completion of work on the 22 Turbine Driven (TD) AFW pump steam supply valves MS-41 and MS-42. Failure to perform a PMT on valves MS-41 and MS-42 prevents demonstration that the valves are operable. Inoperable AFW pump steam supply valves causes the TD-AFW pump to be inoperable. TS 3.7.5 requires three trains of AFW to be operable in Modes 1, 2 and 3. Mode 3 was entered on March 16, 2014. TS 3.7.5 contains a note that Limiting Condition for Operation (LCO) 3.0.4.b is not applicable and this LCO was not met when the plant entered Mode 3 as the LCO of TS 3.7.5 and LCO 3.0.4.a was not met and LCO 3.0.4.b is precluded. Upon discovery of the condition, valves MS-41 and MS-42 and the 22 TD AFW were declared inoperable. Cause of the event was scheduling error. This resulted in the exclusion of the PMT from the outage schedule. Corrective actions included testing valves, and correcting the scheduling error. The event had no effect on public health and safety.

## LICENSEE EVENT REPORT (LER)

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
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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 March 18, 2014, Entergy identified a failure to comply with Technical Specification (TS) 3.7.5 [Auxiliary Feedwater System (AFWS)] after discovery that post maintenance testing (PMT) had not been performed after completion of work on 22 Turbine Driven (TD) Auxiliary Feedwater (AFW) pump steam supply valves MS-41 and MS-42. Failure to perform a PMT on valves MS-41 and MS-42 prevents demonstration that the valves are operable. Inoperable AFW pump steam supply valves causes the TD-AFW pump to be inoperable. TS 3.7.5 requires three trains of AFW to be operable in Modes 1, 2 and 3. Mode 3 was entered on March 16, 2014. TS 3.7.5 contains a note that Limiting Condition for Operation (LCO) 3.0.4.b is not applicable and LCO 3.7.5 was not met when the plant entered Mode 3 as LCO 3.0.4.a was not met and LCO 3.0.4.b is precluded. Upon discovery of the condition, valves MS-41 and MS-42 were declared inoperable and TS 3.7.5 Condition A entered (one steam supply to the TD AFW pump inoperable, OR one turbine driven AFW pump inoperable in Mode 3 following refueling), and the 22 TD-AFW pump was declared inoperable and Condition B entered (one AFW train inoperable in Mode 1, 2 or 3 for reasons other than Condition A). The condition was recorded in the Indian Point Energy Center corrective action program (CAP) as CR-IP2-2014-02149.

The AFWS consists of two motor driven AFW pump and one steam turbine driven pump configured into three trains. The steam turbine driven AFW pump receives steam from two main steam lines upstream of the main steam isolation valves. Each of the steam feed lines will supply 100% of the requirements of the turbine driven AFW pump. Steam to drive the turbine driven AFW pump is supplied from the 22 steam generator (SG) and 23 SG main steam line branch lines through two stop check valves (MS-41 and MS-42) to pressure control valve (PCV)-1139. The 22 AFW pump is a turbine driven multistage centrifugal pump manufactured by Worthington Corp {W318}.

During the Unit 2 Refueling Outage cycle 21 (2R21), the required PMT for steam supply valves MS-41 and MS-42 was not completed after scheduled work was performed prior to start-up. The PMT was to be performed under Work Order (WO) 00361761 (Post Work Test-2-PT-Q34) in 2R21. On March 18, 2014 it was discovered that the required PMT WO was not completed. An investigation determined WO 00361761 was taken to READY status on September 6, 2013 and then the FINISHED status on March 18, 2014. PMT WO 00361761 was not originally coded for 2R21 as it was created by the Work Control Process (Asset Suite) from an online surveillance test thereby inheriting codes designating it to be scheduled within the online schedule. When the PMT WO 00361761 was assigned to outage WOs 52253153 and WO 52253154, an email notification is required to be sent from the WO Planner to Outage Scheduling to include the PMT WO in the 2R21 outage schedule. The investigation could not determine if the email was sent or not or not acted on by scheduling but the WO remained in the online schedule. MS-41 and MS-42 are stop check valves Model No. 179-1/2-U manufactured by Crane Valve Co. {C684}.

The process used by the Planning Department to prepare outage tasks that require PMTs is the use of online Surveillance Tests that include the scope that meets the testing requirements needed for the outage PMTs. In some cases, these online WOs are backgrounded (copies) to create a new WO that then is required to be re-coded in the Work Control Process (Asset Suite) to be included in the outage. The PMT for valves MS-41 and MS-42 were developed using this process. The Asset suite coding on a WO determines in which scheduling inbox the WO will reside until scheduled. When online WOs are backgrounded, the copy is created with the same codes as the original and is immediately written into the online inbox for scheduling.

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Common practice is to either email or call an Outage Scheduler to notify scheduling of a new WO that was created that needs to be included in the outage schedule. The Outage Scheduler then performs the necessary re-coding to get the WO scheduled for the outage. If there is a communication failure between the Planner and Outage Scheduler, the backgrounded copy of the Surveillance Test will remain in the online inbox.

An extent of condition review was performed that reviewed the exclusion of any other PMT WO from the 2R21 schedule. A list of tasks were identified that were not coded to have testing performed during 2R21. An assessment confirmed that none of the listed WOs required PMTs.

Cause of Event

The direct cause of the event was changing modes prior to completing the PMTs of the 22 Turbine Driven (TD) AFW pump steam supply valves (MS-41 and MS-42). Failure to verify the steam supply valves were operable resulted in an inoperable 22 TD AFW pump which is required by TS when entering Mode 3. Cause of the event was that the automatic assignment of the PMT work order (WO) into the correct scheduling inbox was flawed because the PMT WO was backgrounded from an online WO which was automatically sent into the online schedule instead of the outage inbox. This resulted in the exclusion of the PMT from the outage schedule.

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 MS-41 and MS-42 were satisfactorily tested and returned to operable.
- A directive was provided to planners not to background model Work Orders from online surveillances used for outage PMTs.
- The Work Control Program was updated to add security rights for appropriate planners to allow identification of the correct outage.
- A mismatch report will be created to identify PMTs that may have been created with incorrect ties to refueling outage master WOs.

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's TS. This condition meets the reporting criteria because post maintenance testing (PMT) had not been performed on the 22 Turbine Driven (TD) AFW pump steam supply valves MS-41 and MS-42. Failure to perform a PMT on valves MS-41 and MS-42 prevents demonstration that the valves are operable. Inoperable AFW pump steam supply valves causes the TD-AFW pump to be inoperable. TS 3.7.5 requires three trains of AFW to be operable in Modes 1, 2 and 3. Mode 3 was entered on March 16, 2014. TS 3.7.5 contains a note that Limiting Condition for Operation (LCO) 3.0.4.b is not applicable and this LCO was not met when the plant entered Mode 3 as the LCO of TS 3.7.5 and LCO 3.0.4.a was not met and LCO 3.0.4.b is precluded. The TS 3.7.5 requirements were not complied with during mode changes therefore a TS prohibited condition existed. The condition is not reportable in accordance with 10CFR50.73(a)(2)(ii), Any event or condition that resulted in (A) The condition of the power plant, including its principal safety barriers, being seriously degraded; or (B) the nuclear power plant being in an unanalyzed condition that significantly degraded plant safety, nor is it reportable under 10CFR50.73(a)(2)(v).

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

The PMT was performed after discovery it had not been completed and the test satisfactorily demonstrated the safety function would have been performed. Therefore, there was no principal safety barriers seriously degraded, no condition that significantly degraded plant safety nor was there a condition that could have prevented the fulfillment of the AFW system safety function

## Past Similar Events

A review was performed of the past three years for Licensee Event Reports (LERs) reporting a TS prohibited condition due to a failure to perform a PMT or testing to verify operability. No LERs were identified.

## Safety Significance

This event had no effect on the health and safety of the public.

The AFWS is composed on two motor driven and one steam driven AFW pump. Both motor driven AFW pumps were operable when mode 3 was entered. The required PMT on two stop check valves (MS-41 and MS-42) had not been performed. Subsequent, testing was performed that verified the valves were operable and the 22 TD AFW pump would have performed its safety function. On March 18, 2014, at 23:00 hours, TS 3.7.5 was exited for MS-41, MS-42 and 22 AFW pump declared operable.