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Robert J. Murillo
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Waterford 3

W3F1-2008-0007

July 17, 2008

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

Subject: Licensee Event Report 08-002-00
Waterford Steam Electric Station, Unit 3 (Waterford 3)
Docket No. 50-382
License No. NPF-38

Dear Sir or Madam:

Entergy is hereby providing Licensee Event Report (LER) 08-002-00 for Waterford Steam Electric Station Unit 3. The LER is for a condition wherein one of four transmitters used in each Steam Generator for level protection was inoperable during Cycle 15 operation. This condition was a violation of Technical Specification Table 3.3-1, and the condition is being reported pursuant to 10 CFR 50.73(a)(2)(i)(B).

This report contains no new commitments. Please contact Robert J. Murillo at (504) 739-6715 if you have questions regarding this information.

Sincerely,

Gregory Scott
for

RJM/GCS/ssf

Attachment: Licensee Event Report 08-002-00

IE22
NRR

(w/Attachment)

cc: Mr. Elmo E. Collins, Jr.
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
612 E. Lamar Blvd., Suite 400
Arlington, TX 76011-4125

NRC Senior Resident Inspector
Waterford Steam Electric Station Unit 3
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Louisiana Department of Environmental Quality
Office of Environmental Compliance
Surveillance Division
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R.K. West, lerevents@inpo.org - INPO Records Center

Attachment

W3F1-2008-0007

Licensee Event Report 08-002-00

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

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)

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4. TITLE

Inoperable Steam Generator Narrow Range Level Channels

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
									NA	05000
05	23	2008	2008	- 002 -	00	07	17	2008	FACILITY NAME NA	DOCKET NUMBER 05000

9. OPERATING MODE

6

10. POWER LEVEL

0

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

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
Waterford 3 Steam Electric Station Robert J. Murillo	(504) 739-6715

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

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)

On May 8, 2008, at approximately 1400 hours, with the plant in Mode 6, Refueling (RF15), one transmitter for Steam Generator (SG) 1 and one transmitter for SG 2 used for SG narrow range level Plant Protection System (PPS) trip input were determined to be out of calibration. On May 23, 2008, the two transmitters were determined to be inoperable. Evaluation established the transmitters were inoperable since RF14. The Apparent Cause Evaluation established the condition occurred due to procedural inadequacy as the procedures did not provide sufficient detail to assure proper manipulations of valves and venting of sensing lines after installation of the SG narrow range transmitters. Technical Specification Table 3.3-1, Action 2, requires that with the number of channels operable one less than the total number of channels, which are four per Steam Generator, startup or power operation may continue provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour. Since the channels were inoperable and were not placed in bypass or tripped position, as the condition was unknown to plant personnel, this condition resulted in a violation of TS Table 3.3-1. Upon discovery of this condition, both SG transmitters were calibrated during Mode 6 of RF 15, restoring the SG narrow range channels to operable status. Although one narrow range channel from each Steam Generator was determined to be inoperable, three narrow range channels were operable on each SG as required by Technical Specifications. The condition is not a Safety System Functional Failure. The condition did not compromise the health and safety of the general public.

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NARRATIVE

REPORTABLE OCCURRENCE

On May 23, 2008, one transmitter for SG 1 and one transmitter for SG 2 used for narrow range level PPS trip input were determined to be inoperable. The transmitters were out of calibration and inoperable during Cycle 15. Technical Specification Table 3.3-1, Action 2, requires that with the number of channels operable one less than the total number of channels, which are four per Steam Generator, startup or power operation may continue provided the inoperable channel is placed in the bypassed or tripped condition within 1 hour. Plant personnel were unaware of this condition during Cycle 15, and therefore did not place the inoperable channels in the bypass or tripped condition per the Technical Specification. This condition constituted a violation of Technical Specification Table 3.3-1, and the condition is reportable within 60 days pursuant to 10CFR 50.73(a)(2)(i)(B).

INITIAL CONDITIONS

At the time the two SG level transmitters were determined to be inoperable, the plant was in Mode 6 refueling. There were no other structures, systems, or components inoperable at the time of discovery that contributed to this condition.

EVENT DESCRIPTION

On May 8, 2008, maintenance was being performed per procedures MI-003-005 and MI-003-006, Steam Generator Level Loop Check and Calibration for SG 1 and SG 2 respectively. During the performance of the maintenance, personnel discovered that one transmitter for SG 1 and one transmitter for SG 2 used for SG narrow range level PPS trip input were out of calibration. On May 23, 2008, evaluation established the two transmitters were inoperable during Cycle 15 operation.

CAUSAL FACTORS

During RF14 seven of the eight SG level transmitters used for PPS trip input were replaced for SG 1 and SG 2. The transmitters were replaced by temporary outage workers. The one SG narrow range transmitter that was not replaced remained in calibration during Cycle 15 operation. The Apparent Cause Evaluation established the condition occurred due to procedural inadequacy as the procedures did not provide sufficient detail to assure proper manipulations of valves and venting of sensing lines after installation of the seven SG narrow range transmitters.

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NARRATIVE

CORRECTIVE ACTIONS

Corrective actions taken include:

- An Apparent Cause Evaluation, documented in condition report CR-WF3-2008-2107, was performed.
- A Failure Modes and Effects Evaluation was performed.
- The seven SG narrow range transmitters were calibrated.
- A Corrective Action Program (CAP) action was issued to revise calibration procedures.
- A CAP action was issued to enhance the training for temporary outage workers in the calibration of transmitters.

SAFETY SIGNIFICANCE

The condition described in this LER has minimal safety significance.

The SG narrow range level transmitters provide inputs to the PPS safety channels to actuate two PPS functions: (1) initiate reactor trip on SG high level and (2) initiate reactor trip and Emergency Feedwater Actuation Signal (EFAS) on low SG level. Evaluation of the safety analysis and setpoints established that the PPS analytical limit for EFAS on low SG level could not have been exceeded based on the degree of the out of calibration of the transmitters. The evaluation established the analytical limit for the PPS limit for high SG level could have been exceeded based on the magnitude of the out of calibration condition. The SG high level PPS trip is an equipment protection trip and not a safety function trip. The SG high level PPS trip prevents excessive moisture carryover from the steam generator [SB] from reaching the turbine [TA], which could result in damage to the turbine. Three of the four SG narrow range channels were available and operable during Cycle 15 operation. Two SG narrow range channels are required to generate a reactor trip.

There was a zero percent delta Core Damage Frequency, or no increase in core damage probability, with both transmitters not operable. This condition did not exceed the NRC Green criteria of $<10^{-6}$ per year.

SIMILAR EVENTS

A record search was performed for other similar reported conditions at Waterford 3. No similar conditions were identified and reported over the last 3 year period.

ADDITIONAL INFORMATION

Energy industry identification system (EIIS) codes are identified in the text within brackets [ ].