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Donna Jacobs
Vice President - Operations
Waterford 3

10 CFR 50.73

W3F1-2012-0008

March 5, 2012

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

Subject: Licensee Event Report 2012-001-00
Waterford Steam Electric Station, Unit 3 (Waterford 3)
Docket No. 50-382
License No. NPF-38

Dear Sir or Madam:

Entergy is hereby submitting Licensee Event Report (LER) 2012-001-00 for Waterford Steam Electric Station Unit 3. This report provides details associated with exceeding a Technical Specification allowed outage time.

Based on plant evaluation, it was determined that this condition is reportable under 10 CFR 50.73(a)(2)(i)(B) requirements.

This report contains no new commitments. Please contact William J. Steelman at (504) 739-6685 if you have questions regarding this information.

Sincerely,

 FOR D. JACOBS

DJ/WH

Attachment: Licensee Event Report 2012-001-00

cc:	Mr. Elmo E. Collins, Jr. Regional Administrator U. S. Nuclear Regulatory Commission Region IV 1600 E. Lamar Blvd. Arlington, TX 76011-4511	RidsRgn4MailCenter@nrc.gov
	NRC Senior Resident Inspector Waterford Steam Electric Station Unit 3 P.O. Box 822 Killona, LA 70066-0751	Marlone.Davis@nrc.gov Dean.Overland@nrc.gov
	U. S. Nuclear Regulatory Commission Attn: Mr. N. Kalyanam Mail Stop O-07D1 Washington, DC 20555-0001	Kaly.Kalyanam@nrc.gov
	INPO Records Center	lerevents@inpo.org

Attachment to

W3F1-2012-0008

Licensee Event Report 2012-001-00

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION (10-2010)				APPROVED BY OMB NO. 3150-0104				EXPIRES 10/31/2013																																						
LICENSEE EVENT REPORT (LER) (See reverse for required number of digits/characters for each block)																																														
1. FACILITY NAME Waterford 3 Steam Electric Station					2. DOCKET NUMBER 05000 382			3. PAGE 1 OF 3																																						
4. TITLE Technical Specification for Containment Fan Cooler Minimum Cooling Flow Not Met																																														
5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED																																					
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9. OPERATING MODE <div style="text-align: center; font-size: 24pt;">1</div>			11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply) <table style="width:100%; border: none;"> <tr> <td><input type="checkbox"/> 20.2201(b)</td> <td><input type="checkbox"/> 20.2203(a)(3)(i)</td> <td><input type="checkbox"/> 50.73(a)(2)(i)(C)</td> <td><input type="checkbox"/> 50.73(a)(2)(vii)</td> </tr> <tr> <td><input type="checkbox"/> 20.2201(d)</td> <td><input type="checkbox"/> 20.2203(a)(3)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(ii)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(A)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(1)</td> <td><input type="checkbox"/> 20.2203(a)(4)</td> <td><input type="checkbox"/> 50.73(a)(2)(ii)(B)</td> <td><input type="checkbox"/> 50.73(a)(2)(viii)(B)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(i)</td> <td><input type="checkbox"/> 50.36(c)(1)(i)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(iii)</td> <td><input type="checkbox"/> 50.73(a)(2)(ix)(A)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(ii)</td> <td><input type="checkbox"/> 50.36(c)(1)(ii)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(iv)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(x)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(iii)</td> <td><input type="checkbox"/> 50.36(c)(2)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(A)</td> <td><input type="checkbox"/> 73.71(a)(4)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(iv)</td> <td><input type="checkbox"/> 50.46(a)(3)(ii)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(B)</td> <td><input type="checkbox"/> 73.71(a)(5)</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(v)</td> <td><input type="checkbox"/> 50.73(a)(2)(i)(A)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(C)</td> <td><input type="checkbox"/> OTHER</td> </tr> <tr> <td><input type="checkbox"/> 20.2203(a)(2)(vi)</td> <td><input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)</td> <td><input type="checkbox"/> 50.73(a)(2)(v)(D)</td> <td>Specify in Abstract below or in NRC Form 366A</td> </tr> </table>								<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)	<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
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12. LICENSEE CONTACT FOR THIS LER																																														
FACILITY NAME Waterford 3 Steam Electric Station William Steelman						TELEPHONE NUMBER (Include Area Code) (504) 739-6685																																								
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																																					
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)																																														
<p>During the recent NRC Triennial Heat Sink Performance Inspection, it was identified that Component Cooling Water flows to the B and D Containment Fan Coolers during normal operating conditions were below the Technical Specification (TS) Surveillance Requirement (SR) for minimum flow from approximately July 8, 2009 through July 19, 2009. The duration of this condition exceeded the TS 3.6.2.2 Limiting Condition for Operation Allowable Outage Time of 72 hours.</p> <p>TS SR 4.6.2.2.a requires that each train of containment cooling shall be demonstrated operable at least once per 31 days by verifying a cooling water flow rate of greater than or equal to 625 GPM to each cooler.</p> <p>The original condition that caused the flows to be less than 625 GPM during normal operating conditions has since been corrected and subsequently meets or exceeds the flow-rate listed in the surveillance requirement.</p> <p>No plant transient or safety system actuations occurred. Stable plant operation continued at 100 percent power.</p>																																														

LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
Waterford 3 Steam Electric Station	05000382	YEAR	SEQUENTIAL NUMBER	REV NO.	2 OF 3
		2012	- 001	- 00	

NARRATIVE

REPORTABLE OCCURRENCE

Component Cooling Water (CCW)[CC] system flows to the B and D Containment Fan Coolers (CFC)[BK] during normal operating conditions did not meet the listed Technical Specification (TS) Surveillance Requirement (SR) for minimum flow in 2009. The duration of this condition exceeded the Limiting Condition for Operation action statement to restore the inoperable train within 72 hours.

This identified condition is being reported as a Licensee Event Report (LER) under reporting criteria 10CFR50.73(a)(2)(i)(B): Any operation or condition which was prohibited by the plant's Technical Specifications.

INITIAL CONDITIONS

During this time period, Waterford Steam Electric Station Unit 3 (W3) was operating in Mode 1, stable at 100% power. The CFC CCW flow control valves were partially open, as expected, during normal plant operations with no plant protection system actuation signals present.

EVENT DESCRIPTION

During the exit meeting for the recent NRC Triennial Heat Sink Performance Inspection on January 5, 2012, the inspection team informed W3 of one Green Non Cited Violation for failure to comply with TS 3.6.2.2. The example given was that, during the period from approximately July 8, 2009 through July 19, 2009, the records of plant parameters showed that CCW system flows to the B and D CFCs did not meet the listed TS surveillance requirement for minimum flow.

TS 3.6.2.2 requires that two independent trains of containment cooling shall be operable. Per the TS Basis, at least one operable fan cooler is required for each train in Modes 1, 2, 3, and 4. The allowed outage time (AOT) is 72 hours.

SR 4.6.2.2 requires that each train of containment cooling shall be demonstrated operable at least once per 31 days by: 1) starting each operational fan not already running from the Control Room and verifying that each operational fan operates for at least 15 minutes, and 2) verifying a cooling water flow rate of greater than or equal to 625 gpm to each cooler.

The required 31 day surveillances demonstrated that CCW flow to the CFC was greater than the minimum allowed when aligned for the surveillance. However, during normal operation between surveillances, flow was recorded below the minimum allowed.

By design, air operated valves CC-835A (CFC Train A Temperature Control) and CC-835B (CFC Train B Temperature Control) control flow to their respective coolers and go full open upon receipt of a Safety Injection Actuation Signal (SIAS) to assure adequate CCW flow to the fan coolers during the increased heat load resulting from an accident. During normal operation these valves are partially open to allow 700 gpm flow if one fan is started. If both fans A and C or B and D are started, flow is increased to 1400 gpm. These valves fail open on loss of air or power and open fully (2700 GPM) to support the CFC safety function during a SIAS event.

The identified condition is entered into the site corrective action program as CR-WF3-2011-8150. The NRC violation is entered into the site corrective action program as CR-WF3-2012-1044.

CAUSAL FACTORS

In July 2009, W3 identified CCW flow of 600 gpm to CFC B (CR-WF3-2009-3405) during normal operations. Maintenance technicians adjusted an Instrument Air (IA)[LD] regulator for valve CC-835B to raise CCW flow. The IA regulator was then replaced in August 2009.

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NARRATIVE

Later, while investigating minor changes in CCW flow to CFC, it was recognized that the performance of the regulators were degrading and they were replaced. No actual equipment failure occurred.

CORRECTIVE ACTIONS

The IA regulator was replaced. Engineering evaluated the preventive maintenance strategy for valve CC-835 components and established a replacement frequency for the air regulators.

SAFETY SIGNIFICANCE

The safety related functions of CFC, as part of the Containment Cooling System (CCS), are to:

- remove heat from the containment atmosphere following a loss of coolant (LOCA) or secondary system pipe rupture or main steam line break (MSLB) inside containment,
- maintain an acceptable containment pressure and temperature, and
- limit off site radiation dose by reducing the pressure differential between containment atmosphere and external environment.

The safety portion of the CFC is designed with two separate trains each consisting of two fan coolers. One fan cooler in a train of CFC is required to remove heat from the reactor containment building following any LOCA at 100% power in conjunction with a train of the Containment Spray System (CSS)[BE]. This heat is transferred to the ultimate heat sink via CCW. The CFCs are also designed to mitigate the consequences of a MSLB in conjunction with the CSS. The heat removal capacity of each train of CFC in conjunction with a train of CSS is sufficient to lower the containment pressure from peak value to half the peak value in 24 hours following a design basis accident.

The air operated valves CC-835A and CC-835B control CCW flow to their respective CFC and go full open (fail open) upon receipt of a SIAS to assure adequate CCW flow to the fan coolers during the increased heat load resulting from an accident.

The ability of Train B CFC to perform its safety function was evaluated in CR-WF3-2009-3405 when the low CCW flow condition during normal operation was found. With only CFC B in operation, CCW flow was approximately 950 gpm. The changing flow rates when securing and starting CFC D also indicated that CC-835B was moving freely. On a SIAS, CC-835B will fail open to provide full flow to the CFC, as is tested on an 18 month basis.

The status of Train A CFC was evaluated for the time period. No maintenance was performed on Train A CFC, leaving the train fully functional.

Based on the demonstrated ability of Train A and Train B CFC to perform their safety functions, the safety significance of the Train B CFC low CCW flow during normal operations is negligible.

SIMILAR EVENTS

Corrective action program data for past three years was searched for low CCW flow to CFC conditions. No similar conditions of TS low CCW to CFCs were found.

ADDITIONAL INFORMATION

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