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W3F1-2008-0047

July 17, 2008

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

Subject: Licensee Event Report 08-003-00
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) 08-003-00 for Waterford Steam Electric Station Unit 3. This report provides the details of a condition involving the raising of a fuel assembly within the Reactor Vessel during refueling operations without automatic overload cut off protection enabled, a condition prohibited by Technical Specification 3.9.6. The condition is reported herein 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,

RJM/OPP/ssf

Attachment: Licensee Event Report 08-003-00

JE22
NRR

(w/Attachment)
cc: Mr. Elmo E. Collins, Jr.
Regional Administrator
U. S. Nuclear Regulatory Commission
Region IV
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NRC Senior Resident Inspector
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R.K. West, lerevents@inpo.org - INPO Records Center

Attachment

W3F1-2008-0047

Licensee Event Report 08-003-00

NRC FORM 366 U.S. NUCLEAR REGULATORY COMMISSION (9-2007)	APPROVED BY OMB NO. 3150-0104	EXPIRES 8/31/2010
<h2 style="margin: 0;">LICENSEE EVENT REPORT (LER)</h2> <p style="font-size: small; margin: 5px 0 0 0;">(See reverse for required number of digits/characters for each block)</p>		
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.		

1. FACILITY NAME Waterford 3 Steam Electric Station	2. DOCKET NUMBER 05000382	3. PAGE 1 OF 4
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4. TITLE
 Movement of Fuel Assembly In Reactor Vessel With Fuel Handling Machine Inoperable.

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
05	18	2008	2008	- 003	- 00	07	17	2008	NA	05000
									FACILITY NAME	DOCKET NUMBER
									NA	05000

9. OPERATING MODE 6	11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check all that apply)			
10. POWER LEVEL 0	<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

12. LICENSEE CONTACT FOR THIS LER

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

14. SUPPLEMENTAL REPORT EXPECTED <input type="checkbox"/> YES (If yes, complete 15. EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	15. EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)

On May 18, 2008, at about 1659 hours, with the plant shut down in Mode 6 for Refuel 15, fuel assembly LAY405 was raised within the reactor vessel without automatic overload cut off protection enabled, a condition prohibited by Technical Specification 3.9.6.

The refueling machine computer became nonfunctional on May 18, 2008, at approx 1621 hours. At approximately 1659 hours, the hoist was being raised with fuel assembly LAY405 to the up-limit, which is a prerequisite for rebooting the computer. Fuel assembly LAY405 was raised in a mode referred to as "Key Override" wherein automatic overload cut off protection is not enabled. Personnel raising fuel assembly LAY405 incorrectly believed that the overload cut off was enabled in key override mode. Thus, Technical Specification 3.9.6, which requires an overload cut off limit of less than or equal to 3350 pounds for the fuel mast during movement of fuel assemblies within the reactor pressure vessel, was not entered. This condition is reportable as a violation of Technical Specification 3.9.6 pursuant to 10CFR50.73(a)(2)(i)(B). Fuel assembly LAY405 was located away from other fuel assemblies and reactor internals when fuel assembly LAY405 was raised in key override mode. The fuel assembly did not contact reactor internals during the raising of fuel assembly LAY405. The condition did not involve 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 18, 2008 at about 1621 hours, during refueling operations, the refueling machine computer became nonfunctional. Fuel assembly LAY405 was grappled and suspended in the core at about elevation 330 inches, near core location N-18 and other loaded fuel assemblies. Fuel assembly LAY405 was moved away from core location N-18 into clear water by placing the refueling machine in key override mode. The clear water move was a lateral move about 4 inches in the northern direction and then about 4 inches in the easterly direction. At approximately 1659 hours, refueling personnel then raised fuel assembly LAY405 in key override mode. Technical Specification 3.9.6 requires that the refueling machine have an overload cut off limit of less than or equal to 3350 pounds for the fuel mast during the movement of fuel assemblies within the reactor pressure vessel. Technical Specification 3.9.6 ACTION 'a.' states that, "With the above requirements for the fuel mast not satisfied, suspend use of the fuel mast from operations involving the movement of fuel assemblies." The refuel team raised the fuel assembly from within the core using key override mode. Members of the refuel team involved in raising the fuel assembly incorrectly believed that the automatic overload cut off was enabled while using key override mode, so the control room was not contacted and Technical Specification 3.9.6 was not entered. Therefore, this condition is being submitted as a violation of Technical Specification 3.9.6, reportable within 60 days pursuant to 10CFR 50.73(a)(2)(i)(B).

INITIAL CONDITIONS

At the time of discovery, the plant was in Mode 6 in the process of refueling the reactor. There were no other structures, systems, or components inoperable at the time of discovery that contributed to the condition.

EVENT DESCRIPTION

On May 18, 2008 at about 1530 hours, fuel assembly LAY405 was moved from spent fuel pool location WW32 to the reactor core with the objective to set fuel assembly LAY405 in core location N-18. Fuel assembly LAY405 was indexed to core location N-18 and positioned for a clear water move. The attempt to move and lower fuel assembly LAY405 into core location N-18 was not successful due to an adjacent fuel assembly being off of the engagement pins. The refueling machine [FHM] computer [CPU] then became nonfunctional at about 1621 hours. Fuel assembly LAY405 was moved away from core location N-18 into clear water by placing the refueling machine in key override mode. The clear water move was a lateral move about 4 inches in the northernly direction and then about 4 inches in the easterly direction. At approximately 1659 hours, refueling personnel, after ensuring that the fuel assembly was not in contact with other fuel assemblies or other reactor internals, raised fuel assembly LAY405 in order to reboot the nonfunctional computer. Technical Specification 3.9.6 was not entered prior to raising fuel assembly LAY405 without the automatic overload cut off enabled.

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NARRATIVE

CAUSAL FACTORS

The Apparent Cause established that personnel failed to comply with procedure RF-005-002. Procedure RF-005-002 Rev. 302 requires entering the LCO for Technical Specification 3.9.6 when using the manual handwheel or key override to move the refueling machine hoist in an outward direction with the attached fuel assembly in the core region. Personnel did not follow procedural cautions in RF-005-002 and contact the control room for entering Technical Specification 3.9.6 prior to raising fuel assembly LAY405 in key override mode. Personnel performed in a skill based mode rather than rule based mode, thus not ensuring that there was adherence with procedure RF-005-002.

CORRECTIVE ACTIONS

The following corrective actions have been taken (Reference Condition Reports CR-WF3-2008-02427 and CR-WF3-2008-02423):

A Human Performance Evaluation Review was performed and personnel counseled on the importance of verifying procedure compliance.

An Apparent Cause Evaluation was performed.

SAFETY SIGNIFICANCE

The condition described in this LER had minimal safety significance.

The Bases for Technical Specification 3.9.6 state that the requirements for the refueling machine ensure that: (1) the refueling machine will be used for the movement of fuel assemblies, (2) each hoist has sufficient load capacity to lift a fuel assembly, and (3) core internals and pressure vessel are protected from excessive lifting forces in the event they are inadvertently engaged during lifting operations. These conditions were met during the lifting of fuel assembly LAY405 in the key override mode. There was no unintended interaction with the pressure vessel or core internals. The Technical Specification 3.9.6 overload cut off limit of 3350 pounds for the fuel mast was not exceeded while raising the fuel assembly.

Although the reported condition could have hypothetically increased the risk of damage to fuel assembly LAY405 or an adjacent fuel assembly, or involved some small risk of a fuel handling accident, this risk was minimized by the action of Waterford 3 refueling staff to move the assembly away from other assemblies into the open water area of the core before raising the assembly. There is, however, no conceivable way in which this event could have led to the severe core damage that is the end state of concern in a core damage risk assessment. Therefore, the core damage risk impact was zero.

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NARRATIVE

SIMILAR EVENTS

A record search was performed for other similar reported events at Waterford 3. No similar events were identified as reported over the last 3 refueling outages.

ADDITIONAL INFORMATION

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