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ACCESSION NBR: 9309280195      DOC. DATE: 93/09/22      NOTARIZED: NO      DOCKET #  
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 RECIPIENT NAME      RECIPIENT AFFILIATION

SUBJECT: LER 93-004-00: on 930823, discovered maximum TS surveillance interval exceeded due to mgt deficiency. Placed restrictions on surveillance tests in suspend mode & revised program. W/930922 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 7  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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**DUKE POWER**

September 22, 1993

U. S. Nuclear Regulatory Commission  
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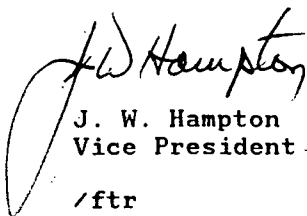
Subject: Oconee Nuclear Station  
Docket Nos. 50-269, -270, -287  
LER 270/93-04

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a)(1) and (d), attached is Licensee Event Report (LER) 270/93-04, concerning an Emergency Feedwater Technical Specification interval being exceeded.

This report is being submitted in accordance with 10 CFR 50.73 (a)(2)(i)(B). This event is considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

  
J. W. Hampton  
Vice President  
/ftr

Attachment

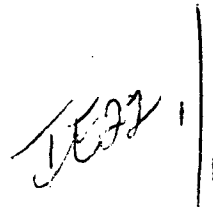
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**LICENSEE EVENT REPORT (LER)**

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) <b>Oconee Nuclear Station, Unit 2</b>		DOCKET NUMBER (2) <b>05000 270</b>	PAGE (3) <b>1 OF 6</b>
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TITLE (4) **EMERGENCY FEEDWATER REQUIRED TECHNICAL SPECIFICATION SURVEILLANCE INTERVAL EXCEEDED DUE TO MANAGEMENT DEFICIENCY**

EVENT DATE (5)			LER NUMBER (6)			REPORT NUMBER (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
08	23	93	93	04	00	09	22	93	FACILITY NAME	05000
									FACILITY NAME	05000

OPERATING MODE (9) <b>N</b>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)			
POWER LEVEL (10) <b>100</b>	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> OTHER
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(iii) (B)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME <b>S. G. Benesole, Safety Review Manager</b>	TELEPHONE NUMBER (include Area Code) <b>(803) 885-3518</b>
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)		
YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/>	NO		MONTH	DAY	YEAR

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

At 0915 hours on August 23, 1993, with Unit 2 at 100 % full power, it was discovered that the maximum Technical Specification surveillance interval of 45 days had been exceeded by 28 days for Unit 2 Motor Driven Emergency Feedwater Pumps (MDEFDWP) initiation circuitry. This error was discovered when an Instrument and Electrical supervisor attempted to coordinate a minor modification functional test with the surveillance test procedure. The supervisor asked the Planner for the next scheduled surveillance test date. The Planner discovered that after the last refueling outage, the computer program which schedules periodic tests was not updated to return this test to an active status. The test should have been performed no later than July 26, 1993. The surveillance test was immediately performed on August 23, 1993 and indicated that MDEFDWP initiation circuitry had been operable. The root cause for this event is Management Deficiency (training, less than adequate training given and inadequate planning/scheduling). Corrective actions include placing restrictions on surveillance tests placed in the suspend mode and revising the program to track task placed in the suspend mode.

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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Oconee Nuclear Station, Unit 2	05000 270	93	04	00	2 OF 6

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

### BACKGROUND

The Emergency Feedwater System (EFDW) [EIIS:BA] is designed to start automatically upon the loss of Main Feedwater (MFDW) [EIIS:SJ]. The EFDW system consist of two Motor Driven and one Turbine Driven Pumps. The Motor Driven Emergency Feedwater Pumps (MDEFDWP) have initiation circuitry which will start the pumps automatically when both MFDW Pumps have low hydraulic oil pressure or both MFDW Pumps have low discharge pressure. An additional initiation signal is generated on low steam generator level.

Section 4 of the Technical Specification (Surveillance Requirements) specifies that the Emergency Feedwater Initiation Circuits surveillance is to be performed monthly, with a maximum allowable frequency of 45 days between surveillance. The test procedure used is IP/0/A/0275/006C (Safety Related Functional Test of the MDEFDWPs Initiation Pressure Switches and Cooling Water Valves).

The "Work Management System" is a computer program which is utilized to schedule predefined preventive maintenance tasks, including Surveillance Tests. The tasks can be placed in one of three modes; Active, Suspend, and Deleted modes. When a task is in the active mode, and a current due date exists, new work orders and scheduled due dates automatically will be generated. When a task is placed in the suspend mode, new work orders and scheduled due dates will not be generated. When a task is placed in the deleted mode, the task no longer exists.

### EVENT DESCRIPTION

On March 31, 1993 IP/0/A/0275/006C (Safety Related Functional Test of the Motor Driven Emergency Feedwater Pumps (MDEFDWP) Initiation Pressure Switches and Cooling Water Valves) was successfully completed.

On April 21, 1993 the Work Management System (WMS) generated Work Order 93028866-01 (WO-1), which scheduled the performance of IP/0/A/0275/006C (the test) on April 28, 1993.

On April 26, 1993, Planner A assigned WO-1 to an Instrument and Electrical (I&E) Supervisor to perform. On April 27, 1993, the I&E Supervisor recommended that the test scheduled for April 28 be delayed until Unit startup, because Unit 2 would begin a refueling outage on that date. At this time Planner A placed WO-1 on hold until Unit startup.

The refueling outage began on April 28, 1993.

**LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION**

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

On May 19, 1993, WMS generated WO 93035860-01 (WO-2), which scheduled the test to be performed on May 26, 1993. At this time, Planner A notified Work Control Technical Support to place this test in the suspend mode to stop the generation of additional WOs.

During Unit 2's outage Planner B assumed the duties originally held by Planner A. On May 25, 1993, Planner B requested that Work Control Technical Support to void WO-2 because WO-1 was open for completion during startup. WO-2 was voided as requested.

On June 11, 1993, per WO-1, the test was successfully completed. Also on this date, Planner B entered WO-1 as being complete in the WMS data base. However, no action was taken to return this test to "Active" status.

On June 24, 1993, Unit 2 was returned to service following the refueling outage.

On August 23, 1993, an I&E Supervisor was assigned a minor modification which involved changing pressure switch setpoints which feed the initiation circuits of the MDEFDWP's. During the implementation of this minor modification, portions of the test would be used for post modification testing. The I&E Supervisor asked Planner B when the test was last performed, with the intention of performing the complete test, if the test was approaching its due date. Planner B discovered that the test had not been performed since June 11, 1993, and was 28 days past the required test interval. At this time, Unit 2 was operating at 100 % full power. Planner B entered this discrepancy into the Problem Investigation Process. Operations was notified and entered a Limiting Condition for Operation (LCO). The test was successfully completed on this date and the LCO was exited. Also, a temporary program was written to identify any other tests placed in the suspend mode and none were found that exceeded the Technical Specification required interval.

An interview was conducted with Planners involved in this event. During this interview the Planners stated that they thought WMS would automatically calculate new due dates for test placed in the suspend mode. Interviews with other Planners revealed that they had been notifying Work Control Technical Support to reset dates for suspended activities without fully understanding that new WOs would not be generated.

An interview with Work Control Technical Support personnel revealed that a directive (Maintenance Directive 7.3.6 Preventive Maintenance Program) exists which gives Planners their specific responsibilities when placing a WO in the suspend mode. The directive uses the term "deferred" rather than "suspend".

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

An investigation into the training that Planners receive revealed that WMS training had been provided. The WMS training did not include training on Maintenance Directive 7.3.6. The WMS training was directed toward the basic use of WMS for Planners. Interviews with Planners revealed that they were aware of the directive however, they were unaware that the directive included their specific responsibilities when placing a WO in the suspend mode.

**CONCLUSIONS**

One of the root causes for this event is Management Deficiency (training, less than adequate training given). The Planners involved in this event were unaware of their responsibilities when a test had been placed in the suspend mode. They did know that they needed to notify Work Control Technical Support to remove the test from the suspend mode. It is concluded that, in the past, they were notifying Work Control Technical Support without fully understanding that new Work Orders would not be generated in the suspend mode. If the WMS training had included the directive, which would have made them aware of their responsibilities when they placed a test in the suspend mode, this event may have been prevented.

Another root cause of this event is Management Deficiency (inadequate planning/scheduling) due to inadequate control over the process of placing and removing tests in the suspend mode. The process depended upon personnel memories to remember that test had been placed in the suspend mode and to remove them from the suspend mode. If the process had included a check to ensure that tests placed on the suspend mode were removed and performed as required, this event may have been prevented.

A review of previous events for the last two years, revealed one event (LER 269/92-06 Technical Specification Surveillance Requirement exceeded for Incore Detector and Core Exit Thermocouple Instrumentation) had occurred which involved the failure to schedule a Technical Specification surveillance test in it's required time frame. Responsibility for that surveillance had been given to an individual within a work group that had no other periodic tests to be scheduled and no established administrative program. One corrective action was to reassign scheduling responsibilities to a group with an established program. The investigation of that event did not identify the lack of a barrier to prevent missed surveillance tests, resulting from inappropriate or omitted actions by a single individual. Therefore, this event is considered recurring.

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

This event did not involve a component failure or malfunction, therefore it is not NPRDS reportable. Also, this event did not result in the release of any radioactive materials, any radiation exposures, or personnel injuries.

CORRECTIVE ACTIONS

Immediate

1. The surveillance test was performed with acceptable results.
2. A computer program was written and performed to identify any other Technical Specification (TS) surveillance and Selected Licensee Commitment (SLC) required tasks that may have been placed in the suspend mode and not returned to an active mode. None were discovered.

Subsequent

1. The suspend mode will no longer be utilized for activities required by TS or SLC items.
2. A revision will be made to the overdue report that will identify all tests placed in the suspend mode.

Planned

1. Training will be conducted on directives that describe planners work and responsibilities as relates to scheduling of surveillance tests.
2. Maintenance Directive 7.3.6 will be revised to include that the suspend mode will no longer be utilized for activities required by Technical Specification or Selected Licensee Commitment items.
3. Groups having responsibilities for Technical Specification surveillance test in Site Directive 4.1.1 will ensure that an adequate program exists to schedule surveillance tests. Programmatic reviews should specifically address barriers needed to assure that surveillance tests are properly scheduled.

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

**SAFETY ANALYSIS**

Although the surveillance test for the Motor Driven Emergency Feedwater Pumps (MDEFWPs) initiation circuitry was completed 28 days past the required interval, the results indicated that the circuitry and associated instruments were operable. Thus, the MDEFWPs would have been available when needed if an event had occurred. Therefore, this event had no impact on the health and safety of the public.

If, however, this portion of the initiation circuitry for the MDEFWPs had actually been inoperable, several redundant systems were available if a loss of main feedwater event had occurred.

First, the Turbine Driven Emergency Feedwater Pump (TDEFWP) receives an initiation signal from a redundant set of pressure switches which monitor the same parameters as the switches affected by the missed surveillance. The TDEFWP would have automatically started and is capable of supplying adequate flow to remove RCS heat from any initial power condition.

Second, even if the TDEFWP failed to autostart for some reason, the two MDEFWPs would have received another automatic start signal on Low Steam Generator Level (Dry Out Protection), using instrumentation which is largely independent from the instruments affected by the missed surveillance.

Third, during a loss of main feedwater event, the Operators are directed by the Emergency Operating Procedure (EP) and Abnormal Procedures (AP) to verify that all EFDW pumps have started. The Operators would have had the ability to manually start the MDEFWPs (and/or the TDEFWP).

Fourth, in the event that none of these pumps would start, the EOP and APs direct the Operators to align EFDW from one of the other two Oconee units.

If all of these efforts failed, the EOP and APs provide for use of High Pressure Injection forced cooling and/or use of the Standby Shutdown Facility (SSF) Auxiliary Service Water pump. Analyses have been performed to verify that sufficient time is available for an operator to line up these systems before any core damage would occur.

Therefore, sufficient redundancy exists to assure that, even had the missed surveillance resulted in inoperable initiation circuitry, the health and safety of the public would not have been affected.