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June 30, 2000

U.S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

Subject: Oconee Nuclear Station  
Docket Nos. 50-287  
Licensee Event Report 287/2000-04, Revision 0  
Problem Investigation Process No.: O-00-1896

Gentlemen:

Pursuant to 10 CFR 50.73 Sections (a) (1) and (d), attached is Licensee Event Report 287/2000-04, concerning a surveillance missed in 1998 due to a failure to conduct an appropriate retest for the work performed. The missed surveillance was performed upon discovery and passed.

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,



W. R. McCollum, Jr.

Attachment

IE22

Document Control Desk

Date: June 30, 2000

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cc: Mr. Luis A. Reyes  
Administrator, Region II  
U.S. Nuclear Regulatory Commission  
61 Forsyth Street, S. W., Suite 23T85  
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Mr. D. E. LaBarge  
U.S. Nuclear Regulatory Commission  
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Washington, D.C. 20555

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Mr. M. C. Shannon  
NRC Senior Resident Inspector  
Oconee Nuclear Station

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), 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. If 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.

# LICENSEE EVENT REPORT (LER)

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

FACILITY NAME (1) Oconee Nuclear Station, Unit 3	DOCKET NUMBER (2) 05000 - 287	PAGE (3) 1 OF 6
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TITLE (4)  
Missed Leak Rate Test Due to Planning Process Weakness

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
01	03	98	2000	- 04	- 00	06	30	00		05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10) 100%	20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)(B)	50.73(a)(2)(viii)					
	20.2203(a)(1)	20.2203(a)(3)(i)		50.73(a)(2)(ii)	50.73(a)(2)(x)					
	20.2203(a)(2)(i)	20.2203(a)(3)(ii)		50.73(a)(2)(iii)	73.71					
	20.2203(a)(2)(ii)	20.2203(a)(4)		50.73(a)(2)(iv)	OTHER Specify in Abstract below or in NRC Form 366A					
	20.2203(a)(2)(iii)	50.36(c)(1)		50.73(a)(2)(v)						
	20.2203(a)(2)(iv)	50.36(c)(2)		50.73(a)(2)(vii)						

LICENSEE CONTACT FOR THIS LER (12)

NAME L.E. Nicholson, Regulatory Compliance Manager	TELEPHONE NUMBER (Include Area Code) (864) 885-3292
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

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)

On January 3, 1998, Oconee Unit 3 was at 100% power. Fittings were replaced on impulse lines for four (4) reactor building pressure switches under a corrective work order (WO). The post maintenance testing (PMT) performed was visual checks for leaks "at normal system pressure." These fittings are part of the containment boundary and would require local leak rate tests (LLRTs) as PMT.

On May 15, 2000, Unit 3 was in Mode 5 preparing to enter Mode 4 after refueling. During a review to ensure that surveillance requirements were satisfied prior to the mode change, the 1998 WO was reviewed and it was observed that LLRTs had not been performed on the fittings. LLRTs were satisfactorily completed prior to the mode change. The apparent cause of this event was a programmatic weakness in identifying the appropriate retest for some infrequently performed activities. A similar event occurred in December 1998, (see LER 287/98-01). Corrective actions from that event included enhancements to the PMT process. An additional corrective action will reassess current guidance to determine if additional enhancements are needed in light of this event. This event is considered to have no significance with respect to the health and safety of the public.

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

EVALUATION:

BACKGROUND

This event is an inadequate (missed) post-maintenance surveillance and is reportable per 10 CFR 50.73 (a)(2)(i)(B) as operation prohibited by Technical Specifications (TS). This event occurred in 1998, prior to the March 1999 implementation of Improved TS at Oconee. Therefore, all TS references are to the "customized" TS in effect at the time of the event.

TS 3.6.1 stated that containment integrity shall be maintained whenever all three of the following conditions exist:

- a. Reactor coolant pressure is 300 psig or greater
- b. Reactor coolant temperature is 200 degrees or greater
- c. Nuclear fuel is in the core

Containment integrity as defined by paragraph (e) of TS 1.7 required that "The containment leakage determined at the last testing interval satisfies Specification 4.4.1."

TS 4.4.1.3 required a local leak rate test (LLRT) after any major modification or replacement of components affecting the reactor building integrity.

The Reactor Building (RB) Containment [EIIS:NH] pressure switches discussed in this report are used to provide initiation signals to the Reactor Protective System (RPS) [EIIS:JC]. Similar containment pressure switches are used to actuate the Engineered Safeguards [EIIS:JE] system. All of these containment pressure switches are connected to the RB by stainless steel tubing which contain fittings. The fittings have threaded connections for caps that are removed and replaced periodically as part of calibration and testing of the switches. Being open to the inside of the RB, this tubing forms part of the containment boundary.

Prior to this event, Unit 3 was operating in Mode 1 at 100% power with no safety systems or components out of service that would have contributed to this event.

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EVENT DESCRIPTION

Description of Event

On May 15, 2000, Oconee Unit 3 was in Mode 5 preparing for entry into Mode 4 following refueling. During a review of work orders (WOs) to assure that all necessary work and post maintenance testing (PMT) had been completed, the reviewer challenged WO 98000443, even though all field work and the designated PMT had been completed on January 3, 1998.

WO 98000443 addressed replacement of instrument fittings, including test tee caps, on instruments that are part of the containment boundary. The WO documentation of the performed PMT was not conclusive to determine if the testing was adequate. As a precaution, appropriate Local Leak Rate Tests (LLRTs) were completed successfully prior to the mode change.

A Problem Investigation Process (PIP) report was initiated to evaluate the adequacy of the original test. The system engineer responsible for the Containment Leakage Rate Testing Program reviewed the available documentation, interviewed the personnel involved in the original work, and concluded that the actual tests could not be considered as LLRTs. Consequently, on May 30, 2000, this event was determined to be reportable as a missed surveillance.

An investigation was performed to determine the details and apparent cause of this event.

On January 3, 1998, corrective WO 98000443 was initiated to inspect and replace tubing fittings on four (4) pressure switches while Unit 3 was operating at 100% power. These pressure switches monitor the internal pressure of the RB and generate an RPS signal to trip the reactor when containment pressure exceeds the setpoint. The documentation indicates that one elbow fitting and associated test cap were replaced on each of the four instruments.

The WO documents that a "visual leak check at system pressure verified no leaks" for each instrument. The pressure switches were returned to service and the work package was reviewed and signed off as complete by supervision. It was then transmitted for routine technical review and close out.

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The PMT for normal equipment after installing instrument fittings and tee caps was to replace the cap, valve the instrument into the associated system, and perform a "Functional Check", in this case a qualitative observation for leakage at "normal system pressure." If work is performed while the system is out of service, the work order will normally indicate that this visual inspection is to be performed after the system has been returned to service. Since the containment building is normally at or near atmospheric pressure, the Functional Check PMT was conducted with no significant system pressure.

Additionally, for equipment that performs safety functions, the PMT usually also includes a "Retest". The appropriate Retest varies depending on the component, it's function, and the scope of the maintenance performed. Given that this tubing and cap performed a containment isolation function, the appropriate Retest should have included a quantitative LLRT at 60 psig (containment design pressure) as required by TS 4.4.1.3.

However, it was not readily apparent to the Planner or work execution team that an LLRT was required. This work was initially planned as one task under a generic Work Item identifier rather than four tasks using the appropriate equipment identification designations for the four pressure switches. The generic identifier did not have an associated Retest requirement. A technician acting as crew supervisor replanned the activity, breaking it into four tasks, one for each affected instrument. For some reason, which cannot be determined due to the elapsed time since the event, three of the activities remained associated with the generic identifier and the fourth was associated with the equipment number of the affected instrument. The Work Management System computer database shows that the fourth task was flagged as requiring a Retest. However, at the time this WO was planned and executed, existing guidance and directives did not directly specify an LLRT as a Retest requirement for these instruments. Furthermore, a crew member revised the printed copy in the work package to delete the requirement, apparently believing it to be in error since it conflicted with the other three tasks.

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CAUSAL FACTORS

Due to the age of the event currently being reported, a formal root cause evaluation was not performed. However, LER 287/98-01, dated December 31, 1998, reported a similar event that occurred December 3, 1998, approximately eleven months after the current event occurred. This similar event involved failure to perform an LLRT after replacing instrument caps on Engineered Safeguards instruments that also monitor containment pressure. One of the identified contributors to that event was a programmatic weakness in identifying the appropriate retest for some infrequently performed activities. Since the event currently being reported occurred prior to the event reported in LER 287/98-01, and since the events are so similar, the apparent cause of the event currently being reported is this same programmatic weakness. LER 287/98-01 corrective actions expanded the guidance on PMT. As a result, the appropriate directives and data bases now include LLRT as part of the retest requirement for the RPS and ES containment pressure switches.

CORRECTIVE ACTIONS

Immediate:

1. Upon discovery on 5-15-2000, LLRTs were performed on the involved instrument impulse lines. The tests passed successfully.

Subsequent:

1. A Reportability evaluation was performed.
2. A review was conducted for similar work activities without adequate testing. This review addressed similar instruments on all three Oconee units. No additional examples were identified.

Planned:

1. The current guidance and work practices will be assessed to determine if existing guidance is adequate to assure that PMT

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is not missed due to use of generic work identifiers rather than specific equipment identifiers. If this issue is found a problem, appropriate guidance and work practices will be revised.

There are no NRC commitment items contained in this LER.

**SAFETY ANALYSIS:**

The replaced fittings are part of instrument tubing used as impulse lines for pressure switches that monitor containment pressure. As such, the fittings are part of the containment boundary and are a potential source of offsite dose in case of a nuclear accident.

The fittings were installed in accordance with an Instrument Procedure that gives specific instructions for installing tubing and fittings. This procedure should assure a proper seal with no leak. Therefore, there is little reason to suspect that an actual leak path existed. In addition, when the missed LLRT was identified, the fittings were tested using the appropriate LLRT procedure and there were no leaks.

Therefore, the public health and safety was not affected by this event.

**ADDITIONAL INFORMATION**

As discussed above, LER 287/98-01 describes a similar event. However, the event addressed in this report actually occurred on 1-3-1998, prior to the event of LER 287/98-01. Therefore, the corrective actions from that event could not prevent this event. A review of events after 1-3-1998 indicated that no other similar events have occurred. Therefore, this is not considered a recurring event.

There were no releases of radioactive materials, radiation exposures or personnel injuries associated with this event.

This event is not considered reportable under the Equipment Performance and Information Exchange (EPIX) program.

This event did not involve a Safety System Functional Failure.