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LaSalle Generating Station
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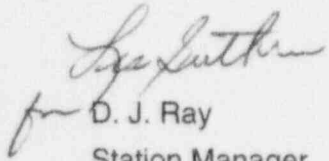


August 21, 1996

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Licensee Event Report #96-003-00, Docket #050-374 is being submitted to your office in accordance with 10 CFR 50.36(c)(2) and 10 CFR 50.73(a)(2)(i).

Respectfully,


for D. J. Ray
Station Manager
LaSalle County Station

Enclosure

cc: A. B. Beach, NRC Region III Administrator
M. P. Huber, NRC Senior Resident Inspector - LaSalle
C. H. Mathews, IDNS Resident Inspector - LaSalle
F. Niziolek, IDNS Senior Reactor Analyst
INPO - Records Center

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LICENSEE EVENT REPORT (LER)

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):

LaSalle County Station Unit Two

DOCKET NUMBER (2)

05000374

PAGE (3)

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TITLE (4)

Design Deficiency of Drywell Cooler Condensate Flow Rate Monitoring System

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	
07	22	96	96	003	00	08	21	96	FACILITY NAME	DOCKET NUMBER	
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)		100									
			<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)			<input type="checkbox"/> 50.73(a)(2)(iii)			<input type="checkbox"/> 73.71(b)	
			<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2003(a)(3)(ii)			<input type="checkbox"/> 50.73(a)(2)(iv)			<input type="checkbox"/> 73.71(c)	
			<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 20.2003(a)(4)			<input type="checkbox"/> 50.73(a)(2)(v)			<input type="checkbox"/> OTHER	
			<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)			<input type="checkbox"/> 50.73(a)(2)(vii)			(Specify in Abstract below and in Text, NRC Form 366A)	
			<input type="checkbox"/> 20.2203(a)(2)(iii)	<input checked="" type="checkbox"/> 50.36(c)(2)			<input type="checkbox"/> 50.73(a)(2)(viii)(A)				
			<input type="checkbox"/> 20.2203(a)(2)(iv)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)			<input type="checkbox"/> 50.73(a)(2)(viii)(B)				
			<input type="checkbox"/> 20.2003(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(ii)			<input type="checkbox"/> 50.73(a)(2)(x)				
LICENSEE CONTACT FOR THIS LER (12)											
NAME Leon R. Sanders, System Engineering								TELEPHONE NUMBER (Include Area Code) (815) 357-6761 Extension 2701			
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	
B	WK	FI	X999	N							
SUPPLEMENTAL REPORT EXPECTED (14)											
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)					<input checked="" type="checkbox"/> NO		EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR

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

At 1739 hours, on July 22, 1996, with Unit 2 at 100% power, the 3-point continuous air monitor (CAM) pump in the reactor coolant system leakage detection panel (2PL75J) tripped off line. The panel was declared inoperable. The cause of the low vacuum pressure trip was insufficient sealing of the CAM following the particulate paper changeout. The reactor coolant system leakage detection panel (2PL15J) was inoperable for calibration. Since the drywell cooler condensate flow rate indication was also inoperable, action statement for Technical Specification (TS) 3.4.3.1 could not be met. TS 3.0.3 was entered for 24 minutes until the 2PL75J was restarted and declared operable. The root cause of the event was inadequate corrective action to eliminate the long-standing design deficiency of the drywell cooler condensate flow rate element. The primary corrective action is to replace the drywell condensate flow rate element with a more reliable design.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor

Energy Industry Identification System (EIIS) codes are identified in the text as [XX].

A. CONDITION PRIOR TO EVENT

Unit: 2	Event Date: 07/22/96	Event Time: 1739 Hours
Reactor Mode: 1	Mode Name: Run	Power Level: 100%

B. DESCRIPTION OF EVENT

Technical Specification 3.4.2.1 states that the following three conditions are required for the reactor coolant leakage detection systems to be declared operable: a) the primary containment particulate radioactivity monitoring system is operable; b) the primary containment sump flow monitoring system is operable; and c) either the primary containment air coolers condensate flow rate monitoring system or the primary containment atmospheric gaseous radioactivity monitoring system is operable. The plant has two panels (2PL15J) and (2PL75J) to monitor the primary containment particulate and atmospheric gaseous radioactivity.

At 0820 hours on July 22, 1996, Instrument Maintenance personnel commenced calibration of the reactor coolant system leakage detection panel (2PL15J) per LIS-PC-206 "Unit 2 Primary Containment Air Particulate And Noble Gas Monitor Calibration." This work was scheduled only for the dayshifts. Since the work was not completed by the end of the shift, 2PL15J remained inoperable. No timeclocks were entered since the other reactor coolant system leakage detection panel (2PL75J) was operable. The calibration frequency for procedure LIS-PC-206 is 18 months.

At 1715 hours on July 22, the radiation protection technicians (RPTs) changed out the particulate filter on the 2PL75J because the CAM was at the alarm setpoint. This action was performed in accordance with procedure, LRP-5821-15, "The Start Up and Operation of the Dual-Channel Constant Air Monitor." The previous changeout occurred at approximately 0500 that day. Replacement of the particulate paper is typically performed every other day.

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The changeout was promptly completed, the RPT monitored the panel and determined that it was operating satisfactorily. At 1739 hours, the 3-point continuous air monitor (CAM) (CM) [IK] pump tripped on low vacuum pressure in the 2PL75J panel. With the calibration of the 2PL15J panel not completed, both panels were now inoperable. Additionally, the drywell cooler condensate flow rate indication (2FI-RF021) (RF) [WK] were also inoperable due to erroneous indication. Since only the primary containment sump flow monitoring system was operable, the action statement for TS 3.4.3.1 could not be met and Unit 2 entered TS 3.0.3.

When the monitor tripped, the Control Room Senior Reactor Operator (CRSRO) immediately dispatched the Operating Field Supervisor and a RPT to the monitoring system panel (2PL75J). They were able to clear the trip signal by retightening the seal and restore the 2PL75J monitor at 1803 hours ending the event. The CRSRO also had the calibration of 2PL15J restarted rather than wait for the planned continuation the following day. The Instrument Mechanics restarted the monitor calibration at 2050 that day. The surveillance was completed and the 2PL15J system restored to normal operation at 1430 hours on July 23, 1996.

This event is reportable per 10 CFR 50.73(a)(2)(i) because the plant entered Technical Specification 3.0.3 and per 10 CFR 50.36(c)(2) because due to a limiting condition for operation not being met.

C. CAUSE OF EVENT

The causes for Unit 2's entry into TS 3.0.3 were inadequate corrective action to eliminate the design deficiency of the drywell cooler condensate flow rate element, the design deficiency and/or procedure deficiency of the particulate filter holder, and inadequate scheduling of the panel's calibration.

The root cause is the long-standing design deficiency of drywell cooler condensate flow rate element to operate reliably. Although routine maintenance on this instrument is performed, and the instrument is operable following this maintenance, the long term unreliability of the flow instrument is due to a design inadequacy. Since the instrument is located in the drywell, maintenance cannot be readily performed on the flow instrument.

The cause of the low vacuum pressure trip on the 2PL75J panel was insufficient sealing of the CAM following the particulate paper changeout. The monitor had been satisfactorily operating for 24 minutes before the low pressure trip on the panel occurred. The 2PL75J panel was restarted after the seal was tightened down. The panel was declared operable 24 minutes after the low pressure trip occurred and TS 3.0.3 was exited.

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The canister assembly design and the vendor's instruction for replacing the particulate paper is a contributing cause of the event. Proper replacement of the particulate filter paper relies on the technician's judgment for establishing the correct sealing pressure. This routine operation sometimes results in either the low vacuum pressure trip of the sample pump when insufficient sealing pressure is applied, or when the housing is overtightened, the clamp causes the holder to fail to properly seal. The station's procedure for replacing the paper instructs the technician to rotate the T-handle until noticeable resistance is achieved. The precaution against overtightening causing excessive wear to the o-rings and the T-handle are noted in the procedure.

Another contributing cause is inadequate scheduling of the panel's calibration. The Maintenance and Work Control departments usually schedule the Instrument Mechanics to proceed with the calibration of the reactor coolant system leakage detection panel in successive shifts until the panel is returned to service. Since the drywell cooler condensate flow rate indication was known to be inoperable, it is important to promptly return to service either the entire panel or a portion (gaseous or particulate monitors) of the panel undergoing calibration as soon as practical. For this calibration, the work on the 2PL15J panel was scheduled only for the dayshifts. Partial restoration of the monitors was not performed.

D. ASSESSMENT OF SAFETY CONSEQUENCES

The purpose of the reactor coolant leakage detection system is to detect leakage of the reactor coolant pressure boundary prior to a loss of coolant accident. During the 24 minute period that the gaseous and particulate monitoring systems were inoperable, personnel were available to obtain and analyze grab samples of the containment atmosphere for gaseous or particulates. The primary containment sump flow monitoring system was the only operable reactor coolant leakage detection system while Unit 2 was in TS 3.0.3. There were no alarms from the sump flow monitoring system during the event. Since the reactor coolant leakage values were within operating limits prior to and after the trip of the sample pump on low vacuum pressure, the safety significance of this event is considered minimal. No safety systems were affected by this event.

E. CORRECTIVE ACTIONS

The immediate corrective action taken was to identify the cause of the 2PL75J panel trip and successfully restart panel. The Instrument Mechanics resumed calibration on the 2PL15J panel and returned the panel to operable status at 1416 hours on July 23, 1996.

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Additional corrective actions are:

1. The Engineering Department will determine a more reliable replacement design for the Unit 1 and 2 drywell cooler condensate flow rate element (Equipment Part Numbers: 1(2)FE-RF021). This evaluation will be completed by September 30, 1996. A schedule for replacement will be developed by January 31, 1997. The replacement for Unit 1 is scheduled for refueling outage L1R08. Unit 2's replacement is scheduled for refueling outage L2R08.
2. The Engineering and Radiation Protection departments will evaluate alternate particulate sampling systems and/or procedure reviews to improve the reliability of sampler operation. This will be completed by September 30, 1996.
3. The Instrument Maintenance Department will assure that separate procedures for the 1(2)PL15J and 1(2)PL75J panel calibration are prepared. These revised procedures will also permit separate calibration of the primary containment air particulate and the noble gas monitors. A precaution to assure that resources and scheduling allow prompt completion of the calibration will be added. The revised procedures will become effective prior to the next scheduled use of April 18, 1997.

F. PREVIOUS OCCURRENCES

LER NUMBER	TITLE
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None

G. COMPONENT FAILURE DATA

Drywell cooler condensate flow rate element (2FE-RF021)
Manufacturer: Fluid Components
Model Number: LT81