

Commonwealth Edison Company
LaSalle Generating Station
2601 North 21st Road
Marseilles, IL 61344-9757
Tel 815-357-6761



March 17, 1997

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

Licensee Event Report #97-004-00, Docket #050-373 is being submitted to your office in accordance with 10 CFR 50.73(a)(2)(i).

Respectfully,

A handwritten signature in black ink, appearing to read "Fred Dacimo".

Fred Dacimo
Plant General 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 One	DOCKET NUMBER (2) 05000373	PAGE (3) 1 of 5
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TITLE (4)
Incomplete Understanding of Engineered Safety Features Filter Testing Requirements Resulted in Non-Compliance with Technical Specifications

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
02	14	97	97	004	00	03	17	97	LaSalle County Station Unit Two	05000374
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9) 4	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)
POWER LEVEL (10) 000	

<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 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 William Burns, System Engineer	TELEPHONE NUMBER (Include Area Code) (815) 357-6761 Extension 2118
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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)

<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines 16)

The Technical Specifications for Main Control Room (MCR) ventilation, Auxiliary Electric Equipment Room (AEER) ventilation and Standby Gas Treatment systems require surveillance testing of electric heaters and the charcoal and HEPA filters to demonstrate system operability. A System Functional Performance Review of the MCR ventilation system determined that Engineered Safety Feature air filtration testing performed at LaSalle was not in verbatim compliance with the Technical Specification.

All three systems were already inoperable and this concern was added to the issues requiring resolution prior to declaring them operable. The cause of this event was an incomplete understanding of the verbatim requirements of the Technical Specification for testing of ESF ventilation systems.

A Technical Specification change will be submitted to more clearly reflect the filter testing that is required to conform to Regulatory Guide 1.52. The testing discrepancies were not safety significant and both units were already shutdown.

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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(s): 1/2	Event Date: 02/14/97	Event Time: 1600 Hours
Reactor Mode(s): 4/N	Mode(s) Name: Cold	Power Level(s): 0%/0%
	Shutdown/Defueled	

B. DESCRIPTION OF EVENT

During the LaSalle System Functional Performance Review of the Main Control Room (VC)[VI] and Auxiliary Electric Equipment Room (VE)[VI] ventilation systems, it was discovered that the procedures used to check required flow measurements, heater performance and in-place adsorber leak testing were not in verbatim compliance with Technical Specification 3.7.2, Control Room and Auxiliary Electric Equipment Room Emergency Filtration System. This review also determined that similar testing concerns existed for Technical Specification 3.6.5.3, Standby Gas Treatment System (SGTS).

Technical Specifications require that train flow rate of 4000 cfm ± 10 percent be verified in accordance with ANSI N510-1975. ANSI N510 Section 8 requires a pitot-tube velocity-traverse be performed and the airflow rate calculated in accordance with Section 9 of ACGIH Industrial Ventilation. LaSalle currently determines flow using installed instrumentation. This instrumentation does not use the same methodology to determine flow. The most significant difference is that the installed instrumentation determines flow without adjusting for density changes based on temperature.

Technical Specifications require the filter unit's electric heater be tested in accordance with ANSI N510-1975. LaSalle currently meets the requirements of ANSI N510 Section 14 except for the power-on mechanical test. This power-on mechanical test checks entering and leaving temperature (wet and dry bulb) and relative humidity.

Technical Specification require that testing be done per Regulatory Position C.5.d of Regulatory Guide 1.52, Revision 2. Position C.5.d. The position requires that after the test is completed, air flow through the unit should be maintained until the residual refrigerant gas effluent is less than 0.01 ppm. LaSalle currently does not verify this effluent concentration.

This event is reportable per the 10 CFR 50.73(a)(2)(i) due to condition prohibited by the Technical Specification.

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C. CAUSE OF EVENT

The cause of this event was an incomplete understanding of the verbatim requirements of the Technical Specification as pertained to filter testing for the ESF ventilation systems.

D. ASSESSMENT OF SAFETY CONSEQUENCES

The function of the Standby Gas Treatment system is to reduce offsite dose by treating radioactive gases and particles from containment building after an accident. The purpose of the VC and VE systems are to provide habitability in the Main Control room and the Auxiliary Electric Equipment Room by removing radioactive gases and particles to meet General Design Criteria (GDC) 19 requirement.

The consequences of using installed flow instrumentation is that it can result in the indicated flow being up to 7 percent higher than the actual flow due to changes in air density. On a design basis winter day the indicated flow could be 3600 cfm which could result in an actual flow of 3350 cfm.

The effect of lower than expected flow rate through the filter unit would be an increased air residence time in the adsorber which would make the charcoal adsorber more effective. The HEPA filter performance is not affected because the HEPA's filter efficiency is required to be greater than 99.97 percent at both rated flow and 20 percent of rated flow. In addition to filtration, these systems have a pressurization or evacuation function. The VC and VE systems function to pressurize the MCR and AEER to a positive 1/8 inch pressure, and the SGTS system functions to evacuate secondary containment to a negative 1/4 inch pressure. The ability of these filter units to pressurize or evacuate a space is based on the mass flow through the filter unit. The functions will not be effected because an actual flow of 3350 cfm on a design winter day would produce more mass flow than 3600 cfm at standard conditions. Based on the above, the design basis of the VC and SGTS systems is maintained.

The purpose of the filter train electric heater is to ensure that the relative humidity of the air entering the charcoal is less than 70 percent, per Regulatory Guide 1.52. Assuming the air entering is saturated, the air temperature will need to be increased by about 12 Degrees Fahrenheit to ensure that the relative humidity (RH) is less than 70 percent. The design heat dissipation, required to maintain 70 percent RH, is less than 15 Kw which is well below the Technical Specification minimum heater dissipation rate 18 Kw for VC and 21 Kw for SGTS. Since the electric heaters have historically met the Technical Specification heater requirements, there is no evidence to indicate that the heater would not reduce the relative humidity as required.

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The purpose of the in-place leak testing of charcoal filters is to identify any significant leakage paths around the charcoal adsorber, (position C.5.d of Regulatory Guide 1.52). Regulatory Guide 1.52 states that after the leakage test is completed on charcoal filters using refrigerant gas, air flow through the filter train should be maintained until the refrigerant gas is less than 0.01 ppm. LaSalle test procedures do not verify that the refrigerant level is below 0.01 ppm before stopping the filter train. The purpose of this requirement appears to be a concern that the residual refrigerant might affect the efficiency of the charcoal or the next test. The filter trains, per Technical Specification 4.6.5.3.a & 4.7.2.a, are operated for 10 hours each month. This will ensure the return of refrigerant concentration to background level. Discussions with the charcoal vendors have indicated that presence of refrigerant on the charcoal adsorber will not degrade its performance and has no measurable effect on its ability to adsorb iodine.

Based on the above there were no actual safety or radiological consequences as a result of this event.

E. CORRECTIVE ACTIONS

1. LaSalle is preparing to submit changes to Technical Specifications 4.6.5.3 and 4.7.2 to incorporate newly approved methodology of filter testing described in NUREG 1434 revision 1, Standard Technical Specifications, General Electric Plants, BWR/6.
2. The testing required by Technical Specifications 4.6.5.3, Standby Gas Treatment System and 4.7.2, Control Room and Auxiliary Electric Equipment Room Emergency Filtration System will be done prior to declaring the associated systems operable. This testing will be done in verbatim compliance with either currently approved Technical Specifications or to the testing required the Technical Specification submittal described above. If the testing is done to the requirements specified in the Technical Specification submittal the systems will not be declared operable until the submittal is approved by the NRC.
3. A System Function Review Program is being implemented for systems important to safe and reliable plant operation. This program is identifying required system functions and sub-functions as described in design bases documents including the Technical Specifications. Surveillance testing requirements and procedures and other test documentation are then reviewed to confirm that system functionality is demonstrated. Any inconsistencies identified among the source documents are being documented and tracked to resolution. The results of the review of these systems will be used to determine if further review of other technical specifications will be performed. This program is being implemented with applicable corrective actions completed prior to restart.

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F. PREVIOUS OCCURRENCES

LER NUMBER	TITLE
373-96-017	Main Control Room Found outside Design Basis due to inadequate Technical Surveillance Procedure.

G. COMPONENT FAILURE DATA

Since no component failure occurred, this section is not applicable.