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January 18, 1996
United States Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

Subject: LaSalle County Station Units 1 and 2
60 Day Response to NRC on Ventilation Issues
Inspection Report Nos. 50-373/95009; 50-374/95009
NRC Docket Numbers 50-373 and 50-374.

Reference: 1. W. L. Axelson letter to R.E. Querio,
Dated November 29, 1995, Transmitting
NRC Inspection Report 50-373/95009, 50-374/95009

The enclosed attachment contains LaSalle County Station's 60 day response to the ventilation plan request that was transmitted with the Reference 1 letter.

If there are any questions or comments concerning this letter, please refer them to me at (815) 357-6761, extension 3600.

Respectfully,

R. E. Querio
Site Vice President
LaSalle County Station

cc: H. J. Miller, Regional Administrator, Region III
M. D. Lynch, Project Manager, NRR
H. J. Simons, Acting Senior Resident Inspector, LaSalle
D. L. Farrar, Nuclear Regulatory Services Manager, NORS
Central file

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LaSalle Station Ventilation Action Plan

During the summer of 1995, hot weather raised many concerns with performance of the ventilation systems at LaSalle Station. The most important of these concerns was the August 16, 1995 scram/Main Steam Isolation Valve (MSIV) isolation that was caused by the Leak Detection (LD) Group One isolation setpoint being exceeded after Reactor Building Ventilation (VR) isolated because of the loss of the 'B' Reactor Protection System (RPS) bus. As a result, the System and Site Engineering Departments have developed the following strategy to resolve the ventilation problems at LaSalle Station.

Our current efforts to improve ventilation system performance are addressing three significant problems as follows:

1) Resolve the operator workaround associated with Main Steam Tunnel (MST) LD,

2) Improve Turbine Building Ventilation (VT) such that sufficient cooling is provided to critical turbine building equipment and the turbine building meets the original design parameter of being negative with respect to outside air, and

3) Resolve performance weaknesses with the control room and auxiliary building ventilation systems.

The following sections describe our actions to address these three areas of concern. LaSalle Station believes this action plan will improve the performance of the ventilation systems and is committed to its implementation.

Main Steam Tunnel (MST) Leak Detection (LD) Operator Workaround

A loss of Reactor Protection System (RPS) power isolates the Reactor Building Ventilation (VR) by de-energizing the logic which closes the secondary containment dampers on both units. Since the Reactor Building Ventilation system cools the MST, a loss of this system results in a rapid increase in the temperatures in the upper portion of the MST. This increase in temperature will exceed the leak detection system isolation setpoint within a few minutes in the summer and cause the MSIV's to close. To prevent this isolation, the operators have been trained to very quickly determine if the VR isolation was valid. If the isolation is determined not to be valid, the operators jumper out the MST leak detection isolation logic.

Since this isolation occurred, the highest priority of the LaSalle Station System/Site Engineering departments has been to eliminate this operator workaround. This will be completed by providing the engineering basis and design modifications necessary to eliminate spurious isolation of the MSIVs by the MST leak detection system. Our proposed plan will require NRC support in the form of a technical specification change which is planned to be submitted January 19, 1996. We are asking for expedited NRC review of the technical specification changes, so that modifications to the T/dT logic can be implemented during L1R07. We also plan to change the power supply associated with the VR isolation logic. This change will affect many different system interfaces. Due to its complexity this modification will be installed during L2R07/L1R08.

The following is a description of the actions LaSalle Station has taken, or plans to take, and a planned schedule for the actions required to correct this operator workaround.

ACTIVITY	COMPLETION DATE
1) Calculate a critical crack length which will provide the bases for a 100 GPM leak used in the MST ventilation model.	Completed 12/5/95
2) 10CFR20 evaluation of a bounding 200 GPM leak.	Completed 12/8/95
3) Technical Review Committee approval for the following design changes associated with Temperature (T) and delta Temperature (dT) logic changes based on ventilation model. a) Relocate temperature detectors b) T/dT logic changes	Completed 12/18/95
4) Develop a MST Ventilation model, draft report will provide bases for new LD setpionts.	Completed 12/22/95
5) Determine appropriate number and content of ECN's for each DCP to allow for contingency planning in case NRC approval is not received in time.	Completed 1/2/96
6) Develop detailed installation schedule for design changes associated with L1R07	Completed 1/11/96
7) Prepare Tech Spec change submittal.	Completed 1/12/96
8) Issue final MST ventilation model results.	Completed 1/16/96
9) Submit Tech Spec change to the NRC.	1/19/96
10) Issue Unit 1 Design Change Packages (DCP) for: a) Relocate temperature detectors b) T/dT logic changes	1/25/96
11) Install design changes	
a) Relocate temperature detectors	L1R07/L2R07
b) T/dT logic changes	L1R07/L2R07
c) VR logic power change to DC	L2R07/L1R08

Turbine Building Ventilation

The Turbine Building Ventilation (VT) system has two major problems which LaSalle Station is resolving. These are original design deficiencies that the station has lived with since plant construction.

The first issue involves turbine building differential pressure (dP). The turbine building has been typically at a positive pressure compared to the outside which raises a concern about unmonitored releases. UFSAR sections 9.4.4.1 and 9.4.4.2.f state that the VT system would keep the turbine building at a negative pressure relative to the outside to prevent unmonitored releases. A simple solution to correct building dP would be to reduce the building supply air flow. Steps have been taken to reduce supply air flow to make the building negative. However, this is not a final solution because reducing the supply air flow will worsen the temperature problems in the turbine building when outside air temperatures are higher.

The second issue is turbine building temperature. Temperatures in the Condensate/Condensate Booster (CD/CB) pump, Heater Drain (HD) pump, and Feedwater (FW) pump rooms are too high for people to work in during the summer and the temperature limits for the equipment are consistently challenged. The design temperature for the CD/CB pump room is 104 degrees F and the design temperature for the HD and FW pump rooms is 122 degrees F with an outside air temperature of 95 degrees F. A maximum ambient outside air temperature of 95 degrees F was assumed in the design of the VT system. These original design temperatures are too low. A new design will assume a maximum outside air temperature of 100 degrees F while attempting to reduce the temperature to the 90-95 degree F range in the CB/CD, HD, and FW pump rooms.

A VT system action plan was developed to permanently restore the turbine building to a negative pressure. In addition, the temperatures in the CD/CB, HD and FW pump rooms will be reduced such that personnel can perform their function in those rooms safely and the equipment will not be forced to operate at its temperature limitations. The plans to deal with this problem include modifications to reduce supply/exhaust differential pressure and a major modification to provide a chilled water system for the turbine building. LaSalle Station is committed to bringing the turbine building dP to a negative value, cooling it and maintaining it for the life of the plant.

The following is a description of the actions LaSalle Station has taken, or plan to take, and a planned schedule for the actions required to correct the problems with the VT system.

ACTIVITY	COMPLETION DATE
1) Complete turbine building thermal model.	Completed 11/1/95
2) Adjusted Station Heat Temperature Control Valves	Completed 11/15/95
3) Initiate Engineering Request (ER) for the addition of turning vanes in the VT exhaust stack to help reduce the VT exhaust pressure drop.	Completed 11/17/95
4) Complete walkdown of CD/CB, HD and FW pump rooms to determine insulation opportunities to reduce the room heat gains.	Completed 12/18/95

ACTIVITY	COMPLETION DATE (cont.)
5) Technical Review Committee (TRC)/ Business Review Committee (BRC) approval of the VT exhaust turning vane modification.	Completed 12/18/95
6) Prepare a LaSalle Special Test (LST) to reduce the VT supply air flow to make the turbine building dP negative while the outside air temperatures are low enough to maintain adequate cooling.	Completed 12/19/95
7) Implement LST to reduce VT supply air flow.	Completed 12/20/95
8) Provide recommendations and engineering details for installation of insulation.	Completed 1/12/96
9) Develop project plan for VT Chiller modification.	Completed 1/15/96
10) Complete installation of filter bypass modification. (This modification will result in increased cooling flow)	L1R07/L2R07
11) Install VT exhaust turning vanes to reduce the VT exhaust pressure drop.	L1R07/L2R07
12) Engineer the VT exhaust turning vane modification.	1/31/96
13) Install temporary evaporative coolers in a Unit 2 CD/CB room.	1/31/96
14) Set VT supply temperature to 60 degrees F to verify chilled water solution will meet expectations.	1/31/96
15) Take data to determine affect of temporary evaporative coolers.	2/28/96
16) VT Chiller modification installation	
a) Temporary chillers	6/7/96
b) Permanent chillers	6/6/97

Control Room (VC) and Auxiliary Electric Equipment Room (VE) Ventilation

The VC/VE systems have had several problems identified including compressor trips and damper actuator failures. Also, the inadequate cooling of the control room by the 'B' VC compressor is a concern. Most of the VC/VE system problems have resulted from insufficient preventive maintenance and performance monitoring. Thus our actions are mostly aimed at resolving these differences. Station management recognized this inadequate system performance this past summer and increased emphasis on identifying problems, root causes, and implementing corrective actions.

We believe VC/VE performance has improved as a result of these actions but we are still not yet satisfied that the system is performing to our standards. LaSalle Station is committed to maximizing the performance of the VC/VE systems. Through system performance monitoring System Engineering is confident that the problems with the VC/VE systems will be corrected in a timely manner.

The following is a description of the actions LaSalle Station has taken, or plan to take, and a planned schedule for the actions required to correct the problems with the VC/VE systems.

ACTIVITY	COMPLETION DATE
1) Monitor performance parameters and determine the need to instrument other HVAC compressors. Tune compressors, as required, to maximize system performance.	Began 10/2/95
2) Install instrumentation on the 0B VC refrigeration subsystem in order to accurately assess operating performance data.	Completed 12/15/95
3) Investigate whether the Temperature Control Valves (TXV's) are the proper size and type for our application. The TXV's should hold steady. Our data shows they hunt.	2/16/96
4) Use temperature data to determine the need for an oil cooler. Vendor recommends an oil cooler when discharge oil temperatures exceed 120 degrees F.	2/16/96
5) Determine the root cause for the major oil level changes seen in the HVAC compressors.	3/22/96
6) Determine the root cause of the ITT actuator failures.	4/19/96
7) Develop a preventative maintenance program for the ITT actuators based on the root cause analysis.	5/3/96