



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

February 7, 1992

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Subject: LaSalle County Nuclear Station Units 1 and 2
Response to Notice of Violation
Inspection Report Nos. 50-373/91023; 50-374/91023
NRC Docket Nos. 50-373 and 50-374

Reference: Brent Clayton letter to Cordell Reed dated
December 24, 1991 transmitting NRC Inspection
Report 50-373/91023; 50-374/91023

Enclosed is Commonwealth Edison Company's (CECo) response to the subject Notice of Violation (NOV) which was transmitted with the referenced letter and Inspection Report. The NOV cited one Severity Level IV violation. The violation concerned the failure to promptly identify and correct the root causes of the problems which resulted in degradation and failure of emergency diesel generator (EDG) air start check valves. CECo's response is provided in the following attachment.

If your staff has any questions or comments concerning this letter, please refer them to Annette Denenberg, Compliance Engineer at (708) 515-7352.

Very truly yours,

T.J. Kovach
Nuclear Licensing Manager

Attachment

cc: A. Bert Davis, NRC Regional Administrator - RIII
B. Siegel, Project Manager - NRR
D. Hills, Senior Resident Inspector

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RESPONSE TO LEVEL IV VIOLATION
INSPECTION REPORT
50-373/91023; 50-374/91023
ATTACHMENT A

VIOLATION: IR 573/91023-01

Appendix B Criterion XVI of the Code of Federal Regulations, Title 10 part 50, requires measures to be established to assure that conditions adverse to quality such as failures and malfunctions are promptly identified and corrected.

Contrary to the above, the licensee failed to promptly identify and correct the root causes of the problems, which resulted in degradation and failure of Emergency Diesel Generator Air Start check valves from the period April 23, 1990, to November 18, 1991.

This is a Severity Level IV violation (Supplement 1).

REASON FOR THE VIOLATION:

Commonwealth Edison acknowledges the violation. The violation involved the failure to identify a trend and subsequently perform a root cause failure analysis of a degrading condition, i.e. the corrosion and wear of check valves associated with the EDG air start systems. The inspection report discussed problems on five (5) check valves in the EDG air start systems. However, only three (3) of the valves are actually in the air start systems; the remaining two (2) valves, 1DG036 and 2DG036, are the Low Pressure Core Spray Systems (LPCS) motor cooler outlet check valves. Although the LPCS valves are of the same model and manufacturer as most of the air start check valves, these valves pass cooling water drawn from the lake instead of air.

Commonwealth Edison has reviewed documentation dating back to March 1990. Based upon this review, it was determined that the degraded check valves did not affect the safety function of either the EDGs or the LPCS motors. However, Commonwealth Edison does recognize a weakness in the lack of root cause trending failure analysis of the check valves. Administrative and programmatic controls should have been more explicit in their direction, thereby identifying the need for the station to perform a root cause failure analysis and follow-up corrective action.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED:

Valves 2DG049B and 0DG023A were disassembled, inspected, and replaced in November 1991 via Nuclear Work Request's L08877 and L11779. Acoustic diagnostic testing was performed on all remaining EDG air start system check valves. All air start systems were found to be operable.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED: (Continued)

A maintenance Problem Analysis Data Sheet (PADS) was initiated. It was concluded that the probable root cause of the valve internals being moist and corroded was due to a higher than acceptable moisture content in the air start systems. Also, the probable root cause of the valve body gouging was due to reciprocating pulsations produced by the air compressors, coupled with the design of the check valves.

The Unit 1 LPCS motor cooler outlet check valve (1DG036) was disassembled, inspected, and cleaned during the refueling outage (L1R04) in 1991 via Nuclear Work Request L01542. The check valve spring was also replaced. The Unit 2 LPCS motor cooler outlet check valve (2DG036) is being disassembled, inspected, and maintenance performed as applicable during the current refueling outage (L2R04) via Nuclear Work Request L08883.

A maintenance PADS concluded that the probable root cause of the valve internals being corroded was due to the chemistry of the LPCS motor cooling water. Prior to start-up from L1R04 in 1991, a chemical addition system was added to treat the lake water used in the service water system. This system was added in response to Generic Letter 89-13, and is expected to mitigate check valve fouling caused by poor water quality. Since the system has been in operation for only a short time, measurable benefits are yet to be realized.

CORRECTIVE STEPS TO AVOID FURTHER VIOLATIONS:

Administrative procedures LAP-300-30, Check Valve Preventive Maintenance Program and LAP-300-7, Preparation and Control of Nuclear Work Requests, will be revised to enhance the direction given for the initiation of root cause failure analysis documentation. The LAP revisions are expected to be completed by May 31, 1992.

Maintenance Memorandums #6, Review of Total Job Management for Equipment Failure Trends, and #27, Analysis of Maintenance Problems, will be revised to enhance the trending of equipment and the direction given in the performance of a PADS for priority systems and components. The Maintenance Memorandum revisions are expected to be completed by May 31, 1992.

Training on the revised Administrative Procedures and Maintenance Memorandums for appropriate personnel is expected to be performed by May 31, 1992.

CORRECTIVE STEPS TO AVOID FURTHER VIOLATIONS: (Continued)

Nuclear Work Requests have been written for the disassembly and inspection of the remaining EDG air start system check valves. Disassembly and inspection is expected to be completed by May 31, 1992. Additionally, Nuclear Work Requests have been written for the inspection and verification of proper operation for each of the EDG air start system's dryers. These inspections will be scheduled in accordance with routine station work planning practices and are expected to be completed by May 31, 1992.

The disc from the Unit 2 LPCS motor check valve (2DG036) will be sent to Commonwealth Edison's System Materials Analysis Department, in order to determine the root cause of the corrosion.

Acoustic diagnostic testing of check valves in the EDG air start systems and LPCS motor coolers will be performed on a semi-annual basis, so that data may be compiled and trended. The frequency of this testing may be adjusted as deemed necessary by future evaluations.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance will be achieved by May 31, 1992, when the identified administrative and programmatic controls have been revised.