



Commonwealth Edison  
1400 Opus Place  
Downers Grove, Illinois 60515

June 29, 1992

U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Attention: Document Control Desk

Subject: LaSalle County Nuclear Power Station Unit 2  
Reponse to Notice of Violation  
Inspection Report No. 50-374/92011  
NRC Docket No. 50-373

Reference: E. Greenman letter to Cordell Reed dated June 1, 1992  
transmitting NRC Inspection Report 50-374/92011

Enclosed is the Commonwealth Edison Company (CECO) response to the Notice of Violation (NOV) transmitted with the reference letter and Inspection Report. The NOV concerned an inappropriate Operating procedure and bypassing a valid reactor water cleanup (RWCU) differential flow isolation signal. CECO's response is provided in the attachment.

The NOV deals with an inappropriate procedure that did not require its substeps to be completed in the given sequence, and with examples of not adhering to procedures leading to the bypassing of a valid reactor water cleanup differential flow signal. Both of these violations occurred to some degree, because of a weakness in the original design of the RWCU system isolation logic.

The original design characteristics of the RWCU System resulted in numerous spurious differential flow isolations. New regulations placed strong emphasis on minimizing these unexpected isolations. To address this problem, a number of corrective actions were taken:

1. Density corrections were incorporated into the instrumentation calibrations to minimize isolations at rated temperature and pressure. As a result, spurious isolation signals at rated conditions no longer occur. However, isolation signals still occur during plant heatup and cooldown.
2. In the original design, the isolation occurred concurrently with the high differential flow alarm. A design change was performed which alleviated this problem by allowing the alarm to occur when the 45 second timer initiated (versus after it timed out), so that the operator would know the isolation was imminent. The intent was to afford the operator the opportunity to evaluate the alarm and take action, if appropriate, to prevent a system/plant transient. Without these changes the Reactor Water Cleanup system would have experienced many more isolations.

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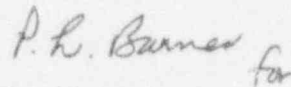
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3. A review was conducted in 1984 and 1985 to determine if hardware changes could be made to reduce spurious differential flow signals/isolations. No cost effective solution was available at the time. The final solution to deal with remaining differential flow isolations in the heatup and cooldown range was to proceduralize the expected isolations.

The above steps have minimized the challenges to the safety function of this system. A new study is being conducted to ascertain whether a better means of detecting system leakage is available.

If your staff has any questions or comments concerning this letter, please refer them to Jim Watson, Compliance Engineer at (708) 515-7205

Sincerely,



T.J. Kovach  
Nuclear Licensing Manager

#### Attachments

cc: A.B. Davis, Regional Administrator - Region III  
B.L. Siegel, Project Manager, NRR  
D. Hills, Senior Resident Inspector

Attachment

Response to Notice of Violation

NRC Inspection Report  
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VIOLATION: (374/92011-01)

10 CFR 50 Appendix B, Section V states, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances.

Contrary to the above, LaSalle Operating Procedure LOP-RT-03, "Reactor Water Cleanup System Shutdown", Revision 7, was inappropriate to the circumstances given that the training of the operators did not require substeps to be done in sequence and, as such the procedure allowed operation of the system in a manner that resulted in reactor coolant leakage outside the primary containment.

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

REASON FOR THE VIOLATION:

CECo acknowledges the violation. The procedure used, LOP-RT-03, "Reactor Water Cleanup System Shutdown", was appropriate for use as written, however, the philosophy promoted to operators at LaSalle was inappropriate. Operating procedures at LaSalle were written in large part against an "expected plant condition" for the plant evolution which was to occur. To accommodate the operating environment in which conditions can be different than those of the procedure. Operating management established a philosophy that allowed operating personnel to do substeps in an order determined to be best suited for the plant conditions. It was perceived that there was more than one way to perform a task and that the expertise of the operators was sufficient to make those choices at the substep level. The substeps were direction to perform the task and provided guidance in a way to do it. Although not fully understood by the users, this philosophy was only to be used when the system was in an other than anticipated configuration and then only after discussion with supervisory personnel.

This philosophy was not documented since it was considered to fall into the realm of craft capability (i.e. consistent with operator training and skills). A review of the event has shown this philosophy to place unnecessary burden on operators in the performance of their duties. This philosophy has been retracted.

CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND RESULTS ACHIEVED:

Operating management has retracted the informal policy of allowing substeps to be performed in any order. This action was accomplished through a directive that was sent to the shift engineers stating that the step/substep informal policy has been retracted and all guidance pertaining to procedure use will be in accordance with I.A.P-100-40, "Procedure Use and Adherence Expectations".

Attachment

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CORRECT STEPS THAT HAVE BEEN TAKEN AND RESULTS ACHIEVED:  
(continued)

A review has been completed of the RWCU system startup and shutdown procedures for adequacy. Although adequate, some enhancements have been made by revising LOP-RT-02, "RWCU Startup"; LOP-RT-03, "RWCU-Shutdown"; LOA-1(2) H13-P601 C411, "Div 1 LD RWCU Flow Hi"; and LOA-1(2) H13-P601 B507, "Div 2 LD RWCU Flow Hi." These revisions have been authorized for use.

The directions given in LAP-100-40, Revision 2, have been reinforced to the operating crews by operating management. This procedure directs the operators to follow procedures step-by-step unless specified otherwise in the procedure. It also gives direction on expectations if the procedure cannot be followed step-by-step.

A review has been completed of LAP-1600-2, "Conduct of Operations", and LAP-100-40. Those items directing procedure adherence requirements/philosophies have been revised such that direction, where possible, exists only in LAP-100-40.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS:

Training on philosophy and procedure revisions will be completed for all applicable operating personnel by July 15, 1992.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance will be achieved on July 15, 1992.

Attachment

Response to Notice of Violation

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VIOLATION: (373/92011-02)

LaSalle Technical Specification 6.2.A.1 requires, in part, that detailed written procedures covering items in Regulatory Guide 1.33, Appendix A, Revision 2, be prepared, approved, and adhered to. Regulatory Guide 1.33 lists procedure for the maintaining of containment integrity and administrative procedures.

The annunciator procedure LOA H13-P601 B507 requires the operator to identify and correct the high differential flow condition and if this cannot be achieved, to verify that automatic actions occur.

The station administrative procedure LAP-16C0-2, "Conduct of Operations", Step F.1.au.5 states, "If a safety function initiates automatically assume a true initiating event has occurred unless otherwise confirmed by at least two independent indications."

Contrary to the above, on April 20, 1992, at approximately 8:50 a.m. the Unit 2 nuclear station operator bypassed a valid reactor water cleanup differential flow isolation signal, thereby failing to identify and correct the high differential flow condition and failing to assume that a true initiating event had occurred. The operators did not have instrumentation available to them to confirm that the signal was spurious.

This is a Severity Level IV Violation (Supplement I).

REASON FOR THE VIOLATION:

CECo acknowledges the violation of failing to adhere to approved procedures. The operators acted in accordance with the intent of LAP-16C0-2, "Conduct of Operations", which directs that the use of two independent (and necessarily identical) indications is sufficient to confirm that a true initiating event has not occurred.

As discussed in the Inspection Report, the operators used the available Reactor Water Cleanup Leak Detection system indications (i.e. area temperature, differential temperature, and area radiation monitors). In this particular event, reactor coolant was being redirected through the designed hard piped relief system to a controlled and monitored tank and the above indications were inadequate to confirm the systems integrity. The operators deviated from the annunciator procedure based on their belief that the initiating event was a spurious signal.

Attachment

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CORRECTIVE STEPS TAKEN AND THE RESULTS ACHIEVED:

The Assistant Superintendent of Operations issued the following policy direction: "...effective immediately, do not bypass the Reactor Water Cleanup delta flow signal during normal operating pressure and temperature unless covered by a specific procedure." This was sent to all operating crews on April 23, 1992.

Station procedures, LGP-1-1, "Normal Unit Startup"; LGP-1-2, "Unit Startup to Hot Standby"; LGP-2-1, "Normal Unit Shutdown"; LGP-2-2, "Unit Shutdown from Power Operation To Hot Standby"; LOA-1(2)H13-P501 C411, "Div 1 LD RWCU Flow Hi"; and LOA-1(2)H13-P601 B507, "Div 2 LD RWCU Flow Hi"; have been revised to give specific guidance on the bypassing of Reactor Water Cleanup differential flow isolations. The procedures state that spurious isolation signals which are a result of the density compensation problem are expected and not reportable during plant heatup and cooldown in the temperature range of 150°F to 300°F. Differential flow isolation signals other than specified above are not expected, are to be considered valid, are not to be over-ridden, and the isolation is considered reportable.

The Station procedure LAP-100-40, "Procedure Use and Adherence Expectations", has been reviewed and revised to clarify expectations and included the following statement:

"The bypassing or defeating of ESF/ECCS isolations or actuations shall not be performed except as directed in an approved operating procedure, or in accordance with the allowances of 10CFR 50.54x."

CORRECTIVE ACTIONS TAKEN TO AVOID FURTHER VIOLATIONS:

Training on philosophy and procedure revisions will be completed for all applicable operating personnel by July 15, 1992.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance will be achieved by July 15, 1992.