



Commonwealth Edison

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July 9, 1993

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attention: Document Control Desk

Subject: LaSalle County Station Units 1 and 2
Response to Notice of Violation
Inspection Report Nos. 50-373/93016; 50-374/93016
NRC Docket Numbers ~~50-254~~ and ~~50-265~~

Reference: T. O. Martin letter to L.O. DelGeorge dated June 11, 1993
transmitting NRC Inspection Report
50-373/93016; 50-374/93016

Enclosed is Commonwealth Edison Company's response to Notice of Violations (NOVS) which were transmitted with the referenced letter and Inspection Report. The violations concern EOP support procedures inappropriate for the circumstances and inadequate EOP corrective actions. Additionally, a response to the open item regarding the lack of appreciation of human factors considerations in the development and maintenance of EOPs is provided in the attachment. Corrective actions identified to address control of completion dates associated with the Nuclear Tracking System (NTS) are discussed in the attachment.

We appreciate the opportunity to discuss on, May 26, 1993, Commonwealth Edison's position regarding the management oversight of the EOP Program and additional concerns identified in Inspection Report 373(374)/93009. Inspection Report 373(374)/93016 indicates that adequate management attention was provided to the EOP program and that this conclusion was based upon the overall adequacy of the EOPs. Additionally, the cover letter indicates that the EOP support procedures identified as inadequate in inspection Report 373(374)/93009 can be performed as written. Although CECO believes the weaknesses associated with the cited EOP support procedures have minimal safety and environmental significance, we recognize that these procedures require additional enhancements to ensure their effectiveness. The associated corrective actions and actions taken to avoid further violations for the cited violations are as specified in the attachment.

If there are any questions or comments concerning this letter, please refer them to Sara Reece-Koenig, Regulatory Performance Administrator at (708) 663-7250.

Respectfully,

D.L. Farrar
Nuclear Regulatory Services Manager

cc: J. B. Martin, Regional Administrator, RIII
J. L. Kennedy, Project Manager, NRR
D. Hills, Senior Resident Inspector, LaSalle

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ATTACHMENT
RESPONSE TO NOTICE OF VIOLATION
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VIOLATION 1

10 CFR Part 50, Appendix B, Criterion V, requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures or drawings, of a type appropriate to the circumstances and shall be accomplished according to these instructions, procedures, or drawings.

Contrary to the above:

1. The procedure for, "Alternate Boron Injection," LGA-RT-03, Revision 1, dated July 2, 1992, was inappropriate to the circumstances in that (1) the on-site sodium pentaborate was insufficient to achieve cold shutdown as the procedure directed, (2) no method was provided to measure a 30-pound sodium pentaborate batch, (3) no method was provided to protect the operator from chemical toxicity, and (4) no documentation was provided to demonstrate that an additional quantity of sodium pentaborate was on-site if reactor pressure vessel emergency depressurization was needed.
2. The procedure for "Alternate Rod Insertion", LGA-NB-31, Revision 1, dated May 12, 1992, was inappropriate to the circumstances in that the hose provided for venting the hydraulic control unit overpiston area was fitted on both ends with quick disconnects which were incompatible with the drain line; and replacement fuses needed were not provided as the procedure directed.

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

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REASON FOR VIOLATION: Item 1, Alternate Boron Injection.

There is no requirement in LGA-RT-03, Revision 1, "Alternate Boron Injection," to maintain cold shutdown weight of boron on-site. The discussion section of the procedure quantifies the amount of boron needed for cold shutdown boron weight and the amount needed for hot shutdown boron weight. The BWR Owners Group Guideline states that there shall be an alternate boron injection procedure method capable of bringing the plant to hot shutdown. "Alternate Boron Injection," LGA RT-03, Revision 1, contained instructions for alternate boron injection so that hot shutdown and cold shutdown conditions may be achieved. Sufficient boron has been maintained on-site to achieve hot shutdown. The procedure provides for obtaining additional boron from Dresden Nuclear Station and Quad Cities Nuclear Station as needed. Included in the procedure are the stores item numbers for the boron at Dresden and Quad Cities to facilitate obtaining the boron. Methodologies for procurement and delivery of the boron from a sister site is part of intra-company routines and need not encumber station procedures. An example of effectiveness includes the response to the LaSalle Lake Screen House flood, with pumps arriving on-site within a few hours of the request for assistance.

By directing how to add the boron and how to get more, the procedure ensures that adequate boron can be provided to the reactor regardless of additional causal factors, i.e., emergency depressurization, leakage, reactor vessel or containment flooding. The emergency depressurization concern specified in this violation would result in nominal 3% carry-over in the steam, an amount easily replaced by a procedure designed to supply a more than adequate quantity of boron. In conjunction with the controlling EOPs, boron is added any time reactor power increases. Certainly, expectations of management during an event which has reached the use of this procedure (ATWS with failure of alternate rod insertion and Standby Liquid Control System) would be that the GSEP has been declared and the TSC manned with a significant number of people to aid the operating staff.

Although no specific tools were provided to measure the required 30-pound batches, 30-pounds is nominally slightly less than half of the 75-pound barrel, and 5 batches are specifically added for every 2 barrels. A review of the related Material Data Sheet shows the NFPA rating of one (1) for health (low risk) and no risk for flammability, reactivity or special categories. The lack of protective equipment to protect the worker from chemical toxicity would have had minimal impact. Neither of these items would have prevented timely or successful implementation of this procedure.

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REASON FOR VIOLATION: Item 1, Alternate Boron Injection. (Continued)

In consideration of the above, we believe that this procedure was not inadequate and would have resulted in timely, and adequate control and shutdown of the reactor in an ATWS condition. Additionally, the results of the effects in the procedure would have minimal safety and environmental significance.

Nonetheless, we agree that maintaining sufficient supplies of sodium pentaborate on-site to achieve cold shutdown would be an enhancement to our response capability and we will strive to maintain the sufficient quantity needed. However, we have found no regulatory requirement delineating a requisite amount. Further, we agree that additional consideration needs to be given to Operator protection relating to chemical toxicity, and to clearly defining an acceptable methodology for measuring the sodium pentaborate batches.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

Human Factors and Quality Verification personnel completed a walkdown of the procedures in May 1993 and concluded that the procedures could be performed.

CORRECTIVE ACTIONS TO BE TAKEN TO AVOID FURTHER VIOLATIONS

1. As an enhancement, LGA-RT-03, Alternate Boron Injection, will be reviewed for personnel safety issues, and revised to include protective requirements relating to chemical toxicity and other personnel safety issues as needed. The revision will be completed by August 30, 1993.
2. As an enhancement, we will strive to maintain cold shutdown weight boron on-site. Additionally, it will be stored at the 820 foot elevation of the Reactor Building by September 30, 1993.
3. As an enhancement, an appropriate device or methodology will be provided for necessary batch measurements. It will be added to procedures for use, control, and inventory surveillance as appropriate, by September 30, 1993.
4. As an enhancement, the identified weaknesses from the Human Factors and Quality Verification walkdown of the procedures completed in May 1993 will be addressed by: August 31, 1993 for procedure revisions, and June 30, 1994 for plant items (some items require a unit outage).

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved with the May 1993 independent walkdown which confirmed the procedure could be performed

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REASON FOR VIOLATION: Item 2, ALTERNATE ROD INSERTION:

LaSalle agrees that the hose stored in the support locker was the wrong hose, and that fuses specific to this procedure application were not in the locker. The root cause for the wrong fitting on the hose is not known. This is viewed as a tool control issue and would not have precluded the ability to vent the system. The fitting could have been cut off or removed with available tools. Additionally, since the venting evolution is performed during some reactor startups using non-EOP controlled hoses, these hoses which are available in the local area of use could have been employed. In recent CSEP exercises, this procedure and the "local" hoses were used in a successful simulation.

This procedure referenced replacement fuses in the support locker. There was no intention to store the fuses in the locker. These fuses are a standard use item and are maintained in the Control Room. Operators routinely acquire fuses from the Control Room when needed.

In consideration of the above, we believe that this procedure was not inadequate and would have resulted in timely, safe, and adequate methodology for back-up control rod movement to shutdown the reactor in an ATWS condition. Additionally, the results of the effects in the procedure would have minimal safety and environmental significance.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

1. The proper hose has been placed in the LGA Support Procedure Locker.
2. The LGA Support Procedure Locker has been inventoried and sealed. Further corrections are being made as necessary.

CORRECTIVE ACTIONS TO BE TAKEN TO AVOID FURTHER VIOLATIONS

1. We are reviewing the LGA Support Procedure Locker inventory control process for improvements. A plan will be implemented by August 30, 1993.
2. Spare fuses will be placed in the LGA Support Procedure Locker and added to the inventory checklist to ensure availability by September 30, 1993.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved when the correct hose was placed in the LGA Support Procedure Locker.

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VIOLATION 2

10 CFR 50, Appendix B, Criterion XVI, requires, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, deficiencies and deviations, are promptly identified and corrected.

Contrary to the above, between February 8, 1991, and April 30, 1993, conditions adverse to quality existed at the LaSalle County Nuclear Station in that conditions identified in the 1991 EOP Inspection Report (No. 50-373/91003 and 50-374/91003) were not promptly corrected. The licensee's corrective actions were either not performed or partially performed for correction of procedural EOP errors that were tracked in Action Item Request (AIR) No. 373-100-91-00302 dated March 22, 1991.

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

REASON FOR VIOLATION

LaSalle agrees that in case of the two Action Item Records (AIR) cited in paragraph 4 of the Inspection Report that either actions were incomplete or taken to a standard less than required by the EOP program. As part of the program to correct the deficiencies identified in the 1991 Inspection Report, an experienced contractor was hired to write the EOP Support Procedures Writers Guide (WG), re-write the support procedures to meet the WG, and then re-verify the support procedures to the WG. The support procedures were not written to the WG standards, which resulted in previously identified deficiencies continuing to some degree. Personnel familiar with the support procedures were used to validate them, and due to their familiarity with the procedures and the facility, found few problems. This also resulted in similar deficiencies continuing. In the cases of verification and validation (V&V), independent overview was not adequately implemented. Additionally, some programmatic issues have been identified in the Nuclear Tracking System (NTS) which controls AIRs that allowed the deficiencies to exist.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

1. An independent review team has conducted a review of the deficiencies and responses to the 1991 report.
2. A Task Force was appointed to review the WGs against EOP related NUREGs for EOP Flow Chart and Support Procedures. The review has been completed.
3. A walkdown of the EOP Support Procedures was performed by a multidisciplinary group, including Human Factors expertise.

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CORRECTIVE ACTIONS TO BE TAKEN TO AVOID FURTHER VIOLATIONS

1. Responsibilities of the EOP program maintenance have been assigned to the plant Operations Department.
2. Assignment of the EOP program has been made as the primary responsibility of a qualified individual, with a specific detailed job description for the program coordinator which clearly delineates responsibilities and authorities.
3. The NTS procedure will be revised to provide clearer expectations in the areas of documentation, completion dates, reviews, and closure. This will be completed by July 15, 1993.
4. Implementation of post closure review of NRC items (non-EOP) on a sampling basis will be completed by September 1, 1993.
5. Corrective actions will be completed for the 1991 and 1993 EOP inspections, AIR 373-251-91-00001, the walkdown review by the multidisciplinary group, and the 1993 offsite independent team review of the 1991 EOP Inspection items. These corrective actions are being worked on in a planned sequence that will extend to September 30, 1994 to complete.
6. The Validation and Verification (V&V) procedures, and WGs will be revised to incorporate more of the NRC guidance from NUREG 1358 and its Supplement 1 to ensure increased consistency in writing and V&V of EOPs. This will be completed by December 31, 1993.
7. To ensure success of corrective actions, we will review our corrective actions against other Commonwealth Edison Station EOP Programs. Specifically, this will be a review of the Dresden and Quad Cities Stations previous EOP inspections. This review will be completed by September 30, 1993 and any identified corrective actions will be incorporated into future procedure revisions.
8. EOPs will be revised as necessary following improvements to the WGs and V&V procedures. These revisions are expected to be completed by September 30, 1994.
9. An independent detailed audit of the EOP Program will be conducted after the corrective actions are complete to ensure that management expectations have been met.
10. Periodic EOP Program audits will be performed.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance will be achieved on September 30, 1994 when all corrective actions have been completed.

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OPEN ITEM

Many of the human factors concerns identified in the 1991 EOP Inspection were not addressed. (30 day response requested) (p. 5)

- 1) Comments supplied by the corporate human factors engineer in November 1991, were not promptly corrected.
- 2) Cautions and notes were removed from the some of the support procedures and placed into the discussion section.
- 3) The level of detail in the body of the procedure was occasionally inadequate, example Alternate Vessel Injection using cycled condensate system, buried vital cycled condensate system information in the discussion section.

The cover letter to the Enforcement Conference Report also requests addressing an additional concern identified during the review of human factors considerations involving the arbitrary extension of completion dates to corrective action items tracked within the Nuclear Tracking System without management concurrence.

DISCUSSION

To address the 1991 Inspection Report concerns, LaSalle initiated multiple corrective actions. These actions included re-writing of the WGs and support procedures, new V&V activities, and Human Factors reviews. However, the successful use of the EOPs in the Initial and Requalification Licensing programs, as well as the V&V by the users of the procedures with few comments, resulted in the belief that the procedures were very useable and adequately human factored. LaSalle's focus had been primarily on performance and had mistakenly neglected to ensure that the program itself was properly documented and designed for good maintenance. There were specific instances of inadequate management oversight such as failure to cross reference flow charts and procedures, failure to require independent verification of the support procedures, and lack of documented justification for positions contrary to human factors. LaSalle agrees with the need for increased management controls and review in these areas.

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DISCUSSION (Continued)

There appeared to be arbitrary extension of completion dates to corrective action items in the Nuclear Tracking System without management concurrence. The system does require management review for due date extensions by requiring the "originator" to concur. In the case of the AIR of concern, the originator was also the cognizant person to complete the AIR, and thus was extending the due date for an item self-requested. Although it seems reasonable to adjust dates for self-requested items, in retrospect, this item should have been originated by the individual's supervisor. This issue of due date extensions as well as other enhancements in the NTS are addressed in the corrective actions of Violation 2.

CORRECTIVE ACTIONS

1. V&V and Writers Guides procedures will be revised to ensure procedure format consistencies. These revisions will be completed by December 31, 1993.
2. Deviations from the WGs will be justified and documented on an ongoing basis.
3. EOPs and Support Procedures will be verified to the revised procedures. Those procedures with changes affecting validation will also be validated. These activities will be completed by September 30, 1994.
4. A requirement will be established to have a human factors review of all changes to the WGs. This requirement will be established by September 30, 1993.
5. Support procedures will be reviewed for personnel hazards. Cautions and notes in discussions will be placed in support procedures as appropriate. Details will be added to the body of procedures as appropriate. These reviews will be completed and any necessary procedure revisions completed by September 30, 1994.