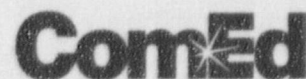


Commonwealth Edison Company
Quad Cities Generating Station
22710 206th Avenue North
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Tel 309-654-2241



SVP-98-095

March 13, 1998

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

Attention: Document Control Desk

Subject: Quad Cities Station Units 1 and 2
NRC Docket Numbers 50-254 and 50-265
NRC Inspection Report Numbers 50-254/97022 and 50-265/97022

Reference: J. A. Grobe to O. D. Kingsley letter dated February 13, 1998

Enclosed is Commonwealth Edison's (ComEd's) responses to the Notices of Violation (NOV) transmitted with the referenced letter. The report contained four Level IV violations:

Violation 97-022-01 cited a failure to provide adequate procedural instruction for operators to perform QCOP 2300-08, "HPCI Local Manual Operations", Revision 10.

Violation 97-022-03 cited a failure to address the additional alternating current (AC) inboard isolation valve closure time during a loss of offsite power event.

Violation 97-022-04a and 04b cited a failure to follow station procedure requirements for 50.59 screenings.

Violation 97-022-06 cited a failure to follow station procedure requirements for 50.59 report submittals.

This letter contains the following commitments:

For Violation 97-022-01:

No new commitments were made for this violation.

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For Violation 97-022-03:

1. The 10CFR50.59 associated with modifications will be revised.
(NTS # 254-100-97-02203.01, due April 30, 1998.)
2. Training will be provided in Modifications and Lessons Learned that will address logic changes associated with design changes. This activity will be tracked by NTS # 254-100-97-02203.02 and will be complete by July 1, 1998.
3. Conduct 50.59 Workshop training for the defined complement of preparers and reviewers. This will be accomplished by August 30, 1998.
(NTS # 254-100-97-02203.03, due August 30, 1998.)

For Violation 97-022-04a and 04b:

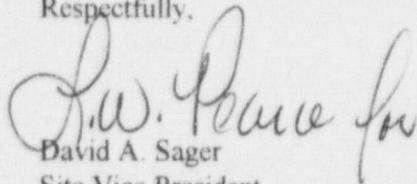
1. See corrective action for violation 50-254 and 50-265/97022-03.
(NTS # 254-100-97-02203.03, due August 30, 1998.)

For Violation 97-022-06:

1. Applicable SEs, not previously submitted, will be submitted to the NRC by March 31, 1998. (NTS item 254-180-97-SCAQ0002401, due March 31, 1998.)

If there are any questions or comments concerning this letter, please refer them to Mr. Charles Peterson, Regulatory Affairs Manager, at (309) 654-2241, ext. 3609.

Respectfully,


David A. Sager
Site Vice President
Quad Cities Station

Attachment A, "Responses to Notices of Violation"

cc: A. B. Beach, Regional Administrator, Region III
R. M. Pulsifer, Project Manager, NRR
C. G. Miller, Senior Resident Inspector, Quad Cities
W. D. Leech, MidAmerican Energy Company
D. C. Tubbs, MidAmerican Energy Company
F. A. Spangenberg, Regulatory Affairs Manager, Dresden
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RESPONSE TO NOTICE OF VIOLATION
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NOTICE OF VIOLATION (50-254(265)/97022-01)

10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," requires that activities affecting quality shall be prescribed by documented procedures of a type appropriate to the circumstances and shall be accomplished in accordance with these procedures.

- A. Contrary to the above, as of October 27, 1997, local manual operation of the High Pressure Coolant Injection (HPCI) system, an activity affecting quality, could not be performed in accordance with its written procedure QCOP 2300-08, "HPCI Local Manual Operations," Revision 10. Specifically, the procedure steps to rapidly open Unit 1 and Unit 2 HPCI steam isolation valves MO 1(2)-2301-4 could not be performed because the steps instructed operators to place jumpers between terminals that did not exist.

This is a Severity Level IV violation (Supplement I). (50-254/97022-01; 50-265/97022-01)

REASON FOR THE VIOLATION:

ComEd accepts this violation.

The reason for the incorrect panel designation was human error during procedure development. On December 11, 1992, QCOP 2300-8, Revision 3, was approved. The panel designations were transposed during the development of Revision 3. A procedure verification checklist was completed for this revision which should have identified the procedure discrepancy. The individual who performed this checklist is no longer employed by ComEd.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED:

On November 12, 1997, at 0900, PIF # Q1997-04352 was initiated as an NRC HPCI SOPI identified issue concerning inconsistencies in panel references within QCOP 2300-08. The immediate action was to have QCOP 2300-08 walked down and verified by a Senior Reactor Operator. A procedure change request was submitted on November 12, 1997, to correct errors found. The procedure change request was processed and the corrected procedure became effective November 17, 1997.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS

No further actions are required for this issue.

DATE WHEN FULL COMPLIANCE WAS ACHIEVED:

Full compliance was met on November 17, 1997, when the QCOP 2300-08, Revision 11, became effective.

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NOTICE OF VIOLATION (50-254(265)/97022-03)

10 CFR 50, Appendix B, Criterion III, "Design Control", requires, in part, that design control measures assure that the design basis for structures, systems, and components are correctly translated into specifications.

Contrary to the above, as of November 12, 1997, Modification M04-1(2)-91-013, "Modify Break Detection Logic to Prevent Spurious Isolation of HPCI", an activity affecting quality, did not address the additional alternating current (AC) inboard isolation valve closure time during a loss of offsite power event. As a result, the overall inboard isolation valve closure time was not reviewed against the valve's design basis time assumed in the Updated Final Safety Analysis Report.

This is a Severity Level IV violation (Supplement I). (50-254/97022-03; 50-265/97022-03)

REASON FOR THE VIOLATION:

ComEd accepts this violation.

The reason for this violation was failure to follow modification and safety evaluation procedures. Specifically, the 10CFR50.59 safety evaluation failed to address all the effects of the modified HPCI valve isolation logic.

The original logic design for the HPCI containment isolation valves (MO-1(2)-2301-4 & 5) provided isolation signals from the AC and DC logic to both the inboard and outboard isolation valves. The nine second upper limit for the HPCI steamline high flow trip time delay is based on the initial analysis used for this isolation. This analysis assumed a steam break concurrent with a loss of offsite power and a failure of the outboard DC powered isolation valve. The inboard AC isolation valve would not move until the Diesel Generator (DG) started and loaded, which was assumed to take 13 seconds. Therefore, the nine second time delay would not preclude valve movement any longer than what was originally assumed in the design basis. This is because the DC logic timer would still time out and provide the isolation signal, and the inboard valve would close when AC power became available from the DG. The nine second limit was used based on historical starting time for the DG of 10 seconds.

In 1991, modification M04-1(2)-91-013 "HPCI Turbine Exhaust Sparger and External Vacuum Breaker Line" separated the power sources for the logic to the inboard and outboard isolation valves. (Please note the title clarification). After this modification, the AC logic provided a closure signal for the inboard AC valve and the DC logic provided a closure signal for the outboard DC valve. The AC time delay relay will not start until after the DG has loaded, and valve movement will not start until the relay has timed out. This effectively added 10 seconds (the time that it takes for an emergency diesel generator to start and load) to the closing time under the design basis analysis.

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The modification package did not identify an evaluation of this change in the closure time for the inboard AC valve. This potential problem is documented in self identified Problem Identification Form #Q1997-04344. The issue screening prepared for the PIF determined that the closure times remained within the Updated Final Safety Analysis Report criteria.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

The effects of the longer valve closure times were evaluated in the issue screening prepared in response to Problem Identification Form #Q1997-04344 on November 14, 1997. As agreed by the inspection committee, this evaluation determined that total valve closure time remained within the design basis allowables for the pressure/temperature effects and radiological effects as established in calculations QC-030-M-001, Revision 2 "Pressure/Temperature Transient Analysis for HPCI Line Steam Break in Torus Compartment" and the radiological zone maps based on Specification N202 Appendix A. Therefore, the Primary Containment System remains within the design basis allowable. A 10CFR50.59 will be prepared to address the logic changes associated with modifications. This will be tracked NTS # 254-100-97-02203.01 and will be complete by April 30, 1998.

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATION

Site Engineering has performed a formal root cause investigation on the quality concerns with 10CFR50.59 safety evaluations. The investigation determined the root cause to be a programmatic weakness in the implementation of the 50.59 process as indicated by:

- The lack of a clear understanding of responsibilities by the preparers and reviewers.
- The lack of knowledge on the tools and references related to the design and licensing basis of the station.

Site Engineering has issued a 50.59 safety evaluation responsibilities document to all qualified preparers and reviewers as interim guidance. This action is complete.

Performance based training has been initiated for the preparers and reviewers of 50.59 safety evaluations. This activity is being tracked in NTS item 254-100-97-02203.03, which is due August 30, 1998. This training, in the form of a two-day workshop, focuses on the 50.59 process, and the expectations and responsibilities for the preparers and reviewers.

Additionally, training will be provided in Modifications and Lessons Learned that will address logic changes associated with design changes. This activity will be tracked by NTS # 254-100-97-02203.02 and will be complete by July 1, 1998.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance will be achieved on April 30, 1998. (NTS #254-100-97-02203.01, due date April 30, 1998.)

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NOTICE OF VIOLATION (50-254/97022-04a & 50-254/97022-04b)

10CFR50, appendix B, Criterion V, "Instructions, Procedures and Drawings," requires that activities affecting quality shall be prescribed by documented procedures of a type appropriate to the circumstances and shall be accomplished in accordance with these procedures.

- B. Nuclear Station work Procedure No NSWP-A-04, "10 CFR Safety Evaluation Process", stated, in part, that previously performed screenings can fulfill the screening requirement provided they meet the validation criteria of Exhibit H, "Validation of Previously Performed Safety Evaluations and Screenings," to determine if the existing screening remains valid.

Contrary to the above,

- (1) The 10CFR 50.59 screening approved on January 26, 1996, for temporary alteration No 96-1-005, "Fine Tune HPCI Flow Controller at Direction of system Engineer," an activity affecting quality, evaluated the installation of a recorder to monitor six (6) HPCI process parameters. However, the work request that installed the recorder also installed additional instrumentation. This instrumentation was not evaluated by Exhibit H to determine if the existing screening remained valid.
- (2) The 10 CFR 50.59 screening approved on February 28, 1996, for temporary alteration No. 96-1-063, "Connect chart Recorder to HPCI Oil Pressure Switches to Monitor Pressure during QIR14," and activity affecting quality, evaluated the installation of a recorder to monitor HPCI process parameters. However the work request that installed the recorder also installed additional instrumentation. This instrumentation was not evaluated by Exhibit H to determine if the existing screening remained valid.

This is a Severity Level IV violation (Supplement 1)

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REASON FOR THE VIOLATION

ComEd accepts this violation.

(50-254/97022-04a) Temporary Alteration (TA) 96-1-005 was issued to install test equipment on the HPCI system. The screening as issued was consistent with and evaluated the items installed under the TA process. The Engineering Request (ER) 9600131 that initiated the TA included the request to add the Linear Variable Differential Transformers (LVDTs). Inclusion of these instruments in the TA and the screening was not required. Installation of these types of instruments is allowed under QAP 0300-12 since they do not require a system breach, have no electrical connections, perform no component alteration and steps were included in the work package for installation and removal. The pressure gauges were installed when the HPCI system had been declared inoperable due to a problem found during the conduct of the testing under the TA. Use of the troubleshooting procedure in existence at the time of the work was listed as a step in the work instructions. As the HPCI system was inoperable at the time of use of these gauges, inclusion in the TA paperwork was not necessary. After troubleshooting was completed and repairs were made, these gauges were removed, the system was returned to service (RTS) and use of the TA continued.

(50-254/97022-04b) Temporary Alteration (TA) 96-1-63 was issued to install test equipment on the HPCI system. The equipment in the TA documentation consisted of a chart recorder and a validyne. The 50.59 screening only addressed the chart recorder installation and did not address the use of the validyne. This was a result of a lack of attention to detail when preparing and reviewing the TA and the 50.59 screening.

This is an example of an inadequate screening, as not all of the equipment being installed by the TA was described in the 50.59 safety screening. The procedure in use at the time of the TA installation was QCAP 1100-9, Revision 3. With this procedure there was no option to validate a previous screening. If it had been identified that additional instruments should have been evaluated, a new screening would have been required to supplement or replace the original screening.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED

PIFs Q1997-03981 3982, 4468, and 4500 were written to address the above issues. Both TAs are no longer installed in the plant. Revision of the 50.59 screening for TA 96-1-63 is not required.

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CORRECTIVE STEPS TAKEN TO PREVENT FURTHER VIOLATION

The following corrective action has been initiated to ensure that this situation does recur:

1. See corrective action for violation 50-254 & 265/97022-03.
(NTS item 254-100-97-02203.03, due August 30, 1998.)

DATE WHEN FULL COMPLIANCE WAS ACHIEVED

Full compliance was achieved when the temporary alteration 96-1-63 was removed on April 23, 1996.

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NOTICE OF VIOLATION (50-254(265)/97022-06)

10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures and Drawings," requires that activities affecting quality shall be prescribed by documented procedures of a type appropriate to the circumstances and shall be accomplished in accordance with these procedures.

- C. Quad Cities procedure NSWP-A-04, Rev. 0, "10 CFR Safety Evaluation Process," Section 5.4.1.3 states, in part, that the report to the NRC shall contain a brief description of each change, test, or experiment and a summary of the safety evaluation performed.

Contrary to the above, on July 1996 and October 1997 the 10 CFR 50.59 summary reports submitted to the NRC contained only those 50.59 descriptions that changed the Updated Final Safety Analysis Report (UFSAR) and not a description of each change, test, and experiment performed at the facility.

This is a Severity Level IV violation (Supplement I). (50-254/97022-06; 50-265/97022-06)

REASON FOR THE VIOLATION:

ComEd accepts this violation.

The cause of failure to submit all SEs to the NRC was based upon an improper management decision in 1995 to not transmit those SEs that were not directly related to changes to the facility, as described in the UFSAR.

CORRECTIVE STEPS TAKEN AND RESULTS ACHIEVED:

1. A review of all SEs, not submitted in the 1995 and 1996 SE summary report, was completed.
2. Appropriate personnel have been briefed on the importance of an accurate accounting of all SEs designated for transmittal to the NRC.
3. Applicable SEs, not previously submitted, will be submitted to the NRC by March 31, 1998. (NTS item 254-180-97-SCAQ0002401, due March 31, 1998.)

CORRECTIVE STEPS TAKEN TO AVOID FURTHER VIOLATIONS

1. Revised procedure QCAP 0500-01 "Processing 10CFR50.59 Safety Evaluations", to specify that all 50.59 evaluations are to be included in the 50.59 Summary Report sent to the NRC. This was completed on January 29, 1998.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED:

Full compliance will be met on March 31, 1998, when the applicable SEs are submitted to the NRC. (NTS item 254-180-97-SCAQ0002401, due March 31, 1998.)