



Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

DCS

May 30, 1991

Mr. J. Lieberman, Director
Office of Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Document Control Desk

Subject: Quad Cities Nuclear Power Station
Notice of Violation & Proposed Imposition of Civil Penalty
(50-254/91006)
NRC Docket Number 50-254

Reference: (a) T.J. Kovach to J. Lieberman letter dated April 26, 1991
transmitting CECO's response to the Notice of Violation and
Proposed Imposition of Civil Penalty

(b) A.B. Davis to Cordell Reed letter dated March 27, 1991
transmitting Notice of Violation and Proposed Imposition of
Civil Penalty

Dear Mr. Lieberman,

The purpose of this letter is to clarify the information which we provided in reference (a), as well as to provide an update of our Lessons Learned initiatives. We believe that our corrective actions at Quad-Cities represent a concerted effort to resolve the issues identified in the subject enforcement action, and that our lessons learned program encompasses a proactive approach to the challenges and opportunities of communicating improvement initiatives throughout a multi-site operation. I hope the information provided in this letter clarifies our continuing strong commitment to comprehensively addressing enforcement issues and associated NRC concerns.

Respectfully,

Thomas J. Kovach
Nuclear Licensing Manager

Attachments: (A) Clarification of Attachment B to the April 26, 1991 Letter
(B) Lessons Learned Synopsis of the Quad-Cities Event

cc: A. Bert Davis - Region III
L.N. Olshan - NRR
T.E. Taylor - Quad Cities

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Clarification of Attachment B to the April 26, 1991 Letter

In reference (b), the NRC requested that the Company, "...indicate when you expect that the operational staff at each of your plants will be aware of your current expectations on operations so that the lack of awareness of management expectations will not be the cause of violations..." Our response provided by reference (a), included as its Attachment B, an overview of the range of communication systems in use, as well as the scope of communication performance measures available. In total, these systems and performance measures provide our basis for concluding that adequate communication by management to our operations personnel does occur. We do not however, wish to diminish the importance we attach to the weaknesses in management communication and reinforcement as they applied to the Quad-Cities event. In the February 21, 1991 Enforcement Conference, we presented the following conclusions of our Quad-Cities event investigation;

1. Management standards have not been effectively communicated/ reinforced.
2. Administrative controls of some work activities were not adequate.
3. Personnel errors.

Our assessment of the Quad-Cities event remains that the management must be more effectively involved in the communication of standards. Through such communication and reinforcement, management provides a vital barrier the propagation of an event from other causes. Given this, we undertook comprehensive corrective actions that focussed on clearly defining station standards and on increasing management involvement observing personnel, developing forums for communication and creating situations in which immediate feedback to personnel could be provided. We will continue our efforts to improve plant performance through more effective management systems and management involvement.

Although there have been individual instances of communication weaknesses at other Company facilities, when we reviewed a wide range of communication performance measures, we could not conclude that the cause of the recent Quad-Cities events is indicative of the performance at all our stations. However, as part of our continuing attention to this issue, our Lessons Learned Program is forcefully and effectively communicating the Quad-Cities enforcement conference issues to all of our operating staffs. The Lessons Learned Review Committee, which includes senior management representation from all of our nuclear stations, has conducted a detailed review of the Quad-Cities event, and elevated the subject to a Significant Lessons Learned notice to each of our Station Managers. A copy of the Lessons Learned synopsis of the Quad Cities event that was transmitted to all of our stations on March 14, 1991, is provided in Attachment B to this letter. Our Lessons Learned Program tasks each of our stations with the action to review the identified lessons learned, and to take appropriate action to reduce the potential for recurrence. Through our On-Site Safety Groups, the lessons learned followup actions of each station are monitored, consistent with our Operating Experience Program (OPEX). Also, our quality and performance assessment personnel will periodically audit individual station effectiveness in learning from internal Commonwealth Edison experiences disseminated via the Lessons Learned Program. Consideration is being given to developing a performance measure for each station which will provide a quarterly assessment of station effectiveness in learning from internal corporate experiences. A performance measure already exists for external utility experiences utilizing OPEX information as its input. Taken together, these actions provide confidence that we are aggressively and effectively pursuing resolution of the root causes of the Quad-Cities event.

Attachment B

Lessons Learned Synopsis of the Quad-Cities Event

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Significant Lessons Learned Significant Lessons Learned

SIGNIFICANT LESSONS LEARNED INFORMATION FOR STATION/DEPARTMENT MANAGER'S ATTENTION

(Significant Lessons Learned Document 91-2)

March 14, 1991


To: R. Bax K. Kofron C. Sargent
G. Diederich R. Pleniewicz R. Flessner
E. Eenigenburg J. Leider
T. Joyce

Subject: Quad-Cities Unit 1 Inadvertent Loss of
Reactor Vessel Inventory During RHR
Valve Testing Activities

The attached Lessons Learned information, relative to the subject event, has been reviewed by the Lessons Learned Review Committee (LLRC) and deemed significant enough to warrant the Station/Department Manager's attention.

A one page synopsis of the event is followed by a list of Lessons Learned that were evaluated at the LLRC meeting on February 27, 1991.

The status of Lessons Learned items will be tracked via the NTS system. No additional written response is required.

 3/27/91
Lessons Learned Group
Safety Assessment Department

Attachments:

- A - 2-7-91 P.F. Manning letter
regarding equipment OOS clearance
- B - 1-30-91 Galle/Wallace letters
regarding valve stroking
- C - Braidwood Station HLA

cc: C. Reed M. Turbak D. Farrar
D. Galle J. Bowers K. Brennan
M. Wallace M. Willoughby F. Rescek
L. DeGeorge ONSG Administrators (6) D. Brown
R. Querio P. Manning
K. Graesser
N. Kalivianakis
Sta. Tech. Supts (6)

SYNOPSIS

EVENT DESCRIPTION

On January 24, 1991 "B" train RHR System (non-operating) MOV post-modification testing was scheduled. The Operating Department temporarily lifted OOS cards with the MOV circuit breakers in the "off" position. By 1200 hours the Electrical Maintenance Department (EMD) completed energizing, cycling, and testing the RHR torus suction MOVs. Prior to cycling the RHR reactor vessel suction MOVs, EMD was supposed to notify the Unit 1 NSO to allow temporary shutdown and isolation of the RHR system in the shutdown cooling mode. EMD did not notify Operating and cycled the RHR reactor vessel suction MOVs.

When Operating had temporarily lifted OOS cards on the "B" RHR system, the vents and drains were omitted based on the belief that the RHR system would be shutdown and completely isolated from the Reactor vessel. EMD valve cycling resulted in the loss of approximately 2800 gallons of water from the reactor vessel and 1400 gallons from the RHR piping.

Prominent Causes (From Event Investigation Report)

- Management standards were not adequately communicated
- Inadequate administrative controls
- Lack of a questioning attitude
- Personnel error

Contributing Causes (from Event Investigation Report)

- Inadequate communication to the control room and between the NSO and the SCRE
- The fact the NSO did not recognize the loss of the water from the reactor vessel (in a timely manner)

FINAL LESSONS LEARNED

QUAD CITIES UNIT 1 INADVERTENT LOSS OF REACTOR VESSEL INVENTORY DURING RHR VALVE TESTING ACTIVITIES

- 1) Stations should evaluate minimizing the routine use of temp lifts. The large number of temp lifts increases the probability for operating errors. The individual station evaluations should be coordinated by the Nuclear Operations Staff. If temp lifts are needed for special testing they should be limited to one shift (consistent with INPO Good Practice OP-203). QA/NS should continue their plans to revise Q.P. 3-52 regarding OOS clearance; however, the 2-7-91 P.F. Manning memo to the NQP Superintendents (attachment A) regarding equipment OOS clearance states that at the completion of the physical work an outage may be cleared prior to signing the work request by Quality Control. This QA manual clarification should allow stations to minimize the use of temp lifts, provided sufficient administrative controls exist to ensure all work requests which affect operability are completed prior to declaration of operability.

Target Completion Date 10-1-91

Track Status Under NTS # 909-247-00201 (Sta., NOD, Action)

- 2) Stations should review administrative controls that define responsibilities for all individuals that prepare and verify OOS sequences. The review should ensure administrative controls: a) include all experience, training and qualification requirements, b) provide standards for guidance on items of concern when performing OOS/temp. lift reviews, and c) provide standards on the level of detail required for temp. lift verifications.

Target completion date 10-1-91

Track Status under NTS # 909-247-91-00202 (Sta. Action)

- 3a) Stations should review their maintenance valve stroking procedures to ensure operating personnel are always in control of the activity and aware of the valve position/status. This maintenance procedure review should verify adequate precautions are included in the proper steps of the procedure.
- 3b) Each station should review its current policy for electrical breaker manipulations and ensure the manipulations are limited to Operations Department personnel. Items 3a and 3b above should be accomplished consistent with the direction provided to station managers by: The 1-30-91 Galle/Wallace letter regarding valve stroking guidelines and circuit breaker control, and the 1-30-91 Galle/Wallace followup letter regarding valve stroking (attachment B)

Target completion date 6-1-91

Track Status under NTS # 909-247-91-00203 (Sta. Action)

- 4) Each station should review its communications policy between the Operations and Maint/Tech. Staff Depts. and the communications within the Operations, Maint, and Tech. Staff Depts. In addition, a policy should be established that requires continuous communication between work locations when multiple work sites are involved. (For example, see item 3 of the Zion Station MOV Maintenance Work Practices, included in Attachment B) Although communication concern was addressed as a part of Significant Lessons Learned Document 91-1 (Quad-Cities Inadvertent Criticality and Subsequent IRM HiHi SCRAM) item 7 (NTS # 909-247-91-00107), additional recommendations are being provided to emphasize the importance of proper communications.

Shift Engineers should perform evaluations of operating shift crews to ensure (at a minimum) that a) The SCRE is informed of the starting and stopping of evolutions, b) Information being communicated to the control room is sufficiently complete to allow the NSO to be aware of the status of plant equipment (for example had the EM's communicated the fact water flow was heard while cycling the MOV, the NSO may have been able to identify decreasing reactor vessel inventory).

Target Completion Date 10-1-91

In addition the QP&A Performance Assessment Department will perform a special communications assessment based on station communication expectations.

Target Completion date 4-1-92

Track Status under NTS # 909-247-91-00204. (STA/PAD Action)

- 5) Establish a station policy similar to Braidwood HLA Attachment C (now termed Infrequent Evolution Awareness for Control Room Activities) that explains how critical tasks (tasks requiring special precautions or contingencies) are identified and specifies the precautions to be considered. Develop and proceduralize critical task list using lessons learned. Establish a station policy which requires a multi-disciplinary review of critical tasks to be coordinated by the station planning department.

Target Completion date 10-1-91

Track Status under NTS # 909-247-91-00205 (STA Action)

- 6) All stations should review their administrative procedure regarding caution cards to ensure that all points of control are identified and carded.

Target Completion date 10-1-91

Track Status under NTS # 909-247-91-00206 (STA Action)

- 7) All stations should conduct collective briefings (including management and bargaining groups participating in activities) for tasks identified by the stations in item 5.

Target Completion date 10-1-91

Track Status under NTS #909-247-91-00207 (STA Action)