Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

October 11, 1991

Dr. Thomas E. Murley, Director
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attn: Document Control Desk

Subject: Dresden Nuclear Power Station Units 2 and 3
Response to Notice of Violation Associated with
Inspection Report 50-237/91022, 50-249/91022
NRC Docket Nos. 50-237 and 50-249

References: W.D. Shafer letter to Cordell Reed dated
September 12, 1991 transmitting NRC
Inspection Report 50-237/91022, 50-249/91022

Dear Dr. Murley:

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 three Level IV violations. One violation involved the failure of maintenance personnel to follow written procedures during the installation of the steam separator shroud head assembly. A second violation was for inadequate corrective actions to a previous violation regarding NRC reporting. The third violation was for programmatic inadequacies in the instrument check process.

If there are any questions or comments regarding this response, please contact Rita Radtke, Compliance Engineer, at (708) 515-7284.

Very truly yours,

Penny L Barnes for

T.J. Kovach
Nuclear Licensing Manager

Attachments

cc: A. Bert Davis, Regional Administrator-RIII
B.L. Siegel, Project Manager-NRR
W. Rogers, Senior Resident Inspector-Dresden

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ATTACHMENT A

RESPONSE TO NOTICE OF VIOLATION
NRC INSPECTION REPORT
50-237/91022; 50-249/91022

VIOLATION 1

10 CRF Part 50, Appendix B, Criterion V, as implemented by Commonwealth Edison Company's Quality Assurance Program, requires in part, that activities affecting quality be accomplished in accordance with documented instructions, procedures, or drawings.

a. Dresden Maintenance Procedure (DMP) 0200-12, "Reactor Shroud Head and Steam Separator Installation," Revision 7, Steps G.12 a-e, detailed actions necessary to lock and tighten the steam separator shroud head hold down bolts.

   Contrary to the above, on November 26, 1990, mechanical maintenance failed to accomplish the locking and tightening of the steam separator shroud hold down bolts in accordance with DMP 0200-12.

b. Dresden Administrative Procedure (DAP) 9-11, "Procedure Usage and Adherence," Revision 2, Step 0.(3) [sic] stated that when a step is initialed or signed, it must be based on either direct observation, or a direct report such as face-to-face communication. If other than direct observation is utilized, then the initials of the person performing the observation must be included with the initials of the person actually initialing the step.

   Contrary to the above, on November 26, 1990, procedure DMP 0200-12, Steps G.12 d-e and G.15, were initialed by a foreman without direct observation of the step performed, and without obtaining the initials of any of the mechanical maintenance crew members who performed the observation of Steps G.12 d-3 [sic] and G.15.

c. DAP 9-12 [sic], "Procedure Usage and Adherence," Revision 2 [sic], defined independent verification as the certification of the correctness of an operation or condition based on either first-hand observation or through personally performed manipulation.

   Contrary to the above, on November 26, 1990, the steam separator shroud hold down bolts were independently verified and procedure DMP 0200-12, Step G.12 f, was initialed without adequately verifying shroud head bolt tightness.

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

THE REASON FOR THE VIOLATION

Violation 1.a.

The Mechanical Maintenance work practice on the refuel floor generally included keeping the work package and relevant procedures on a clean table. The work crews generally received direction from a Maintenance Supervisor who referenced the work package. In this event, however, the work package was not referenced, but the senior member of the work crew did reference a drawing from the vendor manual for re-installing the steam separator. The legend of that drawing stated ". . . flat on end of bolt, as shown, indicates that tee-bar at bottom end of bolt is locked to shroud hold-down bracket and shroud head assembly is secured." This legend is not fully correct, however, in that proper orientation of the flat only indicates that the tee-bar is properly oriented and does not indicate that the hold-down bolt is adequately tightened to secure the shroud head and steam separator assembly. The work crew rotated each hold-down bolt nut until proper orientation of the flat on the end of each hold-down bolt was obtained after approximately three turns of the wrench handle.

The Maintenance Supervisor responsible for this job had also been assigned other jobs, however, including critical path work on the Main Steam Isolation Valves. Consequently, the Maintenance Supervisor was not present on the refuel floor when the work crew latched the steam separator shroud head assembly hold-down bolts.

As a result of discussions with Mechanical Maintenance Supervisors and a Work Analyst, the senior member of the crew believed that the hold-down bolts had been properly tightened when, in fact, they had not.

Violation 1.b

The Mechanical Maintenance practice for work on the refuel floor was generally for the Mechanical Maintenance Supervisor to be present, give direct supervision, and to sign or initial steps performed by his crew based on direct observation. This practice is in accordance with Dresden Administrative Procedure (DAP) 9-11, Procedure Usage and Adherence.

In this event, however, the Mechanical Maintenance Supervisor initialed steps G.12.d and G.12.e of DMP 0200-12 based on a direct report from the work crew rather than direct observation. The Mechanical Maintenance Supervisor was allowed to do so by step C.5.o.(3) of DAP 9-11, but he failed to follow the format of initialing specified in step C.5.o.(4). The Mechanical Maintenance Supervisor incorrectly wrote only his initials. In accordance with step C.5.o.(4), he should have printed the initials of the person performing the observation followed with his written initials.

CECo would like to provide the following clarification to the wording of the violation:

> The wording of the Notice of Violation could be interpreted as implying that because direct observation was not the basis for the Mechanical Maintenance Supervisor initialing steps G.12.d and G.12.e, then the only acceptable method of documenting completion of the steps would be obtaining the initials of one of the members of the work crew. As discussed above, however, DAP 9-11 also allows for initialing or signing steps for work performed by others based on a direct report, provided that the initials of the person actually initialing the step be preceded by the printed initials of the person making the report; the person making the report does not initial the step.
>
> Step G.15 of DMP 0200-12 was initialed by the Mechanical Maintenance Supervisor based on his own visual verification using an underwater telescope at the completion of the work. He looked for indicator head locations and anything out of the ordinary, particularly whether the spring clip was off the side of the nut. Because he, not the work crew, performed this visual verification, his initialing step G.15 was in accordance with DAP 9-11, although his method of initialing steps G.12.d and G.12.e was in violation of DAP 9-11.

Violation 1.c

DAP 9-11, Procedure Usage and Adherence, Revision 1, was in effect on November 26, 1990. The Mechanical Maintenance Supervisor went to the refuel floor with the senior mechanic from the work crew and used the underwater telescope to visually verify the proper orientation of the flats on the end of the hold-down bolts. Because of his conversations with the senior mechanic and their mutual misunderstanding that the proper orientation showed that the bolts were properly tightened, he believed that he had successfully performed the necessary independent verification.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

The steam separator shroud head assembly hold-down bolts were inspected, tightened, and verified under Work Request D00524. Inspection on March 27, 1991, found that all 48 hold-down bolts were latched, but not tight; the hold-down bolts were tightened as necessary (approximately 2-1/4 to 4-1/2 additional turns of each nut). An independent verification of the hold-down bolt tightness was performed on March 28, 1991. The completion date of the work request was April 5, 1991.

THE CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

A Maintenance Department work control team was established with management and union personnel from all three maintenance disciplines (mechanical, electrical, and instrument). The mission of this team is to improve the effectiveness of maintenance by enhancing the work control program. In addition, a work package improvement team was established that included work analysts from all three maintenance disciplines. The teams have been addressing many of the issues identified during the station investigation into the failure to tighten the steam separator shroud head assembly hold-down bolts. The teams also addressed issues identified by a task force with station and corporate representation that reviewed other maintenance-related events. Many of the corrective steps that follow are being implemented through the efforts of the work control and work package improvement teams.

1. The work package improvement team reviewed policies and procedures of other CECo stations as well as established industry good practices for work package content and assembly. Policies were revised and implemented to incorporate changes to work package control and assembly. In addition to existing station policies and procedures on work package preparation, a guide for work analysts will be implemented by October 31, 1991. Actions to date have been found to be effective in making the work packages easier to use on the job site.

2. The Maintenance Department has strengthened its policy on pre-job briefings through revision of Maintenance Memo No. 300.12, Maintenance Supervisor Pre- and Post-Job Checklists. To facilitate implementation of this policy, the work control team prepared a pocket-size guide for supervisors on conducting pre-, and post-job walkdowns. Guidance on the use of pre-job briefings and visual training aids in personnel training for jobs not on the Training Qualification Matrix will be implemented by October 31, 1991. As a longer-term action on this topic, refueling floor activities will be reviewed to identify jobs which, although infrequent, should be added to the Training Qualification Matrix. This will be implemented by December 31, 1991. Recent observations of first-line supervisors by an experienced consultant during the current refueling outage have confirmed that actions to date have improved pre-, and post-job briefings, and that the briefings have the proper detail for the scope of work to be performed.

3. Maintenance supervisors and selected union personnel were trained on performing INPO-style work observations. CECo personnel performed observations of maintenance work activities, and an experienced consultant was used to coach and perform observations of maintenance first-line supervisors for approximately three months. Maintenance issues arising from these observations were forwarded to maintenance professionalism committees for resolution.

4. The Maintenance Department has strengthened work overview practices. Senior maintenance management and an experienced consultant have been periodically coaching second-line supervisors through job observations. The Master Mechanic, Master Electrician, Master Instrument Mechanic, and second-line supervisors coach first-line supervisors through bi-weekly job observations. First-line supervisors coach maintenance workers daily by observing work in progress. Maintenance Memo 100.10, Conduct of Maintenance Assessments, provides guidance for work overview, including safety considerations, craft skills, ALARA practices, procedural compliance, housekeeping, meeting Out-of-Service requirements, and foreign material exclusion.

5. Expectations for assessments of shift coverage adequacy and call-out of additional maintenance supervisors, when needed, have been added to the annual performance appraisal of the Mechanical Maintenance Scheduler. A maintenance policy to give direction to maintenance first-line supervisors regarding the correct method to request assistance after normal working hours will be implemented by October 31, 1991.

6. As stated in the referenced inspection report, "Review of DMP 0200-12 by the NRC and the licensee indicated that the procedure, although weak, was adequate and should have resulted in shroud head bolt tightness." DMP 0200-12 will be revised prior to installation of the steam separator shroud head assembly during the current refueling outage to include detailed instructions and drawings to guide mechanics on the task of tightening the hold-down bolts.

   The work control team identified the procedure inquiry process as a barrier to maintenance procedure improvements. As a result, the station procedure inquiry process was revised and maintenance personnel were trained on the procedure inquiry process and on temporary procedure usage.

7. Maintenance personnel have been trained on the requirements of DAP 9-11 regarding signing for work performed by others.

8. The corporate maintenance staff has issued Maintenance Guideline 4-1, Maintenance Verification. Based on this corporate guidance, Maintenance Memo 300.13, Maintenance Second Verification, has been issued and addresses policies on independent and other second verifications performed during maintenance activities. Maintenance Department training has been conducted on this memo.

9. The work control team identified lack of ready access to infrequently used policies and procedures as a barrier to further improvement in this area. As a result, a handbook has been developed for first-line maintenance supervisors that references and summarizes selected policies and procedures.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on April 5, 1991, when Work Request D00524 was completed for inspecting, tightening, and verifying the tightness of the steam separator shroud head assembly hold-down bolts.

VIOLATION 2

10 CFR 50, Appendix B, Criterion XVI, states, in part, that measures shall be established to ensure that conditions adverse to qualities such as deficiencies, deviations, and non-conformances, are promptly corrected. In the case of significant conditions adverse to quality, measures shall assure that the cause of the condition is determined and the corrective action taken to preclude repetition.

Contrary to the above, previous corrective actions to a significant condition adverse to quality for failure to report an engineered safety features actuation on December 8, 1990, to the NRC were not adequate to preclude the repetition of licensee personnel not reporting an engineered safety features actuation to the NRC of a similar nature on July 4, 1991.

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

THE REASON FOR THE VIOLATION

In January of 1991, Dresden Station received a Notice of Violation, associated with Inspection 50-237/90027-069(DRP). This Notice identified Dresden Station's failure to provide notification within four hours of the unexpected closure of several Unit 2 Group II primary containment isolation valves. A corrective action taken to prevent future noncompliance was to issue Operations Memorandum No. 21 on February 19, 1991. This Memorandum provided clarifying instructions as to what constitutes an ESF actuation and when notification should be made. A further corrective action was to incorporate these instructions into an appropriate procedure by May 31, 1991. Subsequently it was decided to incorporate the instructions into EPIP 0300-02, Initial Notifications.

On May 20, 1991, the Resident Inpector agreed to a one month extension to complete the revision to EPIP 0300-02. This procedure, along with Supplement EPIP 0300-S8, to which the information was also added, was approved on June 28, 1991. While the procedures were now in place, training had not yet been given on the changes. A meeting of the Operating Engineers, Shift Engineers, and Station Control Room Engineers with the Assistant Superintendant Operations, had been scheduled for August 7, 1991. Discussions and training regarding ENS Phone Notifications and ESF actuations were to be included at this meeting.

On July 4, 1991, prior to the scheduled training, an inadvertent Reactor Water Cleanup isolation occured on Unit 2, due to a momentary short circuit caused by changing a light bulb. The incident was reviewed and discussed by the Shift and off-shift management and it was erroneously concluded that NRC notification was not required.

On July 5, 1991, approximately 17 hours after the event, further review determined that notification was, in fact, required, and notification was made at that time. Until the time of the second event, Dresden believed the concerns and issues were adequately addressed by the issuance of the Memorandum as an interim measure and that the issuance of a permanent procedure would address future concerns. There was realization that further discussion and training would be necessary and this was planned.

The review of the second occurrence indicated lack of clarity of the February memorandum and inadequate understanding of the issue by recipients of the memorandum. Untimely training on the subject was a contributor.

THE CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

1. A revision to Operations Memorandum No. 21, which added clarifying detail to the definition of an ESF actuation, was issued July 30, 1991.

2. On August 7, 1991, the incidents were reviewed and discussed during a meeting attended by the Shift Engineers, Station Control Room Engineers, Operating Engineers, and the Assistant Superintendent Operations. In addition, a thorough review of the requirements for reporting as contained in DAP 02-08, Deviation Reporting, with special emphasis on Table 1, NRC ENS Phone Reporting Requirements, was presented by the Station Technical Staff. Those unable to attend this meeting were presented the material on a one on one basis.

3. A copy of NUREG 1022, Licencee Event Report System, which contains guidance and examples in Appendix C and Supplement 1, for identification of ESF actuations , was placed at the SCRE desk.

4. Subsequent revisions to EPIP 0300-02 and 0300-S8 were made to incorporate the definition of ESF actuation as defined in the Operations Memorandum No. 21 dated July 30, 1991. These were approved on September 6, 1991.

5. A flow chart is being developed for the station, as an aid in ascertaining reportability requirements. This aid is expected to be available for use late in the fourth quarter of 1991 or early in the first quarter of 1992

6. The Operations Department will develop a method that ensures notification of the appropriate personnel is provided when future Operations Policies or Memoranda are implemented. A method to document this notification and review of the material will be provided. To ensure that the Operations Department is aware of the contents of current Operations Policies and Memoranda, a one time review of this material will be required of appropriate Operations personnel by November 30, 1991.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

The ENS notification was made at 0942 hours on July 5, 1991. Full compliance was achieved on August 7, 1991 when review of the events, and training on the revised Memorandum and reporting requirements contained in DAP 02-08 were completed with the Operating Engineers, Shift Engineers, Station Control Room Engineers, and the Assistant Superintendant Operations.

VIOLATION 3

10 CFR 50, Appendix B, Criterion V, as implemented by Commonwealth Edison Company's Quality Assurance Program, requires in part, that activities affecting quality be prescribed by documented instructions, procedures or drawings of a type appropriate to the circumstances and shall include appropriate quantitative or qualitative acceptance criteria.

Contrary to the above, from February 2, 1991, to August 22, 1991, a procedure prescribing an activity affecting quality was inadequate, in that the procedure (Unit Operator's Daily Surveillance Log Appendix A) used to perform instrument checks on torus wide range level instrumentation did not prescribe the appropriate qualitative or quantitative acceptance criteria or provide instructions for determining satisfactory operability of such equipment.

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

THE REASON FOR THE VIOLATION

Torus Wide Range Level Transmitter 3-1641-5B drifted from 14.7 feet to 13.5 feet between January 31, 1991, and February 2, 1991. A similar drop on transmitter 3-1641-5A occurred between April 6, 1991, and May 31, 1991. Inadequate definition of a required instrument check and insufficient guidance provided by the Daily Surveillance Log, Appendix A, contributed to the fact that these failures were not discovered until June 5, 1991. Neither a definition of an instrument check nor acceptance criteria for discrepancies in the Torus Wide Range Level instruments was provided.

THE CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

1. Due to a previous concern with spare parts availability, the Torus Wide Range Level transmitters 3-1641-5A and 3-1641-5B were scheduled to be replaced with Rosemount transmitters during the Unit 3 refueling outage (D3R12) which is currently in progress. The existing transmitters will be inspected to attempt to determine the cause of failure.

2. A memorandum reviewing this event has been provided to all licenced personnel, and the event is being reviewed during the Continuing Licenced Operator Training Cycle 7 which began October 7, 1991.

3. The Unit Operator's Daily Surveillance Log, Appendix A, has been revised to provide acceptance criteria for the Torus Wide Range Level instruments.

4. A general definition and instruction for an instrument check will be developed and included in an Operations procedure by December 31, 1991.

5. Specific acceptance criteria for instrument checks required by the Technical Specifications will be developed and included in an Operations procedure by December 31, 1991

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Calibration was successfully completed and the transmitters were returned to service at 2130 hours on June 7, 1991. Full compliance was achieved on July 2, 1991 when all reportability requirements were met.