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UCW

January 25, 1990

Mr. A. Bert Davis
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Dresden Nuclear Power Station Units 2 and 3
Response to Notice of Violation and Inspection
Report Nos. 50-237/89022 and 50-249/89021
NRC Docket Nos. 50-237 and 50-249

Reference: Letter from W.D. Shafer to Cordell Reed dated
December 26, 1989, transmitting the subject Inspection
Report and Notice of Violation.

Mr. Davis:

Enclosed is the Commonwealth Edison Company (CECo) response to the
subject Notice of Violation (NOV) and Inspection Report (IR) which identified
deficiencies in the control of a fire barrier penetration.

CECo understands the significance of the issues involved. Corrective
actions have been taken or have been initiated to prevent similar
non-compliances from recurring in the future.

Please contact this office should further information be required.

Very truly yours,

T.J. Kovach
Nuclear Licensing Manager

cc: B.L. Siegel - Project Manager, NRR
S.G. DuPont - Senior Resident Inspector, Dresden

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ATTACHMENT
COMMONWEALTH EDISON COMPANY

Response to Notice of Violation 50-237/89022-02 (DRP)

Severity Level IV

VIOLATION

10CFR50.48(a) requires that each operating nuclear power plant have a fire protection plan that satisfies Criterion 3 of Appendix A to 10CFR Part 50. It further requires that the plan shall describe specific features necessary to implement the plan such as administrative controls to limit fire damage to structures, systems or components important to safety so that the capability to safely shutdown the plant is assured.

Section C.1 of the licensee's response to the Guidelines of Appendix A to Branch Technical Position APCS 9.5-1 as accepted in the 1980 Supplemental Safety Evaluation Report indicates that administrative measures are established to ensure that guidelines of the Branch Technical Position are included in design and procurement documents and that deviations therefrom are controlled.

Contrary to the above, a penetration in a three hour fire rated wall located in a safety related area of the 570 foot elevation of the reactor building, as prescribed by Section D.1.j of the Branch Technical Position, was not included in design documents and deviations were not controlled. The fire rated wall was degraded in 1985 by replacement of the original piping with non-approved polyvinyl chloride plastic piping and was further degraded on October 25, 1989 when the piping was completely removed and the penetration left unsealed.

This is a Severity Level IV violation (Supplement I) [No. 237/89022-02 (DRP)].

DISCUSSION

The Station's Technical Specifications include a license amendment that requires adherence to the approved fire protection program. This amendment is implemented through the Dresden Administrative Technical Requirements (DATRs) for fire protection. DATR 3.1.6.1.a requires that a fire watch be posted within one hour whenever a fire rated sealing device is inoperable. Because the investigation into this event established that the fire watch time constraint was exceeded, this event was reported under 10CFR50.73(a)(2)(i)(B) for a condition that is prohibited by the Technical Specifications (LER 89-30/050237).

The Mechanical Maintenance Department was in the process of dismantling and cleaning an area which was formerly a Control Rod Drive (CRD) maintenance area. This work was being performed under Blanket Work Request No. 208 for general plant cleanup. The work that was to be performed was not intended to disrupt or alter plant components or systems. The work described on the

Blanket Work Request form must be approved by a Maintenance Department Supervisor. Prior to commencing on the cleanup work, the Radiation Protection Department surveyed the work area and identified a drain line as a source of high radiation. The drain line was connected to a CRD flush tank and routed through the Unit 2 and Unit 3 Reactor building common wall directly to a floor drain. Because the CRD flush tank was to be removed per the blanket work request, removal of the drain line was improperly added to the blanket work request job scope. In order to reduce personnel exposure, the drain line was hydrolazed and removed before other work in the area resumed.

A substantial portion of the line was hydrolazed and removed between October 24 and October 26, 1989. On October 26, 1989, the final portion of pipe remaining in the Reactor Building common wall was removed. At approximately 1100 hours, the Maintenance Mechanics stuffed the penetration with rags and left the area.

Further investigation into this incident revealed that the drain line penetration was originally installed in 1982 per fire protection requirements for a three hour barrier. However, subsequent to its initial installation, sections of the piping were replaced with Polyvinyl Chloride (PVC) plastic piping including the portion that went through the common wall penetration. Further investigation revealed that the PVC pipe alteration occurred in 1985 when it was insufficiently described in the associated Work Request to be identified as involving a fire barrier penetration. The scope of the Work Request as written was to improve the drainline flow by changing the angularity of the pipe. Consequently, it was not identified as Reliability or Regulatory Related. Since that time, the quality of work instructions has been upgraded and all fire protection related work is classified as Regulatory Related which requires review by the Fire Marshall as well as Quality Control.

The most recently performed Technical Staff Fire Protection Procedure (DFPP) 4175-2, "Operating Fire Stop/Break Surveillance," failed to identify the drain line penetration. The fire barrier location drawings, which were first issued in 1985 following a detailed fire barrier survey, also failed to show the penetration. The DFPP 4175-2 surveillance, which is performed on an 18 month cycle, includes instructions to inspect Appendix R wall and floor fire barriers for evidence of new penetrations or breaches. If an unrated penetration seal or breach in an Appendix R fire barrier is identified, the Operations Department Shift Supervisor is to be notified to implement immediate corrective actions. The penetration would then be documented in the surveillance procedure, and in the fire barrier location drawings. It is believed that performance of the penetration surveillance was hampered due to the continuing maintenance work in the areas on either side of the wall. The surveillance technicians's line of sight was most likely obscured or obstructed in each case while inspecting the third floor Unit 2/3 Reactor Building wall, thus preventing detection of the drain line penetration.

CORRECTIVE ACTIONS TAKEN AND RESULTS ACHIEVED

The immediate corrective actions were notification of Operations Department Shift Supervision, and the initiation of an hourly fire watch pursuant to DATR 3/4.1.6. The penetration was then sealed with a temporary fire seal in accordance with Dresden Fire Protection Procedure (DFPP) 4175-1, "Fire Barrier Integrity and Maintenance." Once the temporary fire seal was inspected and approved, the fire watch was terminated. Contrary to DFPP 4175-1, however, a

permanent seal was not installed within the prescribed seven days. Materials to make the repair were not available in time to complete the repair. The Station Fire Marshall, at his discretion, permitted the seven day administrative limit to expire provided that the temporary barrier was intact, and that the permanent barrier was installed as soon as practicable. Mechanical Maintenance installed the permanent seal under Work Request 88289 on November 17, 1989.

CORRECTIVE ACTIONS TAKEN TO AVOID FURTHER NON-COMPLIANCES

1. DFPP 4175-2, will be revised by the Technical Staff to include this fire seal on the surveillance checklist. Also, to aid in performing the next fire barrier surveillance, a Drawing Change Request (DCR) will be initiated to identify the fire seal location on fire barrier drawings F-88 sheets 1 and 2. This will be completed by February 28, 1990.
2. In order to make rated fire walls in the plant more easily identifiable, the Technical Staff system engineer will prepare a fire barrier reference guide including plan views of all the fire areas for use by all working departments. A revision to Dresden Administrative Procedure (DAP) 3-1, "Fire Protection Program," will also be implemented to control preparation and updating of the reference guide. This will be completed by July 31, 1990.
3. The Fire Marshall will provide the Training Department with additional training material on fire barriers by February 12, 1990.
4. Additional training on fire barriers will be given to the Mechanical Maintenance Department during an upcoming continuing training session. A review of this event shall be included in the material to be presented. Emphasis will be placed on the conservative practice of assuming that all walls, floors, and ceilings in the Reactor and Turbine Buildings are fire barriers unless otherwise specified. This will be completed by May 25, 1990.
5. This event was reviewed in a tailgate meeting for all station personnel on December 21, 1989. The conservative practice described in Item 4 will also be emphasized in additional tailgate meetings for all station work groups, substation construction, and ENC to be completed by February 23, 1990. It will be included in entrance training for contractor personnel by May 25, 1990.
6. This event will be reviewed with the Mechanical Maintenance Supervisor and Crew who were directly involved by January 31, 1990.
7. A statement on the appropriate use of the Blanket Work Request system was added to DAP 15-1 by the Maintenance Staff on January 12, 1990.

8. Precautionary statements will be added to fire barrier surveillance procedures DFPP 4175-2 and DFPP 4175-3 ("Shutdown Fire Stop/Break Surveillance") concerning:

- a) improperly modified penetrations, and
- b) removal of obstructions, as appropriate, in order to assure that the entire barrier is properly inspected.

These procedure changes will be implemented by June 29, 1990, i.e. prior to the next 18 month surveillance.

9. Changes have also been implemented in DFPP 4175-1 to clarify the process by which temporary seals may be approved for longer than seven days. It now provides more detailed installation instructions and inspection frequency requirements to ensure that temporary fire seals provide adequate barrier protection for periods exceeding seven days. This was completed on January 12, 1990.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

As described previously, a fire watch was promptly established upon discovery of the degraded fire barrier. The fire barrier penetration opening was then sealed with an approved temporary configuration in accordance with DFPP 4175-1. Once the temporary fire seal was inspected satisfactorily, the fire watch was terminated. Mechanical Maintenance then installed a permanent seal under Work Request 88289. The permanent seal was then inspected satisfactorily on November 17, 1989, at which time all actions to achieve full compliance were complete.