

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-237/89008(DRS); 50-249/89009(DRS)

Docket Nos. 50-237; 50-249

Licenses No. DPR-19; DPR-25

Licensee: Commonwealth Edison Company  
Post Office Box 767  
Chicago, IL 60690

Facility Name: Dresden Nuclear Power Station, Units 2 and 3

Inspection At: Morris, IL 60450

Inspection Conducted: March 16-28, 1989

Inspector: *J. Holmes*  
J. Holmes

April 13, 1989  
Date

Approved By: *R. N. Gardner*  
R. N. Gardner, Chief  
Plant System Section

4-13-89  
Date

Inspection Summary

Inspection on March 16-28 1989 (Reports No. 50-237/89008(DRS);  
50-249/89009(DRS))

Areas Inspected: Special safety inspection regarding allegations concerning unsealed openings inside conduits in firewalls and the use of polyurethane in fire walls.

Results: No violations were identified. The inspection concluded that the one allegation was substantiated, however, no violations of NRC regulatory requirements were identified.

DETAILS

1. Persons Contacted

Commonwealth Edison (CECo)

- \*E. D. Eenigenburg, Station Manager
- \*K. Deck, Quality Assurance
- \*M. Dillon, Fire Marshal
- \*R. Falbo, Regulatory Assurance
- \*L. Kline, Regulatory Assurance
- \*D. Roberts, Fire Protection Engineer

Sargent and Lundy (S&L)

- \*Brian Barth, Technical Staff Engineer

\*Denotes those attending March 17, 1989 exit meeting.

2. Allegation RIII-88-A-180

On December 16, 1989, Region III received an allegation that there were unsealed openings inside conduits in the firewalls at the Dresden Nuclear Power Station. In addition, the allegor indicated that pyrocrete masked the presence of polyurethane in the firewalls. Each of the individual concerns are addressed below:

Concern 1: The firewalls at Dresden contain unsealed openings inside conduit penetrations. This allegation was general for all firewalls and no specific areas were received from the allegor.

NRC Review: The requirement for sealing conduits which penetrate firewalls is contained in the licensee's updated Fire Hazards Analysis, Section 5.0, entitled "Guidelines of Appendix A to APCS 9.5-1". This document indicates that conduit and piping should be sealed or closed to provide a fire resistance rating at least equal to that of the barrier. In discussions with the cognizant NRR reviewer on March 28, 1989, the inspector determined that the document only required the licensee to install seals between firewalls and conduits which penetrate the firewall.

The inspector discussed this matter with licensee personnel including the Fire Marshal. The licensee was aware of the conduit seal requirements and indicated that seals had been installed between firewalls and all conduits at the points where the conduits enter or exit the firewalls.

During this inspection, the inspector reviewed a sample of the licensee's completed surveillances of conduits which

penetrate firewalls. These surveillances did not identify any instances of improper conduit seal installations and were determined to be acceptable.

The inspector also selected several representative firewalls for walkdown to determine whether the licensee was complying with the fire seal requirements. During the walkdown, the inspector determined that all required fire seals were installed.

Conclusion: This allegation concerned a perceived need to install seals inside conduit openings for all conduits which penetrate firewalls at the Dresden Station. However, since the licensee was not required to seal these conduit openings and since the inspector determined that the licensee was installing all required fire seals, this allegation was not substantiated.

Concern 2: Pyrocrete covers polyurethane in firewalls.

NRC Review: The licensee's Fire Protection Program includes the Guidelines of Appendix A to APCSB 9.5-1. This document requires the licensee to provide 3 hour rated floors, walls, and ceilings enclosing the separate fire areas identified in the Safe Shutdown Analysis. Deviations in the fire barriers were justified in Exemption Requests and have been reviewed and accepted as identified in the NRC Safety Evaluation Report dated January 5, 1989. Based on review of the pertinent documents, the inspector determined that the licensee was required to remove the polyurethane from the fire walls or demonstrate that the polyurethane in the firewall did not affect the 3 hour rating of the fire barrier.

During this inspection, the licensee indicated that polyurethane was commonly installed in firewalls in the past to prevent air leaks. The plant had previously realized the potential hazard of utilizing polyurethane in firewalls and had hired outside contractors to remove the polyurethane from the firewalls. The licensee indicated to the inspector that the majority of the polyurethane had been removed. However, the licensee indicated that polyurethane covered by pyrocrete remained in a firewall between the turbine building and Unit 2 on elevation 545'-6" at coordinates H and 43 through 44. The licensee had elected to cover the polyurethane with pyrocrete due to high radiation exposure and the possibility of breaching secondary containment.

The licensee also indicated to the inspector that polyurethane without a pyrocrete covering was located

around a 12 inch pipe penetration located between the Units 2 and 3 reactor building on elevation 545'-6" at coordinates 44 and H through J. The licensee indicated that due to radiation concerns the polyurethane had not yet been removed.

For both instances of installed polyurethane, the licensee was in the process of assessing the need to remove the installed polyurethane. The licensee indicated that the assessment will be completed by May 1, 1989.

The licensee also indicated to the inspector that an outside fire protection engineering firm has conducted two fire barrier surveillances which did not identify other instances of installed polyurethane.

Conclusion:

This allegation was substantiated in that pyrocrete does cover polyurethane installed in one plant location and polyurethane without a pyrocrete covering exists in another location. However, prior to the allegation the licensee removed and replaced the majority of the polyurethane with an appropriate fire rated barrier or seal. Where the licensee was unable to remove the polyurethane due to high radiation and concerns regarding the breaching of secondary containment, the licensee was performing the required assessment of the effect of the polyurethane on the 3 hour rating of the fire barrier. Therefore, no violations or deviations of NRC requirements were identified.

3. Exit Interview

The inspector met with licensee representatives on March 28, 1989. The inspector discussed the likely content of this report and the licensee did not indicate that any information discussed during the inspection could be considered proprietary in nature.