



Commonwealth Edison
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May 31, 1983

Director of Nuclear Reactor Regulation
Attention: Mr. A. Schwencer, Chief
Licensing Branch No. 2
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: LaSalle County Station Units 1 and 2
Fire Protection - Response to NRC
Question 010.74
NRC Docket Nos. 50-373 and 50-374

Reference (a): A. Schwencer letter to D. L. Farrar
dated April 28, 1983, "Request for
Additional Information on Fire Protection."

Dear Sir:

The purpose of this letter is to provide you with the enclosed Commonwealth Edison Company response to Reference (a). We plan to install additional detectors as described in the enclosure prior to startup following the first refueling outage on Unit 1.

To the best of my knowledge and belief the statements contained herein and in the enclosure are true and correct. In some respects these statements are not based on my personal knowledge but upon information furnished by other Commonwealth Edison and contractor employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

Enclosed please find one (1) signed original and forty (40) copies of this letter and the enclosure. The enclosure will be incorporated in the next available amendment to the LSCS FSAR.

If there are any further questions regarding this matter, please contact this office.

Very truly yours,

C. W. Schroeder 5/31/83

C. W. Schroeder
Nuclear Licensing Administrator

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cc: NRC Resident Inspector - LSCS

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In Amendment 62, it is not clear whether the fire protection for safe shutdown in Unit 2 complies with our guidelines in Section C.5.b of BTP CMEB 9.5-1 in the following fire areas:

1. Fire Zone 3E - Reactor Building, elev. 761'
2. Fire Zone 3F - Reactor Building, elev. 740'
3. Fire Zone 3G - Reactor Building, elev. 710'6"
4. Fire Zone 3H1 - Reactor Building, elev. 894'6"
5. Fire Zone 3I1 - Reactor Building, elev. 573'4"
General Floor Area
6. Fire Zone 3J - Primary Containment

Identify and justify any deviations from our guidelines. Confirm that such deviations have not been made in the similar fire areas of Unit 1.

RESPONSE

Unit 1 was found acceptable to the NRC staff based on agreements documented in the La Salle SER (NUREG-0519), Subsection 9.5.4 and Region III Report 50-373/82-19 (DETP) "Inspection of La Salle County Station, March 17-19, 24-26, and April 8, 1982, Open Item (50-373/82-13-01B) "Redundant Division Separation."

In the SER, the staff accepted 50 feet separation in lieu of automatic suppression and in the Region III Report, the staff accepted wrapping of cable at distances less than 50 feet in lieu of automatic suppression. No redundant safe shutdown cables in the Reactor Building are separated by less than 20 feet.

The Unit 1 Reactor Building detection systems will be extended in the same manner as committed to for Unit 2. We believe that these measures provide a level of protection equivalent to the Positions of BTP CMEB 9.5-1 for Unit 1.

The Unit 2 reactor building fire zones 3E, 3F, 3G, 3H1, and 3I1 have been reviewed for conformance with the guidelines of Section C.5.b of BTP CMEB 9.5-1. With the extension of the detector zone coverages indicated in the discussion below, those zones will comply except that automatic suppression is not provided. The following discussion shows that for each indicated fire zone, a level of protection equivalent to the technical positions of BTP CMEB 9.5-1, Position C.5.b is provided.

Compliance with BTP CMEB 9.5-1 for Fire Zone 3J (Primary Containment) is achieved by inerting. See Position C.7.a(1)(b).

Unit 2 Reactor Building Analysis

The analysis of each fire zone addresses specifically the areas on the east and west sides of each reactor where redundant safe shutdown equipment and cables are not separated by the primary containment. All active redundant safe shutdown components separated by less than 50 feet are identified.

In each zone, only IEEE 383 qualified cables are used in solid bottom steel cable trays and conduits. Each zone is a large, open, uncongested area with low fire loading in the intervening area. Manual fire fighting equipment is readily available in each zone as documented in FSAR Appendix H, Section H.3.

Design fire load conservatively includes a transient fire load consisting of a 55 gallon drum of lubricating oil.

I. Fire Zone 3E (761')

The only combustibles in this fire zone are cable insulation, ventilation gaskets, and seals and the assumed transient fire load resulting in a low fire loading of 3.79×10^4 BTU/f².

A. West Side

No redundant systems are present. ADS/SRV and Remote Shutdown Panel Instruments (Div. 1) cables are separated by greater than 50 feet from Div. 2 control room HVAC and AEER HVAC cable. The cables are further separated by an intervening non-fire rated wall along column/row 18.8. This area is covered by automatic ionization detectors. Manual hose stations and portable extinguishers are located through out the area.

B. East Side

Div. 1 RHR, Switchgear Ventilation (VX), Auxiliary Power Systems (AP) Cables and MCC 235X-1 are separated by approximately 40 feet from Div. 2 ADS/SRV, and Switchgear Ventilation (VX) and Auxiliary Power System (AP) cable. The only redundant safe shutdown components served by cables in close proximity are Battery Room Exhaust Fans 2VX02C (Div. 1) and 2VX03C (Div. 1) and 2VX05C (Div. 2). The Division 1 AP cable services MCC 235X-1, which feeds 2VX02C and 2VX03C. The Div. 2 cable services MCC 236X-1 which feeds 2VX05C. No other power operated safe shutdown components utilized in this analysis are on these MCC's. All other safe shutdown cable are separated by greater than 50 feet.

The Battery Room Exhaust fans are necessary only to control H₂ in the battery rooms. The loss of these fans is alarmed in the control room. Commonwealth Edison shall provide sufficient administrative controls to provide adequate temporary ventilation in case of a loss of these fans.

The area is covered by automatic detection. Manual hose stations, and portable fire extinguishers are located throughout the area.

II. Fire Zone 3F Elevation 740'

The only combustibles in this fire area are cable insulation, ventilation seals, lube oil, and the assumed transient fire load resulting in a low fire loading of 5.13×10^4 BTU/ft².

A. West Side

The cables on the west side are separated by the walls which enclosed the steam pipe tunnel. These walls are 3-hour rated.

B. East Side

Division 1 Switchgear ventilation (VX) cable and Div. 1 auxiliary power system (AP) cable are separated from Division 2 SRV/ADS, RHR and Division 2 switchgear ventilation (VX) cable by a minimum of approximately 40 feet. The only redundant components in close proximity are cable serving the Battery Room Exhaust Fans 2VX02C (Div. 1) and 2VX03C (Div. 1) and 2VX05C (Div. 2). The AP cable services the MCC 235X-1 which feeds 2VX02C and 2VX03C. No other power operated safe shutdown components utilized in this analysis are on that MCC. All other safe shutdown cables are separated by at least 90 feet.

The effect of the loss of the battery room exhaust fans is described in I.B above.

Automatic detectors are provided in the northeast quadrant. Automatic detectors will provide the SE quadrant by extending the existing coverage.

Manual hose stations and portable fire extinguishers are located through out the area.

III. Fire Zone 3G Elev. 710'6"

The only combustibles in this fire area are cable insulation, ventilation gaskets and seals, and the assumed transient fire load resulting in a 6.47×10^4 BTU/ft² fire loading.

A. West Side

The Reactor Building penetrations are on this elevation and Elevation 740 (Fire Zone 3F). Division 1 cable is separated by a greater than 50 feet from Div. 2 cable.

Automatic detector coverages is provided. This coverage will be extended to cover the cable tray containing cable 2AP331 (Div. 2).

Manual hose stations and portable fire extinguishers are provided throughout the area.

B. East Side

Div. 1 safe shutdown cable is separated from Division 2 safe shutdown cable by greater than 50 feet except for one cable 2AP317 (Div. 1) which is approximately 40 feet from Div. 2. Cable 2AP317 feeds MCC 235X-1 which in turn feeds battery room exhaust fans, the loss of which is discussed in I.B above.

The detector coverage will be extended to cover the northeast and southeast quadrant.

Manual hose stations and portable fire extinguishers are available throughout the area.

IV. Fire Zone 3H1 (Elev. 694'6")

The only combustibles in this fire area are cable insulation, ventilation gaskets and seals and the assumed transient fire load resulting in a 1.36×10^4 BTU/f² fire load.

A. West Side

The only safe shutdown cables and equipment in this area are related to the Pump room cubicle coolers for RHR, RCIC/LPCS and HPCS. Redundant safe shutdown cables and components are separated by greater than 50 feet.

Automatic detector coverage is provided. Manual hose stations and portable fire extinguishers are located throughout the area.

B. East Side

Division 1 safe shutdown related cables and components are separated from Division 2 safe shutdown related cables and components by a greater than 50 feet.

Automatic detector coverage is provided. Manual hose stations and portable fire extinguishers are located throughout the area.

V. Fire Zone 3I1 (Elev. 673'4")

The only combustibles in this fire zone are cable insulation and the assumed transient fire load resulting in a fire loading of 1.12×10^4 BTU/f².

A. West Side

Division 1 safe shutdown cable and components are separated from Division 2 safe shutdown cable and components by greater than 50 feet.

Automatic detector coverage is provided throughout the area. Manual hose stations and portable fire extinguishers are provided throughout the area.

B. East Side

Motor operated valve 2E12-F068A (Div. 1) RHR and its associated cable are located 20 feet from a cable riser containing Division 2 RHR and SRV/ADS cable. No other Division 1 safe shutdown cable are in this part of the reactor building. All other active safe shutdown components are separated by greater than 50 feet.

2E12-F068A is the RHR Heat Exchanger service water discharge valve. The RHR system is not needed for suppression pool cooling until 3 hours and 40 minutes after suppression pool heat up begins if the reactor is maintained at operating pressure by the SRV's. If there is no loss of offsite power, this valve is not needed until the unit is brought to cold shutdown.

During this time, either offsite power can be restored (if simultaneously with the fire) in which reactor cooling can be provided using non-safety related equipment in the turbine building, repairs can be made to components in either redundant RHR train, or the valve operated manually.

Automatic detectors are provided. Manual hose stations and portable extinguishers are located throughout the area.