Commonwealth Edison
1400 Opus Place
Downers Grove, Illinois 60515

May 16, 1990

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

ATTN: Document Control Desk

Subject: Byron Station Units 1 and 2
Braidwood Station Units 1 and 2
Fire Protection Report
NRC Docket Nos. 50-454/455 and 50-456/457

Reference: (a) December 14, 1983 T.R. Tramm letter to H.R. Denton.

Dear Dr. Murley:

Reference (a) provided a revised response to Open Item #4 to the July, 1983 NRC Fire Protection Audit, performed at Byron Station for Unit 1. Reference (a) provided, in part, the fire loading for Fire Zones 2.1-1 and 2.1-2 of 42,300 BTU/ft^2 and 43,900 BTU/ft^2, respectively. As a result of a recent Commonwealth Edison review, the value of 43,900 BTU/ft^2 for Zone 2.1-2 was identified as not having been incorporated into the Byron/Braidwood Fire Protection Report (FPR).

As a result, the purpose of this letter is to provide an advanced notification of a change that will be made to FPR pages 2.2-18 and 2.3-14 that will be provided to the NRC staff in the annual FPR update in December, 1990, consistent with Edison's previous committment. Marked-up copies of pages 2.2-18 and 2.3-14 are provided in Attachment A.

The fire loading has remained and is below the 43,900 BTU/ft^2 value in Zone 2.1-2 at both the Byron and Braidwood Stations.

Please direct any questions regarding this submittal to this office.

Very truly yours,

S. C. Hunsader

S.C. Hunsader
Nuclear Licensing Administrator

Attachments

cc: P. Shemanski - Project Manager, NRR
S. Sands - Project Manager, NRR
W. Shafer - RIII
BY Resident Inspector
BW Resident Inspector

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ATTACHMENT A

BYRON/BRAIDWOOD

FIRE PROTECTION REPORT

PAGES: 2.2-18
2.3-14

TABLE 2.2-3 (Cont'd)

FIRE AREA/ZONE NUMBER AND NAME	FIRE PROTECTION	FIRE DETECTION	COMBUSTIBLE	FIRE LOAD DESIGN FIRE (Btu/ft^2)
2.1-2 Record storage and toilet room	Note 1	Ionization detection (Unit 2 detection Zone 70)	2,000 lb of paper 2.88 lb of gasketing 71.8 lb of insulation	~~80,900~~ 43,900
3.1-1 Unit 1 cable tunnel	Automatic total flooding carbon dioxide system (Unit 1 suppression Zone 47)	Ionization detection (Unit 1 detection Zone 64) Fenwal thermal (Unit 1 detection Zone 65) Note 3	6000 lb cable insulation 46.8 lb gasketing	45,200
3.1-2 Unit 2 cable tunnel	Automatic total flooding carbon dioxide system (Unit 2 suppression Zone 47)	Ionization detection (Unit 2 detection Zone 64) Fenwal thermal (Unit 2 detection Zone 65) Note 3	3400 lb cable insulation 45 lb gasketing	25,700
3.2-0 Auxiliary building El. 439'-0"	Note 1	Ionization detection (Unit 2 detection Zone 61)	1200 lb cable insulation 62 lb gasketing	9,500
3.2A-1 Unit 1 Nonsegregated bus duct area	Automatic total flooding carbon dioxide system (Unit 1 suppression Zone 43)	Ionization detection (Unit 1 detection Zone 49) Fenwal thermal (Unit 1 detection Zone 50) Note 3	37 lb gasketing 19,000 lb cable insulation	33,100
3.2A-2 Unit 2 Nonsegregated bus duct area	Automatic total flooding carbon dioxide system (Unit 2 suppression Zone 43)	Ionization detection (Unit 2 detection Zone 49) Fenwal thermal (Unit 2 detection Zone 50) Note 3	37 lb gasketing 15,000 lb cable insulation	26,700
3.2B-1 Lower cable spreading area, Zone B-1	Automatic total flooding carbon dioxide system (Unit 1 suppression Zone 44)	Ionization detection (Unit 1 detection Zone 51) Fenwal thermal (Unit 1 detection Zone 52) Note 3	49 lb gaskets 820 lb ducting insulation 27,000 lb cable insulation	44,000
3.2B-2 Lower cable spreading area, Zone B-2	Automatic total flooding carbon dioxide system (Unit 2 suppression Zone 44)	Ionization detection (Unit 2 detection Zone 51) Fenwal thermal (Unit 2 detection Zone 52) Note 3	14.4 lb flex connections 26,000 lb cable insulation	42,200
3.2C-1 Lower cable spreading area, Zone C-1	Automatic total flooding carbon dioxide system (Unit 1 suppression Zone 45)	Ionization detection (Unit 1 detection Zone 53) Fenwal thermal (Unit 1 detection Zone 53) Note 3	23,000 lb cable insulation	69,800
3.2C-2 Lower cable spreading area, Zone C-2	Automatic total flooding carbon dioxide system (Unit 2 suppression Zone 45)	Ionization detection (Unit 2 detection Zone 53) Fenwal thermal (Unit 2 detection Zone 54) Note 3	13,000 lb cable insulation	39,300
3.2D-1 Lower cable spreading room, Zone D-1	Automatic total flooding carbon dioxide system (Unit 1 suppression Zone 46)	Ionization detection (Unit 1 detection Zone 55) Fenwal thermal (Unit 1 detection Zone 56) Note 3	3100 lb cable insulation	51,400

Fire Barrier Description

The floor slab at elevation 451 feet 0 inch, which is the ceiling of the Lower Cable Spreading Room, is a 9-inch clear cover of structural reinforced concrete over 3-inch fluted steel decking formwork. It is suported by structural steel beams protected with a fire resistant covering and carries a 3-hour fire rating.

All walls of the storage area are 12-inch thick hollow concrete masonry units and carry a 3-hour fire rating and they extend up to within 1 inch of the ceiling above. This resulting space is packed with a 1-inch thick blanket of foil-backed Thermafiber insulation. A 3-hour rated Label "A" fire door leads to the Control Room.

The ceiling slab at elevation 463 feet 5 inches, which is the floor of the Upper Cable Spreading Room, is a 2 1/2-inch clear cover of reinforced concrete over 3 hour protected 1 1/2-inch fluted steel decking. It is supported by protected structural steel beams and carries a 3 hour fire rating. An acoustical tile suspended ceiling system is provided below the ceiling slab in the storage area.

Safety-Related Equipment

For details, see Subsection 2.3.2.2.

Protection Criteria

For details, see Subsection 2.3.2.2.

Combustible Materials

This room will be used to store chart paper for control room recorders. It is estimated that 2,000 pounds of paper will be stored here. A transient load is not considered.

The ductwork in this zone contains 2.88 pounds of gasketing and 71.8 pounds of insulation.

The storage area floor is covered with 203 ft^2 of 1/8-inch thick vinyl-asbestos tile. In addition, 59 lineal feet of 4-inch high vinyl cove base is provided at the intersection of the walls and the floor.

Fire Loading

With a floor area of 203 ft^2 the fire loading is ~~1,900~~ 43,900 Btu/ft^2.

Extinguishing and Detecting Capabilities

For details, see Subsection 2.3.2.2.

Design-Basis Fire

For details, see Subsection 2.3.2.2.