

*PLC* *Professional Loss Control, Inc.*

STRUCTURAL STEEL ANALYSIS

for

LIMERICK GENERATING STATION

Unit 1 Reactor Building El. 177'

Corridor Room 118

Fire Area 39

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## LIMERICK GENERATING STATION

### 1. AREA DESCRIPTION

The area under consideration is the Corridor and Passageway, Room 118, on the 177' elevation of the Unit 1 Reactor Building (Fire Area 39). The bounding walls of the area are of reinforced concrete construction with an average thickness of 2.5 ft. The total surface area for heat transfer is 4976 ft<sup>2</sup> (see Attachment A for sketch and surface area calculations).

### 2. COMBUSTIBLE LOADING

All cabling in this area is routed in conduit, there are no cable trays. There are no combustible liquids in this area.

### 3. VENTILATION PARAMETERS

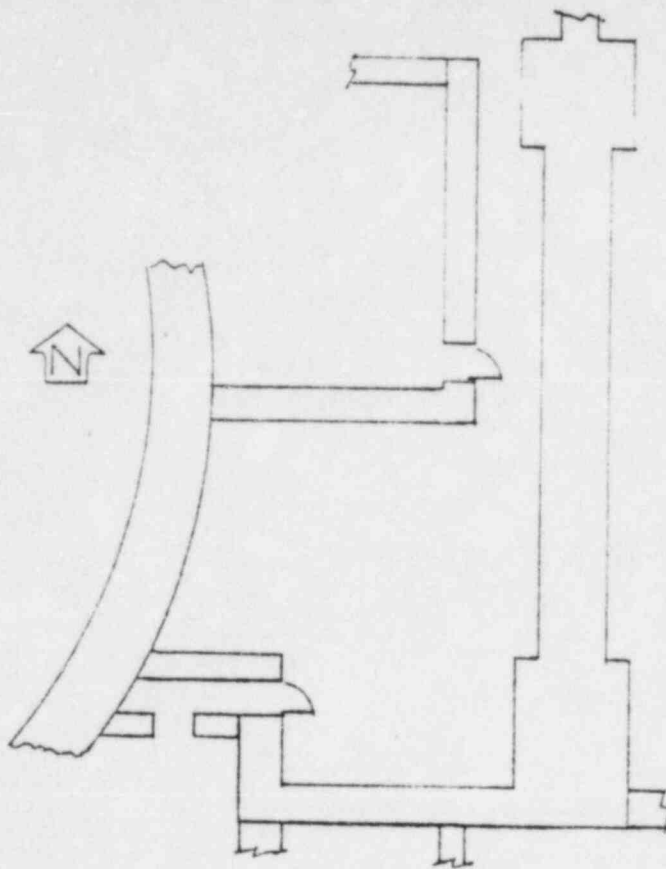
This room is open to the Sump Room, Room 115. There are also two doors, each measuring 3' wide by 5'10" high, located in the west wall of the area.

### 4. CASES EXAMINED

With no exposed combustible cabling and no combustible liquids in the area, there is no fuel in the area to support a fire.

### 5. RESULTS

The structural steel in the area will not fail due to a fire as there are no fixed combustibles in the area to support a fire.



Unit 1 Reactor Building El. 177'  
Corridor & Passageway Room 118

Surface Area Calculation

Area 1 (Corridor)

<u>Walls</u>			
East wall	(29' x 23')	667 ft <sup>2</sup>	
West wall	(29' x 23')	667 ft <sup>2</sup>	
		<hr/>	1334 ft <sup>2</sup>
<u>Ceiling</u>	(29' x 6')		174 ft <sup>2</sup>

Area 2 (Room 118)

<u>Walls</u>			
North wall	(22' x 23')	506 ft <sup>2</sup>	
East wall	(31' x 23')	713 ft <sup>2</sup>	
South wall	(32' x 23')	736 ft <sup>2</sup>	
West wall	(31' x 23')	713 ft <sup>2</sup>	
		<hr/>	2668 ft <sup>2</sup>
<u>Ceiling</u>			800 ft <sup>2</sup>
			<hr/>

Total Surface Area for Heat Transfer 4976 ft<sup>2</sup>