

PLC Professional Loss Control, Inc.

STRUCTURAL STEEL ANALYSIS

for

LIMERICK GENERATING STATION

Unit 1 Reactor Building El. 352'

Refueling Floor

Fire Area 78A

December 20, 1983

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LIMERICK GENERATING STATION

1. AREA DESCRIPTION

The area under consideration is the Refueling Floor on the 352' elevation of the Unit 1 Reactor Building (Fire Area 78A). 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 28,220 ft² (see Attachment A for sketch and calculation of surface areas).

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

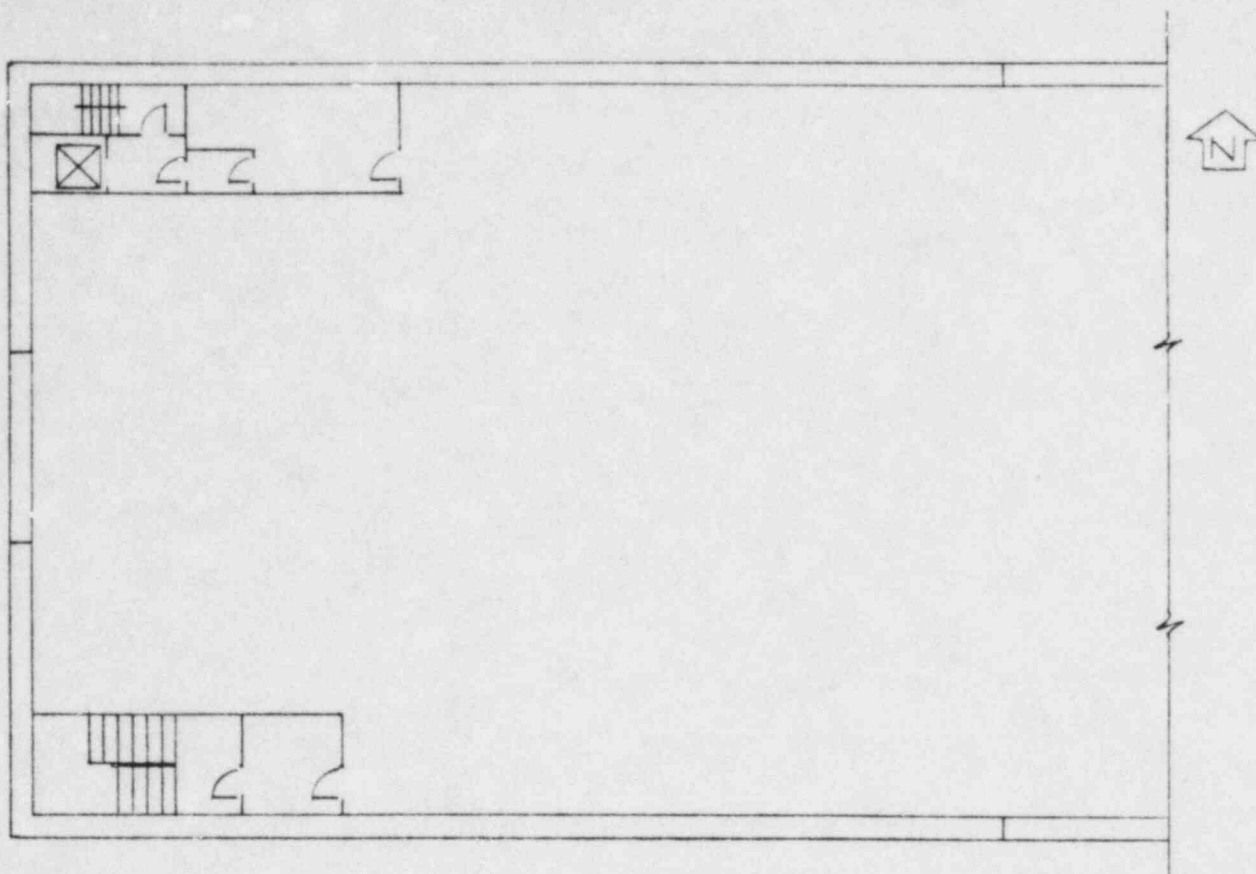
This area is open to the remainder of the 352' elevation of the Reactor Building.

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 this 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. 352'
Refueling Floor

Surface Area Calculation

Walls

North wall	(160' x 30')	4800 ft ²
South wall	(160' x 30')	4800 ft ²
West wall	(98' x 30')	2940 ft ²
		<u>12,540 ft²</u>

<u>Ceiling</u>	(160' x 98')	<u>15,680 ft²</u>
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Total Surface Area for Heat Transfer		28,220 ft ²
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