ENGINEERING ASSESSMENT
BATTERY ROOM CORRIDOR

James A. FitzPatrick Nuclear Power Plant
New York Power Authority

Evaluation No: _____

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ENGINEERING ASSESSMENT
BATTERY ROOM CORRIDOR
FULL AREA SUPPRESSION CAPABILITY

1.0 PURPOSE

The purpose of this assessment is to address the adequacy of existing fire protection capabilities in Fire Zone BR-5 when analyzed against the criteria of Appendix R Section III.G.3.

2.0 REFERENCES

1. James A. FitzPatrick Nuclear Power Plant Fire Hazards Analysis revised October 1985.

2. James A. FitzPatrick Nuclear Power Plant Evaluation of the Compliance to Appendix R section III,G. October 1985.

3.0 BACKGROUND

3.1 Applicable Regulatory Criteria

Appendix R Section III.G.3 requires that detection and fixed suppression be provided in areas, rooms, or zones for which alternate shutdown capability is provided. Redundant cables for safe shutdown systems are located in the Battery Room Corridor Fire Zone BR-5. Fire Zone BR-5 has been redefined as Fire Area XVI and is the only zone within the area. Alternative shutdown capability is required for this area due to loss of Division "A" and "B" cabling due to a fire in the area. Modifications previously implemented in Fire Zone BR-4 to ensure alternative shutdown for a fire in the Main Control Room also ensure alternative shutdown for a fire in Fire Zone BR-5 via the provision for Division "B" dc power to the remote shutdown panels via distribution panel 71DC-B4 (Fire Zone EG-6). Automatic detection is provided for the Battery Room Corridor; however, suppression system capability is not.

4.0 ANALYSIS

4.1 Combustible Material

The Battery Room Corridor has a combustible loading consisting of cable insulation, with an equivalent fire severity of under one hour. The Battery Room Corridor provides access only to the Battery and Battery Charger Rooms; it is not a normal access route to other plant locations. The introduction of transient combustible materials into the corridor, other than that required for work in the corridor and adjacent Battery and Battery Charger Rooms is considered to be highly unlikely. Therefore, the cable insulation is the primary source of combustible material in this area.

4.2 Detection and Suppression

Automatic detection consisting of ceiling mounted ionization detectors is provided in the corridor. Potential fires in the Battery Room Corridor would involve primarily cable insulation located in trays near ceiling level or in vertical risers along the south wall. Fires of this nature would be detected in the incipient stage, with alarm notification in the continuously manned Main Control Room. Alarm notification would result in prompt dispatch of the fire brigade for rapid initiation of manual fire fighting activities.

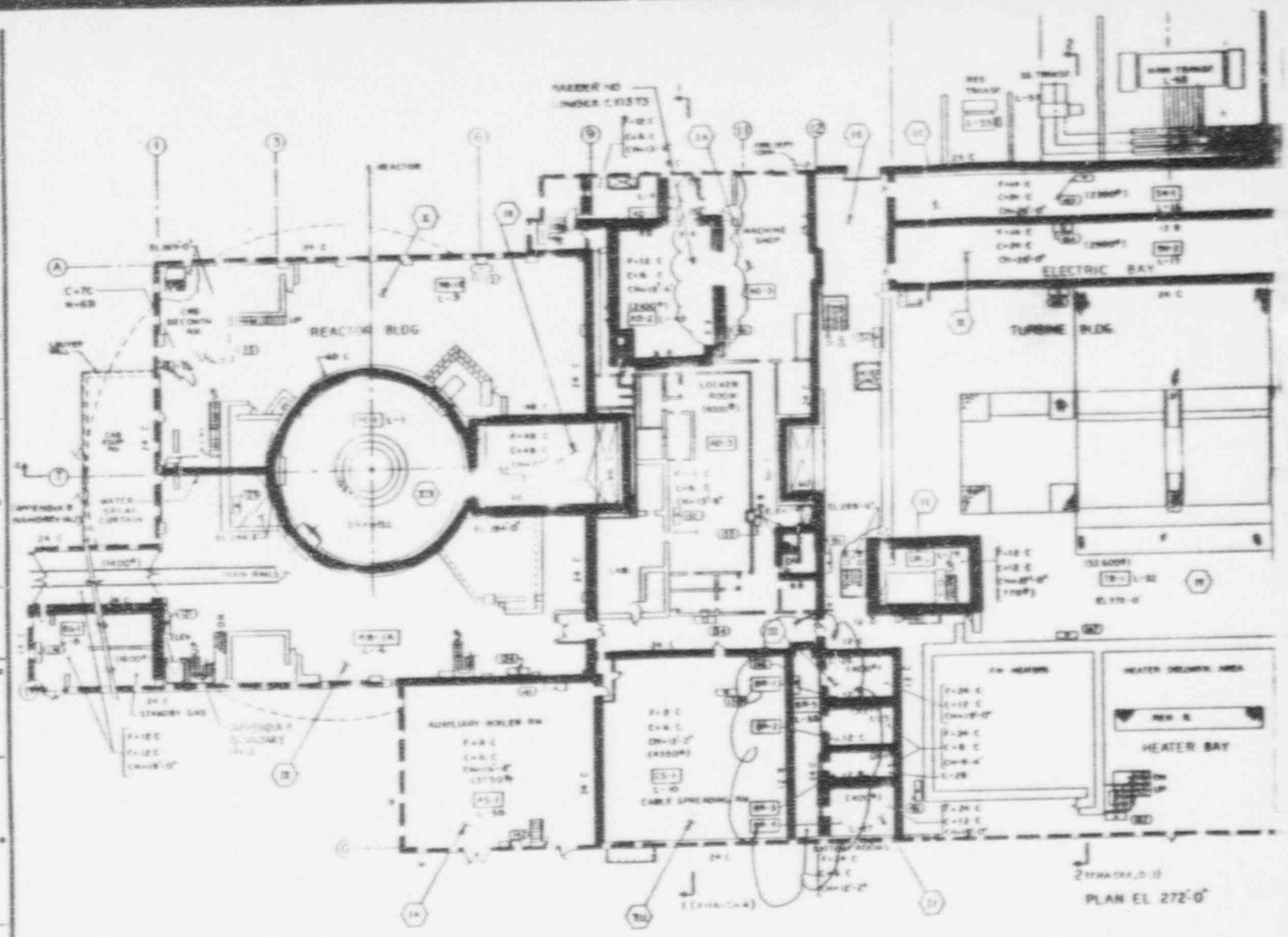
4.3 Other Features

Portable extinguishers and a manual hose station are provided in the Battery Room Corridor. Extinguishers and hose stations are also available for fire brigade use in adjacent locations. Reasonable assurance is provided that manual fire fighting activities would result in prompt extinguishment of postulated fires.

5.0 CONCLUSION

Based on the results of the preceding assessment, the provision of suppression in the Battery Room Corridor would not significantly improve the existing fire protection features. The basis for this conclusion are summarized as follows:

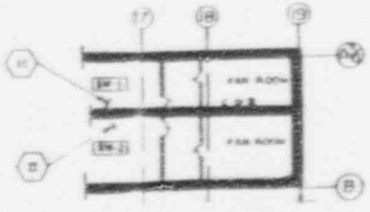
- Alternative shutdown capability is provided outside of the area
- Automatic detection adequate for the hazards is provided at ceiling level
- Postulated cable insulation fire scenarios would be detected in the incipient stage, alarmed in the Main Control Room and result in prompt dispatch of the fire brigade.
- Manual fire fighting activities using extinguishers and hose stations available in the zone and in adjacent locations would result in prompt extinguishment of postulated fires.



ATTACHMENT 1

FIRE ZONE BR-5
FIRE AREA XVI
BATTERY ROOM CORRIDOR

UNCONTROLL



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