

POWER AUTHORITY OF THE STATE OF NEW YORK

10 COLUMBUS CIRCLE New York, N. Y. 10019

(212) 397-6200

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November 14, 1979  
JPN-79-72

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& GENERAL COUNSEL

Director Of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Attention: Mr. Thomas A. Ippolito  
Operating Reactors Branch No. 3  
Division of Operating Reactors

Subject: James A. FitzPatrick Nuclear Power Plant  
Docket No. 50-333  
Fire Protection System

Dear Sir:

We are enclosing additional information in response to various NRC staff concerns on the JAF Fire Hazards Analysis. These responses are consistent with your request in the JAF Safety Evaluation Report supporting Amendment No. 47 to Facility Operating License No. DPR-59 dated August 1, 1979.

The enclosure relates to the following:

1. SER Paragraph 3.1.1 Interior Fire Hose Stations (PF-9, PF-20)
2. SER Paragraph 3.1.8 Ventilation System-Safety Related Pump Rooms (PF-24)
3. SER Paragraph 3.1.19 Exposed Structural Steel (PF-22)
4. SER Paragraph 3.2.2 Pipe Penetrations (PF-33)
5. SER Paragraph 3.3.3 Fire Water Piping Systems (PF-36)
6. SER Paragraph 3.2.5 Fire Door Supervision (PF-8)

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We are also attaching updated Table 3.1 and 3.2 with appropriate references to various Authority letters for the convenience of staff review.

If you need any further assistance please do not hesitate to call us.

Very truly yours,

*George M. Wilbreiding*  
*for* Paul J. Early  
Assistant Chief Engineer-Projects

1367 253

IMPLEMENTATION DATES FOR  
LICENSEE PROPOSED MODIFICATIONS  
AND STAFF REQUIREMENTS

<u>ITEM</u>	<u>DATE</u>	<u>REFERENCE LETTER</u>	<u>PREVIOUSLY LISTED AS ITEM NO.</u>	<u>SEE NOTE</u>
3.1.1 Interior Fire Hose Stations (PF-9,20)	October 1980	JPN-79-44 (7/27/79)		C
3.1.2 Valve Supervision	Implemented	JPN-79-12 (3/7/79)		C
3.1.3 Manual Fire Fighting Equipment (PF-28)	Implemented	JPN-79-12 (3/7/79)		C
3.1.4 Self-Contained Breathing Apparatus	December 1979	JPN-79-40 (7/2/79)		C
3.1.5 Administrative Controls	January 1980	JPN-79-40 (7/2/79)		C
3.1.6 Emergency Lighting (PF-25)	January 1980	JPN-79-40 (7/2/79)		C
3.1.7 Fire Doors (PF-35)	Implemented	JPN-79-44 (7/27/79) JPN-79-55 (9/5/79)		C
3.1.8 Ventilation System-Safety Related Pump Rooms* (PF-24)	Spring 1980	JPN-79-12 (3/7/79) **		C
3.1.9 Alternate Shutdown Capability- Relay Room*	October 1980	JPN-79-12 (3/7/79)		I
3.1.10 Exterior Hydrant Hose Houses (PF-12)	Implemented	JPN-79-55 (9/5/79)		C
3.1.11 Post-Indicator Valve Wrenches (PF-14)	Implemented	JPN-79-40 (7/2/79)		C
3.1.12 Post-Indicator Valve Labeling (PF-31)	Implemented	JPN-79-12 (3/7/79)		C
3.1.13 Fire Bridge Leader Training (PF-30)	Implemented	JPN-79-12 (3/7/79)		C
3.1.14 Control of Combustibles (PF-29)	December 1979	JPN-79-40 (7/2/79)		C
3.1.15 Alternate Shutdown Capability- Cable Spreading Room*	October 1980	JPN-79-12 (3/7/79)	3.3.17	I
3.1.16 Fire Alarm Annunciation in the Control Room	Implemented	JPN-79-12 (3/7/79)	3.3.3	C
3.1.17 Total Flooding CO <sub>2</sub> Suppression System-Ventilation Systems Interlocks* (PF-18)	Spring 1980	JPN-79-12 (3/7/79)	3.3.7	I
3.1.18 Fire Detection and Signaling Systems* (PF-19)	October 1980	JPN-79-55 (9/5/79)	3.3.8	C
3.1.19 Exposed Structural Steel* (PF-22)	October 1980	JPN-79-12 (3/7/79) **	3.3.9	C
3.1.20 Electrical Cable Penetration Qualification* (PF-27)	October 1980	JPN-79-44 (7/27/79)	3.3.12	I
3.1.21 Ventilation Duct Penetrations	July 1980	JPN-79-12 (3/7/79)	3.3.13	C

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NOTES: \*The design details for these modifications will be subject to further staff review prior to implementation.

\*\*Additional Information on these items is sent by JPN-79-72 (Nov. 14 , 1979)

C - No additional information to be provided by the Authority prior to implementation.

I - Additional information will be provided by the Authority prior to implementation.

1367 255

TABLE 3.2

COMPLETION DATES FOR INCOMPLETE ITEMS

<u>ITEM</u>		<u>DATE</u>	<u>REFERENCE LETTER</u>	<u>PREVIOUSLY LISTED AS ITEM NO.</u>	<u>SEE NOTE</u>
3.2.1	Fire Hazard Analysis (PF-11)	November 1979	JPN-79-12 (3/7/79)		I
3.2.2*	Pipe Penetrations (PF-33)	February 1980	JPN-79-25 (5/7/79)	3.3.14	C
			JPN-79-12 (3/7/79)		
3.2.3*	Fire Water Piping System (PF-36)	November 1979	JPN-79-25 (5/7/79)	3.3.6	C
			JPN-79-12 (3/7/79)		
3.2.4	Diesel Fire Pump Room Sprinkler Head Spacing (PF-32)	August 1979	JPN-79-55 (9/5/79)		C
			JPN-79-40 (7/2/79)		
			JPN-79-25 (5/7/79)		
3.2.5*	Fire Door Supervision (PF-8)	November 1979	JPN-79-12 (3/7/79) **		C
3.2.6	Signaling Circuits Supervision (PF-19)	August 1979	JPN-79-55 (9/5/79)	3.3.2	C
			JPN-79-44 (7/27/79)		
3.2.7	Fire Pump Performance	August 1979	JPN-79-55 (9/5/79)	3.3.4	C
3.2.8	Fire Pump Capacity	August 1979	JPN-79-55 (9/5/79)	3.3.5	C
3.2.9	Testing of CO <sub>2</sub> Fire Suppression Systems (PF-18)	January 1980	JPN-79-44 (7/27/79)	3.3.15	AI
3.2.10	Crescent Area Fire Protection (PF-23)	August 1979	JPN-79-55 (9/5/79)	3.3.11	C
3.2.11	Cable Flame Tests	August 1979	JPN-79-55 (9/5/79)	3.3.16	C
			JPN-79-44 (9/27/79)		
			JPN-79-40 (7/2/79)		

NOTE: C - Item Complete, no additional information to be provided by the Authority

AI - Additional Information will be provided by the Authority

\* Additional Information on these items is sent by JPN-79-72 (Nov. 14, 1979)

1367 256

JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
FIRE HAZARDS ANALYSIS  
SUPPLEMENTAL DOCKET NO. 50-333

REFERENCE: NRC Letter of September 22, 1978, Enclosure No. 2

Response to NRC Concern PF-20: Interior Fire Hose Stations

NRC Staff Concern:

Interior fire hose stations have been located within or adjacent to most safety related areas of the plant. Additional lengths of hose (stored on reels) have been provided to extend hose coverage in several areas.

It is the staff's concern that (1) Water leakage past the hose outlet valves will cause deterioration of fire hose; (2) "Electrically safe" fire hose nozzles have not been provided in areas containing high voltage equipment; (3) the 1" hose couplings and long lengths of hose provided may cause friction losses such that sufficient pressure will not be available at the nozzle; (4) hose lengths in excess of 100 ft. will be difficult to maneuver to effectively fight fires; (5) access to some interior hose stations in the plant are blocked by laydown and storage areas; (6) linen hose, which is not suitable for industrial fire fighting, has been provided to protect several safety related areas of the plant.

NRC Staff Position

1. Provide drip valves on all interior hose standpipes downstream of the hose outlet valve.
2. Provide appropriate fire hose nozzles in areas containing electrical hazards.
3. Confirm by the results of tests and/or calculations that the (flowing) pressure at each fire hose nozzle is greater than or equal to 65 psig.
4. Provide additional interior hose stations as necessary to limit the lengths of hose required to not greater than 100 ft.
5. Establish administrative controls to prevent access to manual fire fighting equipment from being restricted by temporary storage of materials within the plant.
6. Provide 300 psi test single jacket lined hose for those hose stations which are provided to protect safety related structures and systems.

1367 257



Response

To comply with the NRC staff position the following items will be adopted:

1. Drip valves will be provided on all interior hose standpipes downstream of the hose outlet valve.
2. Areas containing electrical hazards will be provided with fog nozzles on the Fire Hose Standpipes.
3. The Authority has provided in their submittal dated August 3, 1978 the results of their calculations confirming that at least 65 psig pressure exists at the highest elevation hose stations outlets in the plant.
4. Thirty (30) new interior hose stations will be installed in various locations to provide backup fire suppression for all safety-related and some other areas of the plant. A schedule of all new hose stations is attached. Twenty-two of the new hose stations and the connecting piping in safety-related areas will require seismic supports to prevent damage to essential cables or equipment. These are indicated by the suffix "S" in the schedule and on the drawings.
5. Administrative controls have been established to prevent access to manual fire fighting equipment from being restricted by temporary storage of materials within the plant.
6. Each hose reel will be fitted with 100 ft of 300 psig test single jacket lined and coated 1 1/2 in. fire hose and nozzle as shown on the attached schedule of new hose stations. Canvas or similar covers will be provided for hose reels in potentially contaminated areas.

SCHEDULE OF NEW HOSE STATIONS-SHEET NO.1

Sta. (1) No.	Zone (5)	Type (2)	Nozzle (4) Type
031S	TW	HR	E
032S	TE	HR	E
033	TP	HR	A
051S	TW	HR	E
052S	TE	HR	E
053S	TW	HR	E
054S	TE	HR	E
059	TB	HR	A
061S	TW	HR	E
062S	TE	HR	E
082	RW	HR	A
092	TP	HR	A
093R(3)	HB	HR	-
094R(3)	HB	HR	-
095	TP	HR	A
125S	PC	CHR	A
132	LR	CA	A
135S	SP	HR	ER
136S	BR	HR	ER
153S	SW	HR	ER
154S	SE	HR	ER
161S	ES	HR	ER
162S	EN	HR	ER
193R(3)	HB	HR	-
232S	CN	HR	E
233S	RR	HR	ER
281	RC	CHR	ER
325S	MG	HR	A
326S	MG	HR	A
331	AD	HR	A
333S	CR	HR	A
334S	CR	CHR	ER
425S	MG	HR	A

Wall Hydrant (MG Roof)

(Hose Rack)

A

1367 259



SCHEDULE OF NEW HOSE STATIONS-SHEET NO.2

- (1) 1st Digit = Elev.; 2nd Digit = Bldg. No.; 3rd Digit = Sta. No.  
 Suffix S denotes seismic supports

Legend: Fire Hose Stations  
Numerical Designation Codes

<u>Elevations</u>	<u>Buildings</u>
6 El. 369	2 Reactor Building
5 344	3 Administration Building
4 326	4 Auxiliary Boiler Room
3 300	5 Turbine Building
2 284-292	6 Emergency Generator Building
1 272	7 Screenwell House
0 242-260	8 Radwaste Building
00 below 242	9 Heater Bay

- (2) Type CA = Cabinet (surface mounted) HR = Hose Reel  
 CHR Continuous Hose Reel

- (3) R = Existing hose Station relocated

- (4) Nozzle Type: E = Elect, Fog Only; A = Adjustable; R = Reduced Flow

- (5) Fire Zone Legend

1367 260

(5) Fire Zone Legend

<u>Code</u>	<u>Zone</u>
AD	Administration Building
BR	Battery Room (SR)
CN	Cable Run Room North (SR)
CR	Control Room (SR)
EN	Emergency Generator Switchgear North (SR)
LS	Emergency Generator Switchgear South (SR)
HB	Heater Bay
LR	Locker Room
MG	Motor Generator Room
PC	Primary Containment (SR)
RC	Radwaste Control
RR	Relay Room (SR)
RW	Radwaste Building
SE	Switchgear East
SP	Cable Spreading Room (SR)
SW	Switchgear West
TB	Turbine Building
TE	Cable Tunnel East (SR)
TF	Pipe Tunnel
TW	Cable Tunnel West (SR)

(SR) = Safety Related Area

1367 261

JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
FIRE HAZARDS ANALYSIS  
SUPPLEMENTAL DOCKET NO. 50-333

REFERENCE: NRC Letter of September 22, 1978, Enclosure No. 2

Response to NRC Concern PF-24: Safety Related Pump Rooms -  
Ventilation Air Intakes

NRC Staff Concern

The safety related pump rooms SP1 and SP2 contain cables and equipment required for shutdown and cooldown of the plant. It is the staff's concern that a fire in the screenwell area would be drawn into the rooms through unprotected ventilation openings by the rooms ventilation systems.

NRC Staff Position

Provide physically separated supply ventilation systems, with automatically actuated 3 hour fire rated dampers, for Safety Related Pump Rooms SP1 and SP2.

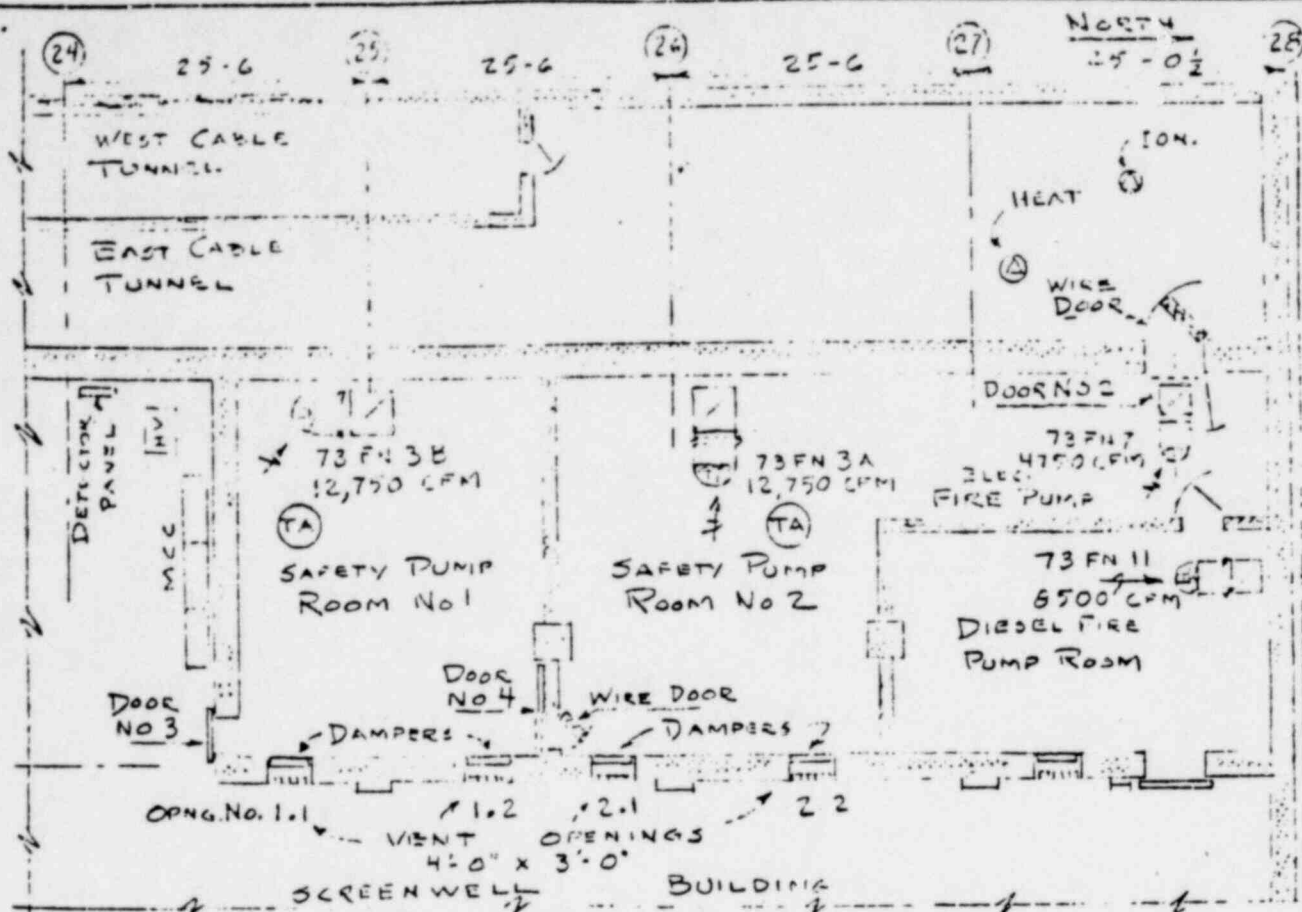
Response

To comply with the NRC staff position of providing separate sources of ventilation air for the Safety Related Pump Rooms SP1 and SP2 the following solution is proposed.

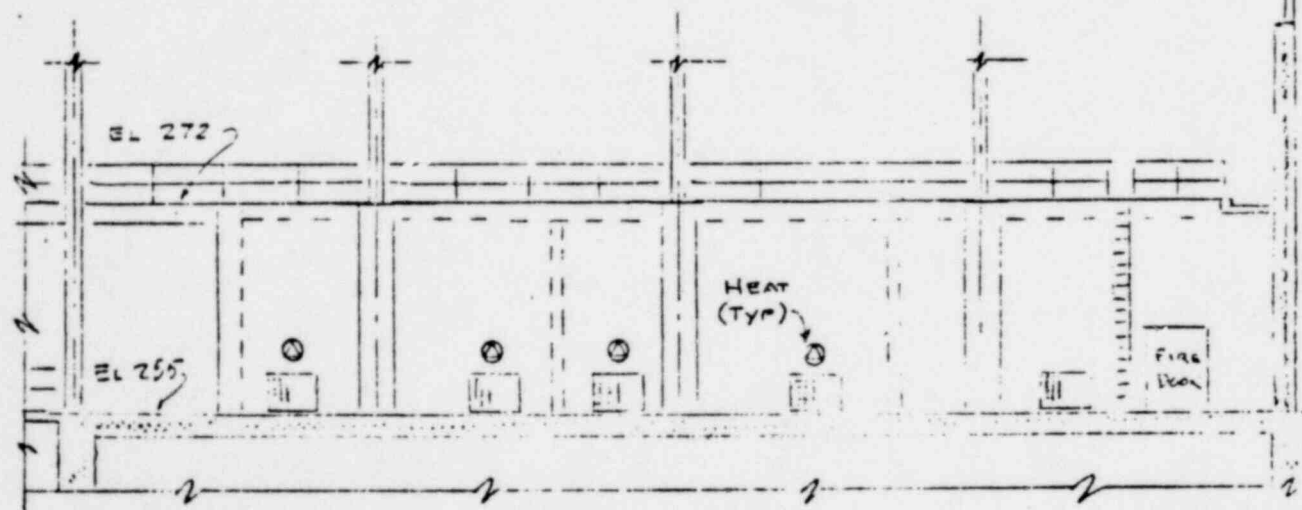
A separate source of ventilation air will be provided from the east cable tunnel via the existing access doorways. The access door between the pump rooms and the door to the east cable tunnel will be held open with fusible links and electric releases. The four existing ventilation openings to the pump rooms will be fitted with 3 hr rated fire dampers equipped with standard 160 F fusible links and electric releases. With this configuration, air can be drawn from either the screenwell building or the cable tunnel to supply makeup air removed by the exhaust fans.

Both doorways will be fitted with new heavy gauge steel wire mesh doors for security purposes and equipped with electronic supervision. The attached sketch shows the locations of the proposed fire dampers and the wire mesh doors.

The electric releases for the two doors and the four dampers will be actuated automatically by heat or smoke detectors or remote manually from a local control panel. The fusible links will serve as back-up for the electric releases.



PART PLAN EL 255-0



ELEVATION LOOKING WEST

② ADDITIONAL FIRE DETECTORS (PF-19)

DRAWN BY: RBBROWN

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PF-24 1367 263

JO 12966.54

POWER INDUSTRY GROUP TITLE JAMES A FITZPATRICK N.P.P.

CHECKED

SAFETY PUMP RMS. VENT'N.

CORRECT

SER 3.1.8

APPROVED

REVISIONS

②

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SCALE  $\frac{1}{16}" = 1'-0"$

DATE: 8-29-79

SKETCH NUMBER

SK. SER 3.1.0-2

JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
FIRE HAZARD ANALYSIS  
SUPPLEMENTAL DOCKET NO. 50-333

Reference: Commission's Letter of September 22, 1978, Enclosure No. 3

RESPONSE TO NRC CONCERN PF-22 EXPOSED STRUCTURAL STEEL

NRC Staff Concern:

In August 3, 1978 response to Staff Request No. 20, the licensee identified several plant areas where exposed structural steels exist, and provided general statements of the licensee's conclusion in regard to the safe shutdown consequences of fire damage to structural steel members in these areas. The responses, however, did not provide any information which could enable the staff to evaluate the validity of such conclusion.

During the site visit, the staff observed that there are many more plant areas; e.g., control building, switchgear rooms, diesel-generator building, MG set area, etc., which are housed by unprotected steel structures but were not identified in the licensee's response.

Apparently, neither the direct impact of the structural steel failure in these areas, nor its effect on safety-related structure, components, and systems in the neighboring areas has been investigated. Therefore, the staff does not have reasonable assurance that redundant equipment/cabling required for safe shutdown may not be damaged by a structural failure due to fire.

NRC Staff Position

Exposed structural steels should be protected against the fire damage unless it can be demonstrated that the failure of such steels would not jeopardize safe shutdown capability of the plant.

Response

Those structures, equipment, or components whose failure could cause significant release of radioactivity (a release of radioactivity with radiological dose consequences potentially exceeding 10CFR100 guidelines) or which are vital to a safe shutdown of the plant and the removal of decay and sensible heat, are Class I structures as listed in Section 12.2.2 and as defined in Section 12.2.1 of the FSAR for JAFNPP. A list of Class I structures follows:

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1367 264



1. Drywell, Vent Pipes, Suppression Chamber, and Penetrations
2. Reactor Building
3. Control Room (including external access)
4. Main Stack
5. Emergency Diesel Generator Building and Associated Switchgear Rooms
6. Radioactive Waste Building
7. Battery Rooms
8. Screenwell-Pump House (substructure)
9. Emergency Service Water Pump House
10. Electrical Bays

Each of these items has been examined for the following:

1. Vital to Safe Shutdown
2. Existence of Exposed Structural Steel
3. Presence of Possible Fire
4. Effect of Steel Failure on Safety-related Equipment
5. Consequences of Loss of Safety-related Equipment on Safe Shutdown Capability

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Where it can not be demonstrated that safe shutdown capability is not jeopardized, action is recommended to modify the existing structure so that safe shutdown capability is assured.

#### Summary of Recommended Actions

The evaluation of the current plant configuration has identified three areas where steel failure could jeopardize safe shutdown capability of the plant. These areas are: control room area, diesel generator building, and the electrical bays. The electrical bays and the diesel generator building do not currently have sufficient fire resistant construction for redundant modules. The control room structure does not have sufficient fire resistant support steel construction to prevent the collapse of steel in the event of a major fire in this structure.

As a result of this evaluation, the barriers in the electrical bays and the diesel generator building will be modified to obtain

1367 265

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a three hour fire resistant rating. These actions will be in accordance with designs tested and approved in accordance with test methods as specified by ASTM E119 or UL263. Refer to conceptual drawings 11825-FIG-PF22-1, 2, and 3 for delineation of the areas where modifications are recommended.

Protection against a major fire in the control room structure will be provided by assuring the capability to shut down the plant independently of the control room.

Further details of this method of shut down are provided in Appendix C to the response to NRC concern PF-11.

#### Emergency Diesel Generator Building and Associated Switchgear Rooms

This structure is vital to safe shutdown. The emergency diesel generator building houses two modules each consisting of two emergency diesel generators and the switchgear associated with these two generators. The building is a one-story reinforced concrete structure with a structural steel supported roof. The steel roof framing is not independent and is not fire protected.

Conclusion: The roof support beams will be fire protected for a 3 hr fire resistance rating. This protection will sustain the roof slab and the fire barriers between modules so that a fire in one module will not damage the other module. Refer to 11825-FIG-PF22-2 for a delineation of the steel requiring fire protection.

#### Electrical Bays

This structure is vital to safe shutdown. It is a reinforced concrete structure with a concrete roof supported on structural steel framing. Below E1 272 ft, the safety-related cabling is protected by reinforced concrete. Above E1 272 ft, the safety-related switchgear equipment is located between column lines 13 to 19 and A3/4 to B. The redundant switchgear modules are separated by a north-south concrete block wall. The Class I equipment is protected by poured concrete walls at the A3/4, B, and 13 lines and by a concrete wall at the 19 line. There are exposed structural steel beams above the internal walls and column flanges in the block walls which are not fire protected.

The foam room is located at E1 272 ft to the north of the switchgear areas. This area houses fire protection subsystems used to protect Class I equipment. The concern for the foam room is not fire damage to steel within the room as there is a fire loading of 0 Btu/sq ft as shown in the Fire Hazards Analysis Summary, Attachment 1, but rather that a fire in an adjacent area could result in damage to exposed structural steel leading to impairment of the foam room's integrity. The foam room is bounded by the outside to the west and above. The north and east sides are adjacent to the turbine building track bay. The south



side is adjacent to the generator lead housing area. The oil storage room on the south side was originally designed to confine a fire. The cable tunnels below the foam room do not contain exposed structural steel. The northeast corner of the foam room is supported by structural steel over the closed loop cooling water system heat exchangers and pumps.

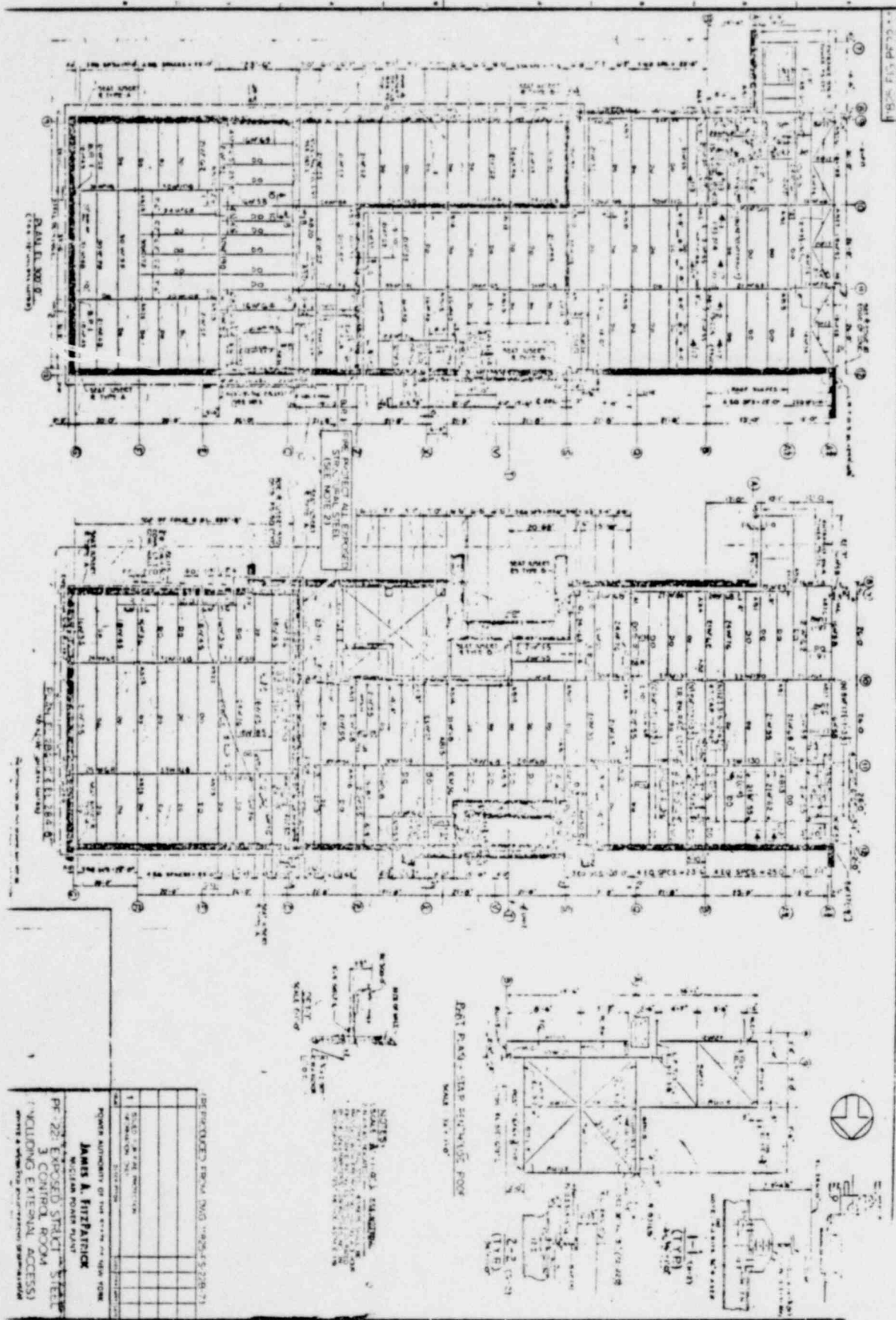
Exposed structural steel exists on the north, east, and south boundaries in the form of partially exposed columns and roof support beams as they penetrate the walls. The beams supporting the northeast portion of the slab at El 272 ft are also exposed structural steel.

Conclusion: All column flanges and beams above the walls bounding the two switchgear areas and the foam room, and the beams which support the northeast corner of the foam room floor slab, will be fire protected for a three hour fire resistance rating. With this action taken, a fire in one switchgear area resulting in failure of exposed structural steel, will not damage the redundant switchgear area and thus safe shutdown capability will not be jeopardized. The integrity of the foam room will not be endangered by failure of exposed structural steel in an adjacent area, and thus the foam room's function of providing fire protection subsystems for Class I equipment will not be impaired. Refer to 11825-Fig-PF22-3 for delineation of steel requiring fire protection.

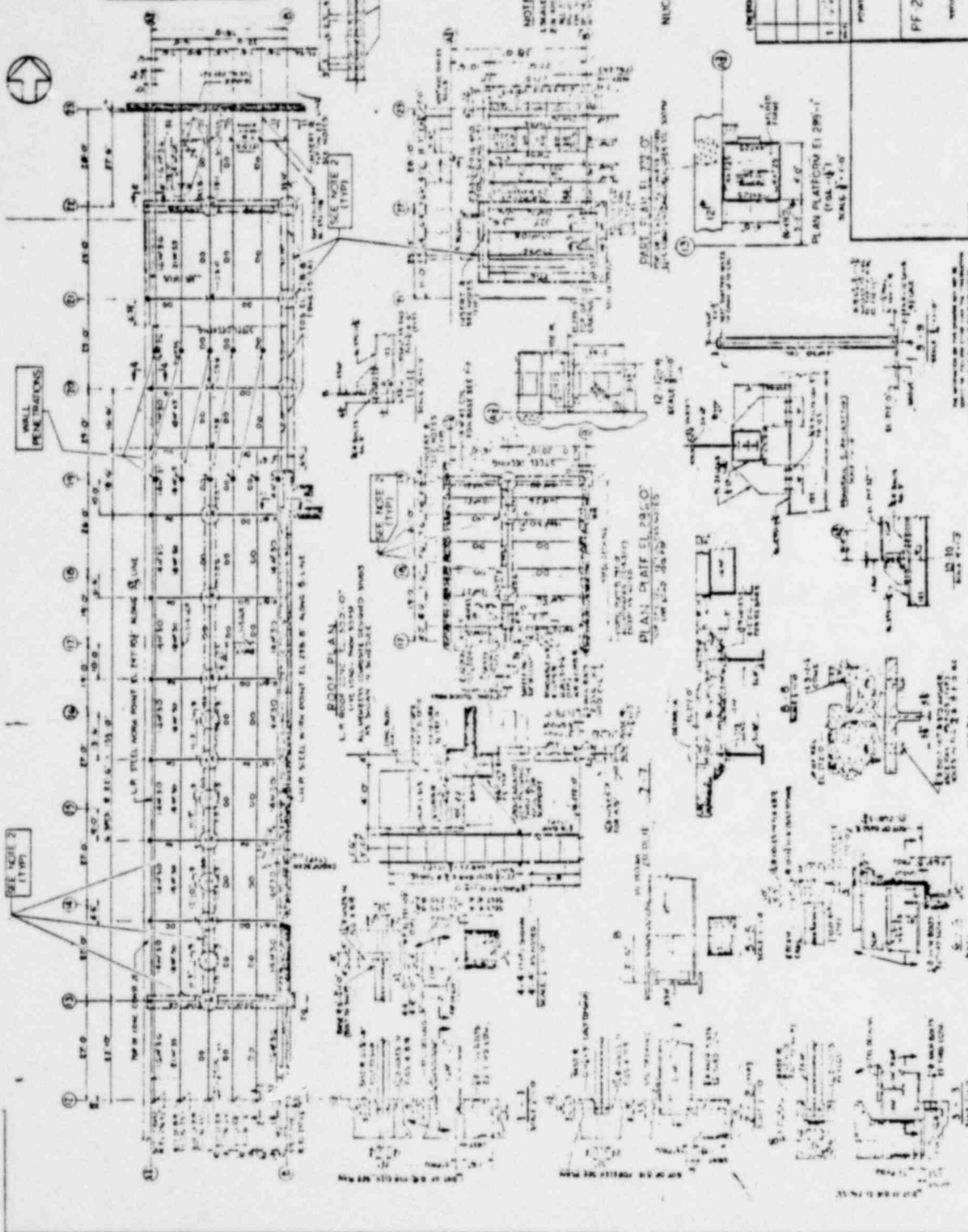
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**JAMES A. FITZPATRICK**  
NUCLEAR POWER PLANT

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JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
FIRE HAZARDS ANALYSIS  
SUPPLEMENTAL DOCKET No. 50-333

REFERENCE: NRC Letter of September 22, 1978, Enclosure No. 4

Response to NRC Concern PF-33: Unsealed Pipe Penetrations

NRC Staff Concern:

In the August 3, 1978 response to Staff Request #19, the licensee stated that several fire barriers in the plant contain unsealed pipe penetrations. The barriers containing unsealed penetrations were not identified.

It is the staff's concern that unsealed pipe penetrations will allow a fire to propagate to adjacent fire areas.

NRC Staff Position:

Install fire rated seals in the pipe penetrations through fire barriers separating safety-related areas of the plant from other safety-related and non-safety related areas.

Response

To comply with the NRC staff position the location of all critical unsealed pipe penetrations as well as the design installation method for sealing each type of penetration will be identified. These seals will be designed to have a fire rating of at least 3 hours. In addition the existing sealed pipe penetrations will be investigated to see if they meet a fire resistance rating of at least 3 hours. The design of the seals will be based upon, in addition to fire integrity, pressure differential across the fire barrier. Each pipe penetration will also be analyzed to determine the affect of the fire seal on the pipe stress at that point.

1367 271

JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
FIRE HAZARDS ANALYSIS  
SUPPLEMENTAL DOCKET NO. 50-333

Reference: NRC letter of September 22 1973, Enclosure No. 3

RESPONSE TO NRC CONCERN PF-36

FIRE WATER PIPING SYSTEM

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NRC Staff Concern:

The fire protection water system consists of a fire main loop and several individual subsystems. Each subsystem supplies fire suppression water to fixed automatic water suppression system and hose stations for the areas serviced by the subsystem. One subsystem supplies the fixed water suppression system and backup hose stations in the Screenwell Hose and Turbine Building, and the fixed suppression systems in the Reactor Building. Other subsystems supply the Administrative Building and portions of the Reactor Building.

Because of the pipe layout and valve arrangement in the fire water supply system, a single failure can impair the ability to supply fire suppression water to the automatic water suppression systems and backup manual hose stations in some areas of the plant.

NRC Staff Position

A separate redundant connection should be provided from the underground fire main to each subsystem such that a single failure in the piping system will not cause a loss of all fire suppression water to any safety related fire zone.

Response:

Piping will be extended into an internal grid system with sectionalizing valves. Independent redundant fire water supplies (fixed suppression or hose stations) are available to all safety related areas and arranged such that a single failure will not cause the loss of all suppression water. The 12-inch internal header will be considered an extension of the yard loop as allowed by paragraph 3(a) of BTP APCSB 9.5-1 Appendix A.

One fire department connection similar to the one on the warehouse will be provided outside the turbine building. If water is not available to the fire protection headers in the foam room from the 12 inch internal header, two 2 1/2 inch hoses can be run from hydrant No. 08 to the fire department connection to supply the headers from the yard loop.

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As further protection against complete loss of fire protection water, hydrant No. 14, which is connected to the 8 inch city water main, will be replaced with a municipal type hydrant having a 4 1/2 inch pumper nozzle. Also, the present check valve number 78 in the warehouse will be removed. In the event both fire pumps were out of service, or if supplementary water beyond the capacity of the pumps is required, a fire department pumper truck could take suction from the city water main and supply any part of the entire system.

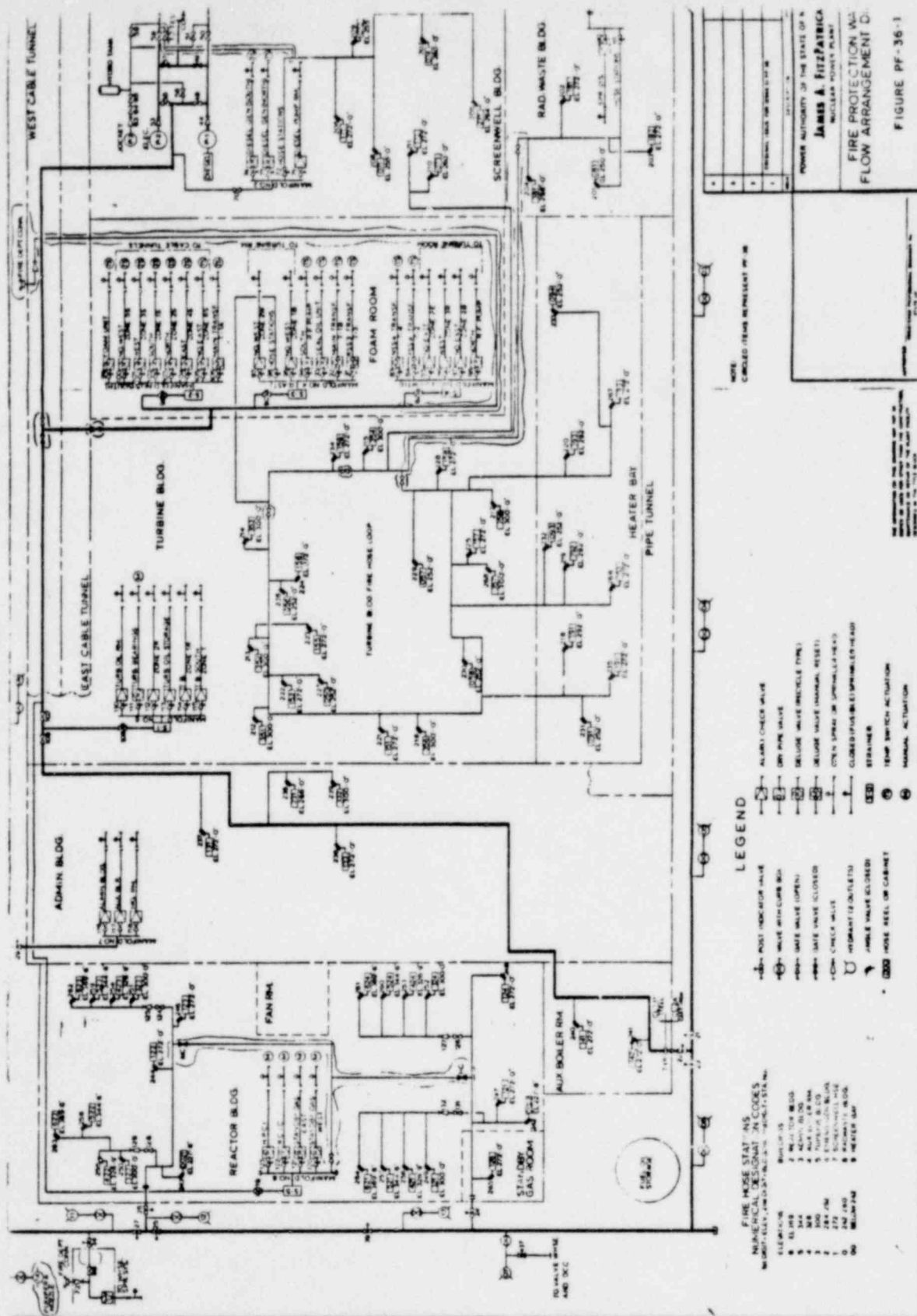
Figure PF 36-1 shows the system including the fire pumps, the yard loop, the internal headers, all valve manifolds, all fire protection valves to fixed suppression systems and all hose stations. Every hydrant, valve, and hose station has been given an identification number to assist a fire brigade. A hose stations coding system is explained on the drawings.

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JAMES A. FITZPATRICK NUCLEAR POWER PLANT  
FIRE DOOR SUPERVISION  
SUPPLEMENTAL DOCKET NO. 50-333

REFERENCE: NRC Letter of September 22, 1978, Enclosure No. 3

Response to NRC Concern PF-8: Fire Door Supervision

NRC Staff Concern:

Fire doors protecting safety related areas of the plant are either locked closed; electrically supervised and alarmed in the control room; or are provided with automatic release mechanisms to ensure that they are closed to provide protection as a fire barrier. In the event of a fire an open door will allow the fire to propagate to adjacent areas. An open door can defeat the effectiveness of gas suppression systems for areas so equipped.

NRC Staff Position:

Fire doors in barriers that separate safety related areas of the plant from other safety related and non-safety related areas; and fire doors in barriers surrounding areas containing large amounts of combustibles should be closed and electrically supervised or locked closed. When such doors are blocked open or when locks and/or electrical supervision systems are inoperative appropriate precautions should be taken.

Response:

There are presently 21 supervised fire doors in the FitzPatrick Plant. These doors are supervised by the plant security system.

To comply with the NRC Staff Position, the 20 additional fire doors listed in the attached Table PF-8-1 will be supervised by a new Class A monitoring system.

JAMES A. FITZPATRICK NUCLEAR POWER PLANT

TABLE PF-8-1

Listing of Additional Fire Doors  
to be Supervised

	<u>Areas Connected</u>	<u>Elevation</u>	<u>Location</u>
1.	Cable Tunnel CT1 to Cable Tunnel CT2	258'-0"	North End of CT1
2.	Safety-Related Pump Room SP2 to Cable Tunnel CT2	258'-0"	Northwest Corner of SP2
3.	Safety-Related Pump Room SP2 to Safety-Related Pump Room SP1	258'-0"	East End of Wall Separating SP1 from SP2
4.	Fire Pump Room FP1 to Screen House SH1	258'-0"	Northwest Corner of Screenwell House
5.	Motor Generator Area M61 to Reactor Building RB1	300'-0"	Northwest Corner of Reactor Building E1 300
6.	Entrance to Stairwell in Control Room	300'-0"	Middle Control Room North Wall
7.	Standby Gas Room S61 to Reactor Building RB1	272'-0"	Southwest Corner of Standby Cast Room
8.	Battery Room BR1 to Corridor BR5	272'-0"	Middle of South Wall of BR1
9.	Battery Room BR2 to Corridor BP5	272'-0"	Middle of South Wall of BR2
10.	Battery Room BR3 to Corridor BR5	272'-0"	Middle of South Wall of BR3

1367 276

<u>Areas Connected</u>	<u>Elevation</u>	<u>Location</u>
11. Battery Room BR4 to Corridor BR5	272'-0"	Middle of South Wall of BR4
12. Emergency Diesel Generator Room EG2 to Emergency Diesel Generator Room EG3	272'-0"	West End of Wall Separating EG2 from EG3
13. Emergency Diesel Generator Room EG1 to Switchgear Room EG5	272'-0"	Middle of East Wall in EG1
14. Emergency Diesel Generator Room EG-2 to Switchgear Room EG5	272'-0"	Middle of East Wall of EG2
15. Emergency Diesel Generator Room EG3 to Switchgear Room EG6	272'-0"	Middle of East Wall of EG3
16. Emergency Diesel Generator Room EG4 to Switchgear Room EG6	272'-0"	Middle of East Wall of EG4
17. Switchgear Room EG5 to Switchgear Room EG6	272'-0"	East End of Wall Between EG5 and EG6
18. Between Cable Tunnel Ventilation Rooms	286'-0"	South End of Separating Walls
19. Relay Room RR1 to Cable Tunnel CT3	286'-0"	South End of West Wall of Relay Room
20. Relay Room RR1 to Cable Tunnel CT4	286'-0"	Middle of West Wall of Relay Room

1367 277