POWER AUTHORITY OF THE STATE OF NEW YORK
JAMES A. FITZPATRICK NUCLEAR POWER PLANT
OPERATIONS DEPARTMENT STANDING ORDER

TITLE: INCOMPLETE FIRE MODIFICATIONS* PROCEDURE NO. 15

REVIEWED BY: Plant Operations Review Committee
Meeting No. 81-016 Date 2/18/81

APPROVED BY: [signature] Date 2/18/81
Operations Superintendent

APPROVED BY: [signature] Date 2/18/81
Resident Manager

TELECOPIED
TO: Phil Polk
FROM: R. Pasternak
DATE: 2-18-81
TIME:
NUMBER: 2 of 8
(301) 492-8110
Rapicom

TELECOPIED (By Voice)
TO: Leon Gregwil
FROM: R. Pasternak
DATE: 2-18-81
TIME: 2:15pm
NUMBER: 2 of 8
74-7618

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Rev. No. 1

Date 2/18/81

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1.0 PURPOSE:

To ensure proper measures are taken to adequately protect the plant from fire situations while fire modifications are being completed.

2.0 APPLICABILITY:

This procedure applies until the inadequacies due to incomplete fire modifications are completed.

3.0 REFERENCES:

3.1 Letter J. P. Bayne (PASNY NYO) to T. A. Ippolito (NRC) dated February 11, 1981.

3.2 Operating Procedure F-OP-56, Relay Room Ventilation

3.3 Surveillance Test F-ST-40D, Daily Surveillance Report

4.0 DEFINITIONS:

None.

5.0 RESPONSIBILITIES:

5.1 Each member of the fire brigade is responsible to ensure this procedure is carried out.

5.2 The Operations Department Superintendent is responsible to ensure training is complete on this standing order.

6.0 SPECIAL INSTRUCTIONS:

None.

7.0 PROCEDURE:

7.1 In the event of a fire in the relay room, the relay room ventilation will be immediately shut down in accordance with F-OP-56.

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7.2 In the event a fire alarm is received for RCIC or HPCI area, immediately initiate sprays to the associated area, also a foam cart shall be kept in reactor building 272' area.

7.3 New detector panels will be checked once per hour and any alarm investigated. The check shall also include power available light on. This will be added to surveillance test F-ST-40D (see Appendix A).

7.4 Fire doors will be checked once per shift. This will be signed off on F-ST-40D (see Appendix B).

7.5 Weekly, the ionization detector panel remote alarms will be tested by placing test/reset switch in test position and ensuring remote control room alarm is activated. This will be signed off on F-ST-40D.

8.0 FIGURES:

None.

9.0 EXHIBITS:

None.

4. Loads

The primary loads imposed on the block walls were due to seismic events. Two levels of earthquakes were used - Operating Basis Earthquake, OBE and the Design Basis Earthquake, DBE, (2 times OBE). The loads obtained for the DBE were reduced by 2/3 to account for the 50 percent increase in allowable stresses. No increase in allowable stresses were permitted for the OBE.

The seismic loads were computed using the following basis:

4.1. Damping of 0.5 percent for OBE and DBE. This is highly conservative by today's standards.

4.2. Cracked moment of inertia for frequency calculation.

4.3. One way action for frequency calculation.

4.4. Boundary conditions: Simply supported or fixed at bottom and simply supported or free at top depending on the construction details at the top and bottom. Fixity was assumed when reinforcement was doweled into supporting concrete element. Simple supports were assumed when the walls were supported by steel support angles on both sides and separation between the wall and structural element was achieved by a joint filler.

4.5 The accelerations obtained from the response spectra were further increased to account for overall torsional effects of the buildings. These multiplying factors were obtained from the John A. Blume & Associate Report for the Kewaunee Plant, December 1968.

5. Allowable Stresses

Working stress method has been used in the design of masonry walls.

The allowable stresses used were taken from the 1967 Edition of the Uniform Building Code, Table No. 24-H under the requirement of special inspection. The value of f'_m was taken equal to 1350 psi per UBC-67.

Compression flexural = 0.33 f'_m	=	450 psi
Bond	=	140 psi
Shear (No shear reinforcement)	=	50 psi

6. Analysis Method

The stresses in the block walls were computed using one way action of the walls (spanning vertically). Typical boundary conditions used were:

Top	Bottom
Free	Fixed
Simply Supported	Simply Supported
Simply Supported	Fixed

APPENDIX A

LOCAL FIRE PANELS

1) 76 CP-132 Location: Rx Building El. 272' N.E. Corner

ZONES	DESCRIPTION
1	West Crescent Area
1A	RCIC Enclosure
2	East Crescent Area
2A	HPCI Enclosure
3	S.E. Rx Bldg. El. 272'
4	S.W. Rx Bldg. El. 272'
5	N.W. Rx Bldg. El. 272'
6	N.E. Rx Bldg. El. 272'
7	East RHR Hx. Room
8	Drywell Access Hatch Area
9	CRD Decon. Room
10	West RHR Hx. Room
12	Railroad Air Lock
13	Standby Gas Treatment
14	MCCs 151/132 & 151/142

NOTE: Zone 11 does not exist.

2) 76 CP-133 Location: Rx Bldg. El. 300' N.E. Corner

ZONES	DESCRIPTION
15	S.E. Rx Bldg. El. 300'
16	S.W. Rx Bldg. El. 300'
17	N.W. Rx Bldg. El. 300'
18	N.E. Rx Bldg. El. 300'
20	RWCU Heat Exch. Room
21	Clean-up Decant Pump Room
25	S.E. Rx Bldg. El. 326'
26	S.W. Rx Bldg. El. 326'
27	N.W. Rx Bldg. El. 326'
28	N.E. Rx Bldg. El. 326'
31	Fuel Pool Hx. Room
32	Cont. Equip. Storage

3) 76 UV-1 Location: Recirc. MG Set Area S.E. Corner

ZONE	DESCRIPTION
24	Fire at MG Set A or B

APPENDIX A

LOCAL FIRE PANELS

4) 76 CP-134 Location: Rx Bldg. El. 344'-6" N.E. Corner

ZONES	DESCRIPTION
35	S.E. Rx Bldg. El. 344'-6"
36	S.W. Rx Bldg. El. 344'-6"
37	N.E. Rx Bldg. El. 344'-6"
38	N.W. Rx Bldg. El. 344'-6"
41	Change Room El. 366'
43	S. LPCI Inverter Area El. 344' ("B" Side)
44	N. LPCI Inverter Area El. 344' ("A" Side)
47	S.E. Rx Bldg. El. 369'-0"
48	S.W. Rx Bldg. El. 369'-0"
49	N.W. Rx Bldg. El. 369'-0"
50	N.E. Rx Bldg. El. 369'-0"
51	Refuel Exhaust Duct

5) 76 CP-135 Location: Relay Room El. 285' at North Wall Below Stair

ZONES	DESCRIPTION
74A	West Batt Room
74B	East Batt Room
75	West Batt Chrg Room
76	East Batt Chrg Room
77	Batt Room Corridor

6) 76 CP-137 Location: Operations Office

ZONES	DESCRIPTION
54	Control Room Air Intake
55	Control Room Chiller Area

7) 76 CP-2 Location: Foam Room El. 272' T.B.

ZONES	DESCRIPTION
61	West Cable Tunnel
62	West Cable Tunnel
63	West Cable Tunnel
64	East Cable Tunnel
65	East Cable Tunnel
66	East Cable Tunnel
70	West Switchgear Room
71	East Switchgear Room
72	Emergency Swgr Room South
73	Emergency Swgr Room North
80	Diesel Fire Pump Room
81	Radwaste Sample Room

APPENDIX A

LOCAL FIRE PANELS

8) 76 CP-136 Location: Foam Room El. 272' T.B.

ZONES	DESCRIPTION
78	S. Safety Pump Room
79	N. Safety Pump Room

9) 76-CP-1 Location: Instrument Shop Admin. Bldg. El. 300'

ZONES	DESCRIPTION
42	Batt Room South
45	Batt Room North
53	Control Room & AC Equipment Room
57	Relay Room El. 284'
58	Cable Spreading Room El. 272'
60	Cable Run Room South El. 286'
69	Cable Run Room North El. 296'

APPENDIX B

SUPERVISED FIRE DOORS

DOOR NUMBER	DESCRIPTION OF LOCATION
R227/1	West Wall of HPCI Enclosure
R227/2	East Wall of HPCI Enclosure
R227/3	West Wall of RCIC Enclosure
R227/4	East Wall of RCIC Enclosure
R272/15	Spiral Stairway Enclosure
R272/10	Door between SBGT & Track Bay
R300/4	Airlock Doors between Recirc MG Set Room and Reactor Building
HB272/2	A Side Batt Chgr Room
HB272/3	A Side Batt Room
HB272/4	B Side Batt Room
HB272/5	B Side Batt Chgr Room
DG256/1	North Entrance to West Cable Tunnel
DG272/2	Door Between Emerg Swgr Rooms A & B
DG272/3	Diesel Gen. "D" Room
DG272/4	Diesel Gen. "B" Room
DG272/5	Diesel Gen. "C" Room
DG272/6	Diesel Gen. "A" Room
E286/3	Door Between A & B Elec. Bay Fan Rooms
A286/23	North Cable Run Room (Off Relay Room)
A286/24	South Cable Run Room (Off Relay Room)
A300/15	Control Room Stairs from Relay Room
FP255/2	Elec. Fire Pump Room to Elect. Tunnels
SP255/4	Fire Door Between A & B Service Water Pump Rooms
SP255/6	Fire Door Between Diesel Fire Pump Room and Screenwell

ATTACHMENT TO F-ST-40D

SEE OPS DEPARTMENT STANDING ORDER NO. 15, STEP 7.3

DATE _____

TIME	SIGNATURE
0100	
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