UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NIAGARA MOHAWK POWER CORPORATION

DOCKET NO. 50-220

NINE MILE POINT NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 53
License No. DPR-63

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Niagara Mohawk Power Corporation (the licensee) dated March 22, 1978, supplemented March 17, 1980, and superseded May 2, 1983, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-63 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 53, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 20, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 53

FACILITY OPERATING LICENSE NO. DPR-63

DOCKET NO. 50-220

Revise the Appendix A Technical Specifications by removing and inserting the following pages:

Existing Page	Revised Page
4a	4a
241m	241m
241n	241n
241o	241o, o1, o2, o3, o4, o5, o6
241p	241p
241q	241q
241q1	241q1
241r	241r
241s	241s, s1
241t	241t, t1
241u	241u
241v	241v
241w	241w
241x	241x
241y	241y, y1
241z	241z
241aa	241aa
241cc	241cc
241dd	241dd, dd1, dd2, dd3, dd4

The revised areas are indicated by marginal lines.

1.16 Fire Suppression Water System

A Fire Suppression Water system shall consist of: a water supply system, fixed extinguishing systems of both automatic sprinklers and sprays, and manual fire fighting equipment consisting of standpipe risers with hose connections and hose reels.

1.17 Fire Watch Patrol

At least each hour an area with inoperable Fire Protection Equipment shall be inspected for abnormal conditions.

LIMITING CONDITION FOR OPERATION

3.6.6 FIRE DETECTION

Applicability:

Applies to the operational status of the fire detection system.

Objective:

To assure the capability of fire detection instrumentation for each fire detection zone shown in Table 3.6.6a to provide fire detection.

Specification:

a. With the number of detectors OPERABLE less than the number required by Table 3.6.6a.

1. Within one hour, estabish a fire watch patrol to inspect the zone with the inoperable detector(s); and

2. Restore the inoperable detector(s) to OPERABLE status within 14 days

OR

3. Prepare and submit a report in accordance with 6.9.2.b.

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SURVEILLANCE REQUIREMENT

4.6.6 FIRE DETECTION

Applicability:

Applies to the periodic surveillance of the fire detection system.

Objective:

To assure the operability of the fire detection instrumentation for each fire detection zone shown in Table 3.6.6a to provide fire detection.

Specification:

a. Each of the fire detectors shall be demonstrated OPERABLE:

1. By performance of an instrument channel test at least once per six months for all detection devices.

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TABLE 3.6.6a

FIRE DETECTORS PROTECTING SAFETY-RELATED EQUIPMENT

DETECTION ZONES

LOCAL FIRE ALARM CONTROL PANEL #1

	LOCATION	# DETECTORS	MINIMUM # OPERABLE
1	DA-2031 - Turb. Bldg. 250 North of Cable Spread Room	17	17
2	DA-2041N - Turb. Bldg. 250 Diesel Gen. 102	12	12
3	DA-2041S - Turb. Bldg. 250 Diesel Gen. 103	6	6
4	DA-2051E - Turb. Bldg. 250 South Side East	14	14
5	DA-2051W - Turb. Bldg. 250 South Side West	16	16
6	DA-2081S - Turb. Bldg. 261 East Corridor	41	41
7	DX-2141A - Turb. Bldg. 261 Diesel Gen. 102	3	3
8	DX-2141B - Turb. Bldg. 261 Diesel Gen. 102	3	3
9	D-2151 - Turb. Bldg. 261 D.G. 103 Cable Tray	3	2 (Note 1)
10	DX-2151A - Turb. Bldg. 261 Diesel Gen. 103	3	3
11	DX-2151B - Turb. Bldg. 261 Diesel Gen. 103	3	3
12	DA-2161E - Turb. Bldg. 261 South Side East	23	23
13	DA-2161M - Turb. Bldg. 261 P.B. 11 & 12 Area	22	22
14	DX-3011A - Turb. Bldg. 250 Cable Spreading Room	6	6
15	DX-3011B - Turb. Bldg. 250 Cable Spreading Room	6	6
16	D-3031PL - Turb. Bldg. 261 Aux. Control Room Panels	99	80 (Note 1)

TABLE 3.6.6a

FIRE DETECTORS PROTECTING SAFETY-RELATED EQUIPMENT

DETECTION ZONES

LOCAL FIRE ALARM CONTROL PANEL #1 (continued)

	LOCATION	# DETECTORS	# OPERABLE
17	DX-3031A - Turb. Bldg. 261 Aux. Control Room	16	16
18	DX-3031B - Turb. Bldg. 261 Aux. Control Room	16	16
19	D-8151 - South Yard Foam Room	2	1
20	DA-2141 - Turb. Bldg. 261 Diesel Gen. 102	4	4
21	DA-2151 - Turb. Bldg. 261 Diesel Gen. 103	4	4

Note 1: No two (2) adjacent detectors may be out of service simultaneously.

TABLE 3.6.6a

FIRE DETECTORS PROTECTING SAFETY-RELATED EQUIPMENT

DETECTION ZONES

LOCAL FIRE ALARM CONTROL PANEL #2

	LOCATION	# DETECTORS	MINIMUM # OPERABLE
22	DA-2022N - Turb. Bldg. 250 North Corner	20	20
23	DA-2022S - Turb. Bldg. 250 West Side	22	22
24	DA-2092E - Turb. Bldg. 261-277 Booster Pump Area	40	40
25	DA-2092W - Turb. Bldg. 261-277 Recirc. MG Set Area	36	36
26	DA-2162W - Turb. Bldg. 261 West Side South	33	33
27	DA-2092MG - Turb. Bldg. 261 Recirc. MG Sets	15	15

TABLE 3:6.6a

FIRE DETECTORS PROTECTING SAFETY-RELATED EQUIPMENT

DETECTION ZONES

LOCAL FIRE ALARM CONTROL PANEL #3

	LOCATION	# DETECTORS	MINIMUM # OPERABLE
28	DA-2013S - Turb. Bldg. 250 North Side East	11	11
29	DA-2013N - Turb. Bldg. 250 Cond. Stor. Tank	16	16
30	DA-2083M - Turb. Bldg. 261 Cool Water Pump Area	44	44
31	DA-2083N - Turb. Bldg. 261 Cond. Stor. Tank	23	23
32	DX-2113A - Turb. Bldg. 261 Power Board 103 Room	1	1
33	DX-2113B - Turb. Bldg. 261 Power Board 103 Room	1	1
34	DX-2123A - Turb. Bldg. 261 Power Board 102 Room	1	1
35	DX-2123B - Turb. Bldg. 261 Power Board 102 Room	1	1
36	D-5013 - Screen House 250-261 P.B. 176 Area	6	5
37	D-5023 - Screen House 243-256 South Side	17	14 (Note 1)

Note 1: No two (2) adjacent detectors may be out of service simultaneously.

TABLE 3:6:6a

FIRE DETECTORS PROTECTING SAFETY-RELATED EQUIPMENT

DETECTION ZONES

LOCAL FIRE ALARM CONTROL PANEL #4

	LOCATION	# DETECTORS	MINIMUM # OPERABLE
38	D-2224 - Turb. Bldg. 277 P.B. 101 Area	22	18 (Note 1)
39	D-2234 - Turb. Bldg. 277 South East Side	27	22 (Note 1)
40	D-3054 - Turb. Bldg. 277 Control Room	26	22 (Note 1)

Note 1: No two (2) adjacent detectors may be out of service simultaneously.

TABLE 3.6.6a

FIRE DETECTORS PROTECTING SAFETY-RELATED EQUIPMENT

DETECTION ZONES

LOCAL FIRE ALARM CONTROL PANEL #5

	LOCATION	# DETECTORS	MINIMUM # OPERABLE
41	D-2345 - Turb. Bldg. 305 Rx Bldg. Supply Fan Area	13	11 (Note 1)
42	D-2395 - Turb. Bldg. 300 Control Ventilation Area	7	6

Note 1: No two (2) adjacent detectors may be out of service simultaneously.

TABLE 3.6.6a

FIRE DETECTORS PROTECTING SAFETY-RELATED EQUIPMENT

DETECTION ZONES

LOCAL FIRE ALARM CONTROL PANEL #6

	LOCATION	# DETECTORS	MINIMUM # OPERABLE
43	D-4016 - Rx Bldg. 198 Northeast Corner	2	1
44	D-4026 - Rx Bldg. 198 Northwest Corner	2	1
45	D-4036 - Rx Bldg. 198 Southwest Corner	2	1
46	D-4046 - Rx Bldg. 198 Southeast Corner	2	1
47	DA-4076E - Rx Bldg. - 237 East Side	16	16
48	DA-4076W - Rx Bldg. - 237 West Side	21	21
49	D-4086 - Rx Bldg. Drywell	9	7 (Note 1) (Note 2)
50	DA-4116E - Rx Bldg. 261 East Side	11	11
51	DA-4116W - Rx Bldg. 261 West Side	21	21
52	D-4156 - Rx Bldg. 281 West Side	16	13 (Note 1)
53	D-4166 - Rx Bldg. 281 East Side	16	13 (Note 1)

Note 1: No two (2) adjacent detectors may be out of service simultaneously.

Note 2: Detectors in service only when unit is shutdown and drywell is open for major maintenance.

TABLE 3.6.6a

FIRE DETECTORS PROTECTING SAFETY-RELATED EQUIPMENT

DETECTION ZONES

LOCAL FIRE ALARM CONTROL PANEL #7

	LOCATION	# DETECTORS	MINIMUM # OPERABLE
54	D-4197 - Rx Bldg. 298 North Side	9	7 (Note 1)
55	D-4207 - Rx Bldg. 298 South Side	7	6
56	DA-4237 - Rx Bldg. 318 Storage Area	30	30
57	D-4267 - Rx Bldg. 340	13	10 (Note 1)
58	DX-4217A - Rx Bldg. 298 Emerg. Cond. Vlv. Room	4	4
59	DX-4217B - Rx Bldg. 298 Emerg. Cond. Vlv. Room	4	4

Note 1: No two (2) adjoining detectors may be out of service simultaneously.

The basic function and capabilities of the system are to provide the means to detect fires with a visual indication of its location and an audible alarm at central points, and also to control certain ancillary actions, such as extinguishment and ventilation subsequent to the detection of fire.

The system is comprised of seven (7) Local Fire Alarm Control Panels (LFACP) located throughout the Reactor Building and Turbine Building, primarily in a central location to the zones of fire detection for which each panel serves. In addition there is a Main Fire Alarm Control Panel (MFACP-2), in the Control Room to which all seven (7) panels report, and their indications and control functions are duplicated.

Five types of detection instruments are employed in the system:

a) Ionization Smoke
b) Photoelectric Smoke
c) Infrared
d) Thermal
e) Thermistor Wire

The configuration of the fire detection instrument locations has been examined and found satisfactory to detect a fire with the minimum number of detectors operable as indicated in Table 3.6.6a.

LIMITING CONDITION FOR OPERATION

3.6.7 FIRE SUPPRESSION

Applicability:

Applies to the operational status of the fire suppression system.

Objective:

To assure the capability of the fire suppression system to provide fire suppression in the event of a fire.

Specification:

a. The FIRE SUPPRESSION WATER SYSTEM shall be OPERABLE with;

   1. Two high pressure pumps each with a capacity of 2500 gal./min. with their discharge aligned to the fire suppression header.

   2. Automatic initiation logic for each fire pump.

b. With an inoperable redundant pump or water supply line inoperable, restore the inoperable equipment to OPERABLE status within 7 days or prepare and submit a report in accordance with 6.9.2.b.

SURVEILLANCE REQUIREMENT

4.6.7 FIRE SUPPRESSION

Applicability:

Applies to the surveillance of the fire suppression system.

Objective:

To assure the operability of the fire suppression system to provide fire suppression in the event of a fire.

Specification:

a. The FIRE SUPPRESSION WATER SYSTEM shall be demonstrated OPERABLE:

   1. At least once per 31 days by starting each pump and operating it for 30 minutes on recirculation flow.

   2. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path is in its correct position.

   3. At least once per 12 months by cycling each manually-operable valve through one complete cycle.

   4. At least once per 6 months by a flush of the hydrants.

   5. At least once per operating cycle.

      (a) By performing a system automatic start on low header pressure.

LIMITING CONDITION FOR OPERATION

3.6.7 FIRE SUPPRESSION (Continued)

c. With no FIRE SUPPRESSION WATER SYSTEM operable, within 24 hours:

1. Establish a backup fire suppression system, and

2. Report to the NRC in accordance with 6.9.2.a.

d. The spray and sprinkler systems located in the following areas shall be OPERABLE:

1. Automatic water spray systems

(a) Reserve Transformer 101N

(b) Reserve Transformer 101S

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SURVEILLANCE REQUIREMENT

4.6.7 FIRE SUPPRESSION (Continued)

(b) By verifying that each pump will develop a flow of at least 2500 gpm at a pump discharge of 115 psig.

(c) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.

(d) Verifying that each automatic valve in the flow path actuates to its correct position.

6. At least once per 3 years by performing a flow test of the system in accordance with Chapter 8, Section 16 of the Fire Protection Handbook, 15th Edition, published by the National Fire Protection Association.

b. The fire pump diesel engine shall be demonstrated OPERABLE:

1. Daily by checking the starting air tank pressure

2. At least once per 31 days by verifying:

(a) That the fuel day storage tank contains at least 150 gallons of fuel.

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LIMITING CONDITION FOR OPERATION

3.6.7 FIRE SUPPRESSION (Continued)

2. Automatic Sprinkler System for the Diesel Fire Pump Room in the Screen House.

3. Pre-Action Systems:

(a) Rx Bldg., El. 237
(b) Rx Bldg., El. 261
(c) Rx Bldg., El. 318
(d) Turb. Bldg., El. 250 South
(e) Turb. Bldg., El. 250 West
(f) Turb. Bldg., El. 250 North
(g) Turb. Bldg., El. 250 East
(h) Diesel Gen., El. 250
(i) Cable Spreading Room
(j) Turb. Bldg., El. 261 South
(k) Turb. Bldg., El. 261 North
(l) Turb. Bldg., El. 261 East
(m) Turb. Bldg., El. 277 East
(n) Turb. Bldg., El. 300 Storage Area

e. With a spray or sprinkler system inoperable, establish a fire watch patrol with backup fire suppression equipment for the unprotected area within one hour.

f. With a pre-action system inoperable, trip system wet or establish a fire watch patrol with backup fire suppression equipment for the unprotected area within one hour.

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SURVEILLANCE REQUIREMENT

4.6.7 FIRE SUPPRESSION (Continued)

(b) The fuel storage tank contains at least 1000 gallons of fuel.

(c) The fuel transfer pump starts and transfers fuel from the storage tank to the day tank.

(d) The diesel starts from ambient conditions and operates for greater than or equal to 30 minutes on recirculation flow.

(e) The method of starting the diesel fire engine will alternate between the normal air start method and the low air pressure start.

3. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-65, is within the acceptable limits specified in Table 1 of ASTM D975-74 with respect to viscosity, water control and sediment.

4. At least once per six months by using the manual bypass of the solenoid on the starting air system.

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LIMITING CONDITION FOR OPERATION

3.6.7 FIRE SUPPRESSION (Continued)

g. Restore the system to OPERABLE status within 14 days or prepare and submit a report in accordance with 6.9.2.b.

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SURVEILLANCE REQUIREMENT

4.6.7 FIRE SUPPRESSION (Continued)

5. At least once per 18 months, subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service, and verifying the diesel starts from ambient conditions on the auto-start signal and operates for greater than or equal to 30 minutes while loaded with the fire pump.

c. The spray systems shall be demonstrated to be OPERABLE:

1. At least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path is in its correct position.

2. At least once per year by cycling each manually operable valve through one complete cycle.

3. At least once per operating cycle.

(a) By performing a system functional test which includes simulated automatic actuation of the system and verifying that the automatic deluge valves in the flow path actuate to their correct positions.

(b) By visual inspection of spray headers to verify their integrity.

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4.6.7 FIRE SUPPRESSION (Continued)

(c) By visual inspection of each nozzle to verify no blockage.

4. At least once per 3 years by performing an air or water flow test through each open head spray header and verifying each open head spray nozzle is unobstructed.

d. The sprinkler system shall be demonstrated to be OPERABLE:

1. At least once per operating cycle.

(a) By performing a system functional test which includes simulated automatic actuation of the system.

(b) By visual inspection of sprinkler headers to verify their integrity.

(c) By visual inspection of each nozzle to verify no blockage.

The fire water supply is provided by two vertical turbine fire pumps, one electric and a diesel-driven unit which are design rated at 2500 gpm at 125 psig pump discharge head. These pumps are located in the screen house and take suction from the station cooling water intake tunnel and have relief valves set at 140 psig.

The automatic initiation logic for each fire pump indicated in Specification 3.6.7.a.2 requires that these pumps are automatically started together upon a drop in discharge header pressure. Each pump can also be manually started. In addition, the diesel fire engine will be started on low air pressure at alternate testing intervals to verify the adequacy of the low air pressure start system. A bypass of the starting air solenoid valves is provided for additional assurance in starting the diesel fire engine.

The verification of the hydraulic performance of the fire suppression water system required once per 3 years in Surveillance Requirement 4.6.7.a.5 will be done by means of a measured hydrant flow test.

The redundant components in the fire water supply system are the fire pumps, which discharge to the same header. They are the only components addressed in Specification 3.6.7.b.

The backup water supply system referenced in Specification 3.6.7.c.1 is the Oswego City water system, which can be connected to the fire main if required.

The water spray systems provide fire protection for the safety-related reserve transformers 101N and 101S. Supply for these systems is provided by the fire line. The systems employ open nozzles and are controlled by deluge valves. Valve actuation is by pneumatic type rate-of-rise devices installed over the protected equipment.

In addition to the automatic operation, systems may be tripped manually either at the deluge valves on elevation 250' or at remote cable pull stations on elevation 261'.

The fire control panel annunciator records system operation, low supervisory air pressure and valve closure.

In addition to the spray systems described above, a closed head wet pipe automatic sprinkler system is provided for the diesel fire pump room in the Screen House on Elevation 254. The sprinkler heads used have fusible elements rated at 165°F. The system has flow alarms connected to the fire control panel annunciator.

Fourteen pre-action type systems are used for various hazards throughout the plant. These systems employ closed heads, under an air pressure of 20 psig, and are controlled by a pre-action type valve.

Valve actuation is automatic by ionization type detectors installed over the protected equipment. In addition to the automatic operation, systems may be tripped manually either at the pre-action valve or from the Main Fire Panel in Control Room.

System operation, low supervisory air pressure and valve closure is monitored on both the Main Fire Control and Local Fire Panels.

LIMITING CONDITION FOR OPERATION

3.6.8 CARBON DIOXIDE SUPPRESSION SYSTEM

Applicability:

Applies to the operational status of the carbon dioxide suppression system.

Objective:

To assure the capability of the carbon dioxide suppression system to provide fire suppression in the event of a fire.

Specification:

a. The CO_2 system, which supplies the Recirculation Pumps Motor-Generator Sets, Power Boards 102 and 103, Diesel Generators 102 and 103, Cable Room fire hazards, shall be OPERABLE with a minimum level of 40% of tank and a minimum pressure of 250 psig in the storage tank.

b. With one or more of the above required CO_2 systems inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment for those areas in which redundant systems or components could be damaged.

c. The Auxiliary Control Room CO_2 system shall be operated as a manual backup for the Halon System.

SURVEILLANCE REQUIREMENT

4.6.8 CARBON DIOXIDE SUPPRESSION SYSTEM

Applicability:

Applies to the periodic surveillance requirements of the carbon dioxide suppression system.

Objective:

To verify the operability of the carbon dioxide suppression system.

Specification:

a. The CO_2 system shall be demonstrated operable.

   1. At least once per 7 days by verifying the CO_2 storage tank level and pressure.

   2. At least once per 31 days by verifying that each valve, manual power operated or automatic, in the flow path is in its correct position.

   3. At least once every six months by verifying the system valves and associated ventilation dampers actuate automatically to a simulated actuation signal. A brief flow test shall be made to verify flow from each nozzle ("Puff Test").

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.6.8 CARBON DIOXIDE SUPPRESSION SYSTEM (Continued) d. Restore the system to OPERABLE status within 14 days or prepare and submit a report in accordance with 6.9.2.b.	

A low pressure carbon dioxide system is installed to serve seven different safety-related hazard points in the station indicated in Specification 3.6.8.a.

Supply is provided by a 10 ton tank of liquid carbon dioxide located on elevation 261 feet. The self-contained refrigeration unit maintains the liquid at 0°F with a resultant pressure of 300 psig. Carbon dioxide to the individual hazards is controlled by a series of carbon dioxide operated, pilot type master valves at the tank. Each of these valves serve a group of hazard valves of similar construction located at the individual areas.

Fire extinguishment by carbon dioxide is either by total flooding or local application. In total flooding, sufficient CO_2 is injected into a closed room or space to inert the atmosphere and suppress combustion. Local application is employed for unenclosed areas and involves application of CO_2 on the equipment protected to extinguish the fire with additional discharge to permit cooling and inhibit reflash.

The automatically actuated CO_2 systems employ either thermostats set at 225°F or smoke detectors to trip a timer located in the main cardox control cabinet. One or more sirens and a strobe light in the hazard area are initially operated for a pre-discharge period of 30 seconds to enable personnel to leave the area. The related master and hazard valves are then opened for a timed discharge period. Restoration of the CO_2 hazard area to service is accomplished manually by pushbutton at the fire control panel. Manual pushbutton stations are also located at the individual areas to initiate the cycle. The control switch for each area on the fire control panel has three positions and is normally set for "Automatic" operation. An "Alarm only" position permits greater safety when men are working in the hazard area and the 30 second delay may be insufficient.

A "Manual" position permits the operator to actuate the discharge cycle on his own initiative. An area pushbutton station will override the "Alarm only" setting on the Fire Control Panel. Due to the high rate of personnel access, and thus safety requirements, the Auxiliary Control Room CO_2 system is a manual system, used to backup a total flood automatic 6% Halon system.

All CO_2 systems except hose reels are provided with odorizing devices as a safety measure. A glass flask of wintergreen concentrate is inserted in a capped tee beyond each hazard valve. This flask ruptures upon operation of the hazard and must be replaced after each use.

In the event of total loss of D.C. control power to the CO_2 system, all master valves will open since their pilot valve solenoids are normally energized. The CO_2 system hazard valves remain closed since their pilot valve solenoids are normally de-energized. CO_2 can be discharged into an area by operating the manual lever provided in each pilot valve cabinet. This is a manual operation within predischarge alarm or timer.

The flow test ("Puff Test") of the CO_2 system is performed by closing the CO_2 tank valve. This allows only the CO_2 vapor in the line to be discharged to the various designated areas in the plant.

Carbon dioxide hose reels are provided at various points throughout the Turbine Building. These reels are provided with 150 feet of 1" high pressure hose with manual shutoff at the nozzle. Removal of the nozzle from its mounting bracket trips a switch which opens the master valve serving the hose reels. Carbon dioxide then flows to the nozzles of all hose reels. No odorant capsules are provided for hose reels. Certain hose stations are provided with timer operated bleeder valves to discharge vapor and speed arrival of liquid CO_2 at the hose station.

All system operations are monitored on the annunciator on the fire control panel.

LIMITING CONDITION FOR OPERATION

3.6.9 FIRE HOSE STATIONS

Applicability:

Applies to the operational status of the fire hose stations.

Objective:

To assure the capability of the fire hose stations to provide fire suppression in the event of a fire.

Specification:

a. The fire hose stations in the locations shown in Table 3.6.9a shall be operable.

b. With one or more of the fire hose stations shown in Table 3.6.9a inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an operable hose station within 1 hour if the inoperable fire hose is the primary means of fire suppression, otherwise route the additional hose within 24 hours.

c. Restore the inoperable fire hose station(s) to operable status within 14 days or prepare and submit a report in accordance with 6.9.2.b.

SURVEILLANCE REQUIREMENT

4.6.9 FIRE HOSE STATIONS

Applicability:

Applies to the periodic surveillance of the fire hose stations.

Objective:

To assure the operability of the fire hose station to provide fire suppression in the event of a fire.

Specification:

a. Each fire hose station shown in Table 3.6.9a shall be verified to be OPERABLE:

   1. At least once per 31 days by visual inspection of the fire hose stations accessible during plant operation to assure all required equipment is at the station.

b. At least once per operating cycle by:

   1. Visual inspection of the fire hose stations not accessible during plant operation to assure all required equipment is at the hose station.

   2. Removing the hose for inspection and re-racking.

   3. Inspecting all gaskets and replacing any degraded gaskets in the couplings.

LIMITING CONDITION FOR OPERATION

SURVEILLANCE REQUIREMENT

4.6.9 FIRE HOSE STATIONS (Continued)

c. At least once per 3 years by:

1. Partially opening each hose station valve to verify valve operability and no flow blockage.

2. Conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at any hose station.

Table 3.6.9a

FIRE HOSE STATIONS

	Building	Elevation (feet)	Column	Station Number
1.	TURBINE	267	Aa-7	FS-144
2.	TURBINE	267	C -3	FS-132
3.	TURBINE	267	G -2	FS-128
4.	TURBINE	267	H -9	FS-123
5.	REACTOR	346	L -12	FS-112
6.	REACTOR	346	P -4	FS-106
7.	REACTOR	324	K -11	FS-111
8.	REACTOR	324	P -5	FS-105
9.	REACTOR	309	K -11	FS-110
10.	REACTOR	304	P -5	FS-104
11.	REACTOR	287	K -11	FS-109
12.	REACTOR	287	P -5	FS-103
13.	REACTOR	267	K -11	FS-108
14.	REACTOR	267	P -5	FS-102
15.	REACTOR	243	K -11	FS-107
16.	REACTOR	243	P -5	FS-101
17.	WASTE	267	H -19	FS-301
18.	WASTE	267	MB-19	FS-300
19.	WASTE	267	MB-16	FS-116
20.	TURBINE	375	H -8	FS-126
21.	TURBINE	357	H -10	FS-121
22.	TURBINE	311	H -9	FS-125
23.	TURBINE	311	G -2	FS-130
24.	TURBINE	311	C -3	FS-134
25.	TURBINE	297	H -9	FS-124
26.	TURBINE	297	G -2	FS-129
27.	TURBINE	267	F -15	FS-117
28.	DIESEL	267	C -18	FS-164
29.	DIESEL	267	Ba-17	FS-166

Table 3.6.9a

FIRE HOSE STATIONS
(Continued)

	Building	Elevation (feet)	Column	Station Number
30.	TURBINE	256	Aa-13	FS-152
31.	DIESEL	256	Aa-17	FS-163
32.	DIESEL	256	C -17	FS-165
33.	TURBINE	256	H -9	FS-122
34.	TURBINE	267	Aa-14	FS-156
35.	TURBINE	267	B -2	FS-139
36.	TURBINE	267	P -14	FS-114
37.	TURBINE	297	C -3	FS-133
38.	TURBINE	283	B -2	FS-140
39.	TURBINE	283	Aa-7	FS-145
40.	TURBINE	283	Aa-13	FS-153
41.	TURBINE	283	F -15	FS-118
42.	TURBINE	256	Aa-7	FS-143
43.	TURBINE	256	B -2	FS-138
44.	TURBINE	256	C -3	FS-131
45.	TURBINE	256	G -2	FS-127
46.	TURBINE	256	M -13	FS-115
47.	SCREEN	256	UV-16	FS-408
48.	TURBINE	277	H -9	FS-405
49.	TURBINE	256	F -16	FS-406
50.	REACTOR	267	Track Bay	FS-401
51.	REACTOR	267	M -12	FS-422
52.	REACTOR	243	P -9	FS-402
53.	REACTOR	243	Drywell Entrance	FS-403
54.	REACTOR	243	P-Q	FS-404
55.	SCREEN	262	R-14	FS-113
56.	TURBINE	306	Aa-13	FS-154

LIMITING CONDITION FOR OPERATION

3.6.10 ADDITIONAL FIRE EQUIPMENT

3.6.10.1 FIRE BARRIER PENETRATIONS

Applicability:

Applies to the condition of the fire barrier penetrations, including cable penetration barriers, fire doors and fire dampers.

Objective:

To assure the capability of the fire barrier penetrations to perform their intended function.

Specification:

a. All fire barrier penetrations protecting safety related areas shall be intact.
b. With one or more of the above required fire barrier penetrations non-functional, within one hour establish a continuous fire watch on one side of the affected penetration, or
c. Verify the operability of fire detectors on one side of the non-functional fire barrier and establish a fire watch patrol.
d. Restore the non-functional fire barrier penetrations to functional status within 14 days or prepare and submit a report in accordance with 6.9.2.b.

SURVEILLANCE REQUIREMENT

4.6.10 ADDITIONAL FIRE EQUIPMENT

4.6.10.1 FIRE BARRIER PENETRATIONS

Applicability:

Applies to the periodic surveillance requirements for the fire barrier penetrations.

Objectives:

To verify the condition of the fire barrier penetrations.

Specification:

a. Fire barrier penetrations shall be verified to be functional by:

   1. A visual inspection at least once per opearting cycle.

   2. A visual inspection of a fire barrier penetration after repair or maintenance, prior to restoring the fire barrier penetration to functional status.

BASES FOR 3.6.10.1 AND 4.6.10.1 FIRE BARRIER PENETRATION FIRE SEALS

Cable penetrations of the primary containment (drywell and pressure suppression chamber), reactor building, auxiliary control room and the cable room have been designed to provide adequate fire stop and to prevent a fire from spreading through the penetration. Drywell and pressure suppression chamber penetrations are double-sealed, 12-inch pipes that are inerted with nitrogen. Reactor building penetrations consist of standard conduit (pipe) sleeves, which vary in diameter from 3/4" to 4" and which are sealed at both ends. The auxiliary control room and the cable room have formed pipe sleeves and cable tray penetrations. These sleeves and penetrations are sealed at the ends with rock-wool filler and externally applied fire-resistant material for fire proofing.

The local leak test required in Surveillance Requirement 4.6.10.1.a.2 will be performed by a non-hazardous method to ensure penetration integrity (an example of an acceptable local leak testing method is the "Downy Wand Test" or equivalent).

LIMITING CONDITION FOR OPERATION

3.6.10.2 HALON SUPPRESSION SYSTEM

Applicability:

Applies to the operational status of the Halon suppression system.

Objective:

To assure the capability of the Halon suppression system to provide fire suppression in the event of a fire.

Specification:

a. The Halon systems which supply the Auxiliary Control and Emergency Condenser I.V. Rooms shall be operable with the storage tanks having at least 95% of full charge weight (level) and 90% of full charge pressure.
b. With a Halon system inoperable, within one hour establish a continuous fire watch with backup fire suppression equipment.
c. Restore the system to operable status within 14 days or prepare and submit a report in accordance with 6.9.2.b.

SURVEILLANCE REQUIREMENT

4.6.10.2 HALON SUPPRESSION SYSTEM

Applicability:

Applies to the periodic surveillance requirement of the Halon suppression system.

Objective:

To verify the operability of the Halon suppression system.

Specification:

a. Each of the required Halon systems shall be demonstrated operable:

   1. At least once per 31 days by verifying that each valve, manual, power operated or automatic, in the flow path is in its correct position.

   2. At least once per 6 months by verifying Halon storage tank weight (level) and pressure.

   3. At least once per 18 months by:

      (a) Verifying the system and associated ventilation dampers and fire door release mechanisms actuate manually and automatically.

      (b) Performance of a flow test through headers and nozzles to assure no blockage.

BASES FOR 3.6.10.2 AND 4.6.10.2 HALON SUPPRESSION SYSTEM

The Halon 1301 fire protection systems are a gaseous fire suppressant system used in the Auxiliary Control and the Emergency Condenser Isolation Valve Rooms.

The Halon 1301 fire protection system is comprised of a fire detection system status monitoring network and a fire suppression system. The fire detection system's status monitoring network monitors the areas covered by the Halon 1301 systems for fire conditions and system abnormalities. The fire suppression system consists of storage tanks of Halon 1301 and a delivery system to route Halon 1301 to the affected area in the event of a fire.

Fire extinguishment by Halon 1301 is by total flooding. In total flooding, sufficient Halon is injected into the area to extinguish the fire.

Both Halon systems are provided with odorizing devices as a safety measure. A glass flask of wintergreen concentrate is inserted in a capped tee in the main line piping. This flask ruptures upon operation of the system and must be replaced after each operation.

A siren and strobe light in the protected area are initially operated for a pre-discharge period of 30 seconds to enable personnel to leave the area.

Both systems may be manually tripped, either from the Main Fire Control Panel or at the storage banks.

LIMITING CONDITION FOR OPERATION

3.6.10.3 YARD FIRE HYDRANTS AND HYDRANT HOSE HOUSES

Applicability:

Applies to the operational status of the Yard Fire Hydrants and Hose Houses.

Objectives:

To assure the capability of the yard fire hydrant to provide fire suppression in the event of a fire.

Specification:

a. The yard fire hydrants shown in Table 3.6.10.3a shall be operable.
b. With one or more of the yard fire hydrants or associated hydrant houses shown in Table 3.6.10.3a inoperable, route sufficient additional lengths of 2-1/2 inch diameter hose located in an adjacent operable hydrant hose house to provide service to the unprotected area(s) within one hour, if the inoperable fire hydrant is the primary means of fire suppression, otherwise, route an additional hose within 24 hours.
c. Restore the inoperable hydrant(s) and/or hose house(s) to operable status within 14 days or prepare and submit a report in accordance with 6.9.2.b.

SURVEILLANCE REQUIREMENT

4.6.10.3 YARD FIRE HYDRANTS AND HYDRANT HOSE HOUSES

Applicability:

Applies to the periodic surveillance requirement of the yard fire hydrants and associated hose houses.

Objective:

To assure the operability of the yard fire hydrant to provide fire suppression in the event of a fire.

Specification:

a. Each of the yard fire hydrants and associated hose houses shown in Table 3.6.10.3a shall be demonstrated operable:

   1. At least once per 31 days by visual inspection of the hydrant hose house to assure all required equipment is at the hose house.

   2. At least once per 6 months during March, April, May and during September, October and November by visually inspecting each yard fire hydrant and verifying that the hydrant barrel is dry and that the hydrant is not damaged.

   3. At least once per 12 months by:

      (a) Conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at any yard fire hydrant.
      (b) Replacement of all degraded gaskets in couplings.

TABLE 3.6.10.3a

YARD FIRE HYDRANTS AND ASSOCIATED HYDRANT HOSE HOUSES

Hydrant Number	Location
3	El. 261' - West
4	El. 261' - Southwest