

Attachment A

Niagara Mohawk Power Corporation

License No. DPR-63

Docket No. 50-220

Proposed Changes To Technical Specifications

Attached are revised Pages 241r, 241t, 241u,  
241v, 241w and 245a. The marginal markings  
indicate the specific changes to the text.

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LIMITING CONDITION FOR OPERATION

- e. The spray and sprinkler systems located in the following areas shall be OPERABLE:
  - 1. Automatic water spray systems
    - (a) Reserve Transformer 101K
    - (b) Reserve Transformer 101S
  - 2. Automatic Sprinkler System for the Diesel Fire Pump Room in the Screen House.
- f. With a spray or sprinkler system inoperable, establish a continuous fire patrol with backup fire suppression equipment for the unprotected area(s), within one hour.
- g. Restore the system to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission within the next 30 days outlining the cause of inoperability and the plans for restoring the system to OPERABLE status.

SURVEILLANCE REQUIREMENT

- 2. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-55, is within the acceptable limits specified in Table 1 of ASTM D975-74 with respect to viscosity, water control, and sediment.
- 3. At least once per 18 months, by 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  $\geq 20$  minutes while loaded with the fire pump.
- c. The spray systems shall be demonstrated to be OPERABLE:
  - 1. At least once per year by cycling each manually operable valve through one complete cycle.
  - 2. 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.
    - (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.

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.

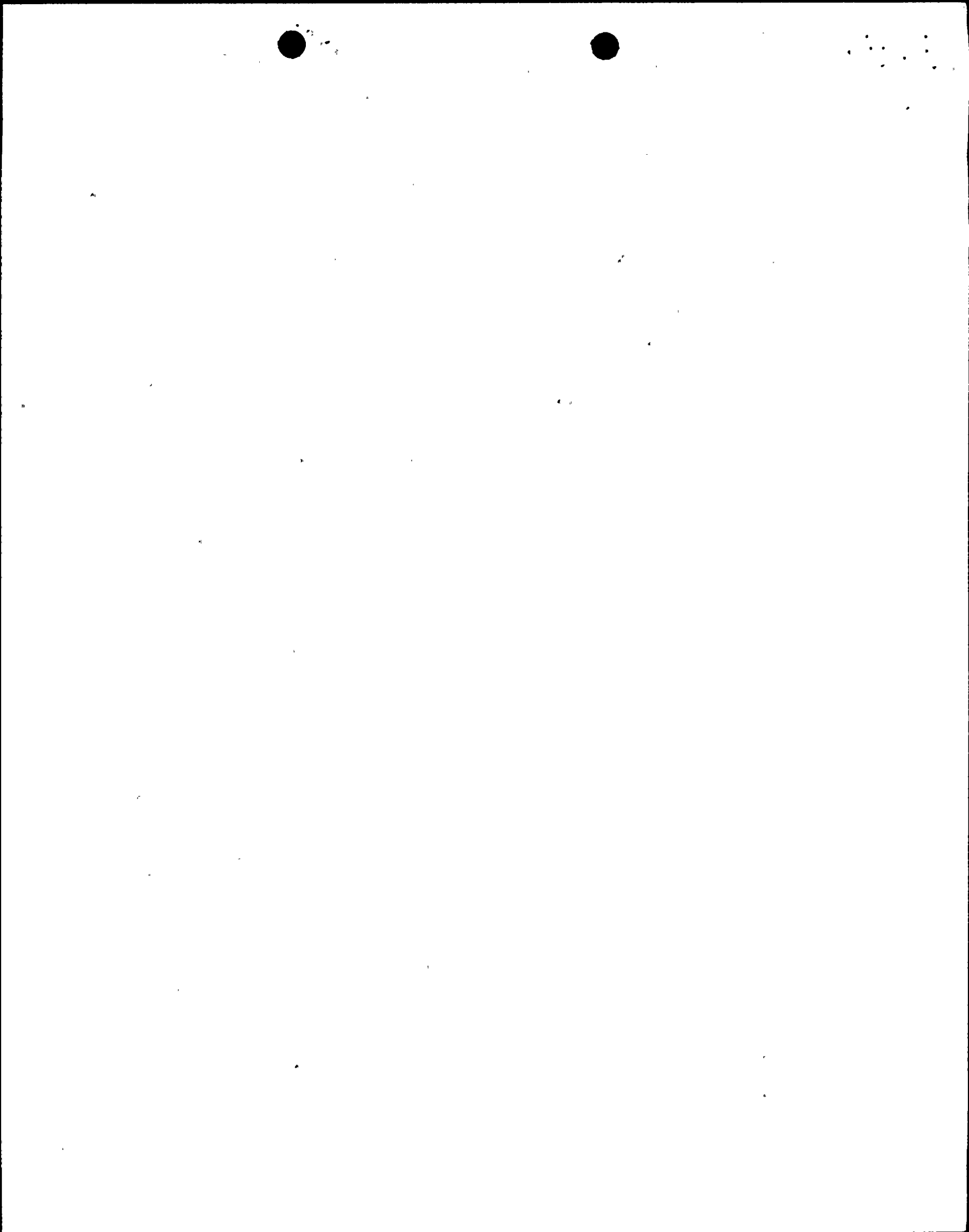
The backup water supply system referenced in Specification 3.6.7.c.2 is the Oswego City water system, which can be connected to the fire main if required.

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.



### 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<sub>2</sub> system, which supplies the Recirculation Pumps Motor-Generator Sets, Power Boards 103 and 104, Diesel Generators 102 and 103 and the 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 a CO<sub>2</sub> system inoperable establish a continuous fire patrol with backup fire suppression equipment for the unprotected area(s) within one hour.
- c. The Auxiliary Control Room shall be operated in the "Alarm Only" mode.

### 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<sub>2</sub> system shall be demonstrated OPERABLE
  1. At least once per 7 days by verifying the CO<sub>2</sub> storage tank level and pressure.
  2. At least once per operating cycle 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.")



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LIMITING CONDITION FOR OPERATION

3.6.8 CARBON DIOXIDE SUPPRESSION SYSTEM (Continued)

- d. Restore the system to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission within the next 30 days outlining the cause of inoperability and the plans for restoring the system to operable status.



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 ft. 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<sub>2</sub> 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<sub>2</sub> on the equipment protected to extinguish the fire with additional discharge to permit cooling and inhibit reflash.

The automatically actuated CO<sub>2</sub> 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 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<sub>2</sub> hazard area to service is accomplished manually by push-button at the fire control panel. Manual push-button 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 push-button 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<sub>2</sub> System is normally in the "Alarm Only" setting. In addition, a manual block valve is installed down stream of the hazard valve for the Auxiliary Control Room.

All CO<sub>2</sub> 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<sub>2</sub> system, all master valves will open since their pilot valve solenoids are normally energized. The CO<sub>2</sub> system hazard valves remain closed since their pilot valve solenoids are normally de-energized. CO<sub>2</sub> can be discharged into a area by operating the manual lever provided in each pilot valve cabinet. This is a manual operation within pre-discharge alarm or timer.

The flow test ("Puff Test") of the CO<sub>2</sub> system is performed by closing the CO<sub>2</sub> tank valve, which automatically trips the system (opens the master and selector valves). This allows only the CO<sub>2</sub> 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



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Facility Staff (Cont'd)

- f. A Fire Brigade of five (5) members shall be maintained on site at all times. This excludes two (2) members of the minimum shift crew necessary for safe shutdown and any personnel required for other essential functions during a fire emergency.



ATTACHMENT B

Niagara Mohawk Power Corporation

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Supporting Information

The purpose of these changes is to make corrections for typographical errors in the Fire Protection Technical Specifications, and to further clarify the intent of these specifications. Following is a discussion of the specific changes:

Page 241r

Under the Limiting Condition for Operation, Paragraph "f" has been changed to indicate that, with a spray or sprinkler system inoperable, a continuous fire patrol will be established rather than a continuous fire watch. This change will allow operational flexibility while complying with the intent of proper fire protection.

Under Surveillance Requirement, Paragraph 3, "during a refueling outage" is deleted. A refueling outage is not required for the inspection of the diesel.

Page 241t

Elevation 261' has been changed to 254'. Elevation 254' is the proper elevation.

Page 241u

Paragraph a of the Limiting Conditions for Operation is revised to remove the Auxiliary Control Room. (See discussion for Paragraph c.)

Paragraph b of the Limiting Condition for Operation Specification has been changed to allow operational flexibility (see the discussion of Page 241r above).

Paragraph c is added to indicate that the Auxiliary Control Room CO<sub>2</sub> System is normally operated in the manual mode. Personnel safety is the reason for the manual operation. Since the Auxiliary Control Room is frequently manned, it has been postulated that automatic initiation of the CO<sub>2</sub> System could be hazardous to the Operating Staff.

Page 241v

Paragraph c under Limiting Condition for Operation is changed to d as a result of the addition of Paragraph c on Page 241u.

Page 241w

In the Bases for 3.6.8 and 4.6.8 "Carbon Dioxide Suppression System" the term "selector valve" has been changed to "hazard valve" in four portions of the text. The purpose of this change is to more properly define these valves.





Supporting Information

(Continued)

Page 241w  
(Cont'd)

The Auxiliary Control Room CO<sub>2</sub> System will not be operated in the "Automatic" mode, since it is frequently habitated by station personnel. The thirty-second delay may not provide adequate time for evacuation if the system is initiated. Therefore, the system will be operated in "alarm only", and initiated by Operating personnel.

In order to provide a higher degree of safety, Niagara Mohawk is designing a 6% Halon System which will initiate automatically. This system will be operable by October 1, 1980.

Page 245a

The first sentence of Paragraph "f" under the Facility Staff is changed from "A Fire Brigade of four (5) members..." to "A Fire Brigade of five (5) members..." The purpose of this change is to correct a typographical error.



Attachment C

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Amendment Classification

Based upon the July 26, 1979 transmittal letter from Mr. Thomas A. Ippolito to Mr. D. P. Dise which accompanied Amendment No. 33 to Facility Operating License, Niagara Mohawk Power Corporation believes that a license fee is not required for these changes.

