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

ROCHESTER GAS AND ELECTRIC CORPORATION

DOCKET NO. 50-244

R. E. GINNA NUCLEAR POWER PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 51
License No. DPR-18

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

   A. The application for amendment filed by the Rochester Gas and Electric Corporation (the licensee) dated October 8, 1992, 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-18 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 51 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 30 days after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Walter R. Butler

Walter R. Butler, Director
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 13, 1993

ATTACHMENT TO LICENSE AMENDMENT NO. 51

FACILITY OPERATING LICENSE NO. DPR-18

DOCKET NO. 50-244

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove	Insert
3.5-14	3.5-14
3.7-1	3.7-1
3.7-2	3.7-2
3.7-3	3.7-3
-	3.7-3a
3.7-5	3.7-5
3.7-6	3.7-6
-	4.6-4a
4.6-5	4.6-5
4.6-5A	4.6-5A

7. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 1 hour. Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of a trip signal, operation may proceed until this Channel Functional Test. At the time of this Channel Functional Test, or if at any time the number of operable channels is less than the Minimum Operable Channels, either

   a) be at Hot Shutdown within the next 6 hours and an RCS temperature less than 350°F within the following 6 hours, or

   b) energize the affected bus with a diesel generator.

8. With the number of operable channels one less than the Minimum Operable Channels required, restore the inoperable channel to operable status within 48 hours or be in Hot Shutdown within the next 6 hours and at an RCS temperature less than 350°F within the following 6 hours.

9. With the number of operable channels one less than the Total Number of Channels required, operation may proceed until the next Channel Functional Test provided the inoperable channel is placed in the tripped position within 1 hour. At the next Channel Functional Test, or at any time the number of operable channels is less than the Minimum Operable Channels required, be at Hot Shutdown within the next 6 hours and at an RCS temperature less than 350°F within the following 6 hours.

10. With the number of operable channels one less than the Minimum Operable Channels required, restore the inoperable channel to operable status within 48 hours or be in Hot Shutdown within an additional 6 hours, and at cold shutdown within the following 30 hours.

11. With the number of operable channels less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the tripped condition within 2 hours. Should the next Channel Functional Test require the bypass of an inoperable channel to avoid the generation of an actuation signal, operation may proceed until this Channel Functional Test. At the time of this Channel Functional Test, or if at any time the number of operable channels is less than the Minimum Operable Channels required, be at Hot Shutdown within 6 hours and at Cold Shutdown within the following 30 hours.

3.7 AUXILIARY ELECTRICAL SYSTEMS

Applicability

Applies to the availability of electrical power for the operation of plant auxiliaries.

Objective

To define those conditions of electrical power availability necessary to provide for the continuing availability of engineered safeguards.

3.7.1 Specification

3.7.1.1 When in cold shutdown or refueling, with fuel in the reactor vessel, the following conditions are to be met:

a. One independent offsite power source operable, or backfeed through unit auxiliary transformer 11; and

b. One train of 480-volt buses (14 and 18, or 16 and 17) operable; and

c. One diesel generator operable with onsite supply of 5,000 gallons of fuel available and either buses 14 and 18, or 16 and 17, capable of being supplied from that diesel generator.

d. One battery and one dc system, and at least 150 amps of battery charger capacity to the battery must be operable.

e. Either 120 volt A.C. Instrument Bus 1A or 1C energized from its associated inverter.

3.7.1.2 Actions To Be Taken If Conditions of 3.7.1.1 Are Not Met: With less than the above minimum required power source operable, immediately suspend all operations involving positive reactivity changes, core alterations, movement of

irradiated fuel and initiate corrective action to restore the required power sources to operable status.

3.7.2 Specification

3.7.2.1 The reactor coolant system shall not be taken above the mode indicated unless the following conditions are met:

a. Above cold shutdown;

1. One independent offsite power source operable.
2. the 480-volt buses 14 and 18 (Train A) and buses 16 and 17 (Train B) are energized.
3. the two diesel generators are operable with onsite supply of 5,000 gallons of fuel available for each diesel generator.
4. both batteries and both dc systems are operable.
5. at least 150 amps of battery charging capacity for each DC system that is in service.
6. 120 volt A.C. Instrument Buses 1A and 1C are energized from their associated inverters.
7. 120 volt A.C. Instrument Bus 1B is energized from its associated constant voltage transformer from MCC 1C.

b. Above 350°F:

1. All conditions of 3.7.2.1a above are met; and
2. Two offsite sources (34.5 kv-4160 volt station service transformers, 12A with dedicated circuit 751, and 12B with dedicated circuit 767) are operable.

3.7.2.2 Actions To Be Taken If Conditions of 3.7.2.1 Are Not Met:

a. Operation above 350°F may continue with one offsite source inoperable, provided all remaining conditions of 3.7.2.1 are met.

b. With one or both independent offsite sources operable, and one diesel generator inoperable above cold shutdown, demonstrate the operability of the remaining diesel generator by:

1. Performing the surveillance requirements identified in Specifications 4.6.1.b.4 and 4.6.1.b.6 within 1 hour and at least once per 24 hours thereafter and restore the inoperable diesel generator to operable status within 7 days; OTHERWISE:
2. Reduce to a mode equal to or below hot shutdown within the next 6 hours and be in cold shutdown within the following 30 hours.

c. With one safety related 480V Bus (i.e., bus 14 or 16 or 17 or 18) de-energized, re-energize the bus within 1 hour or reduce to a mode equal to or below hot shutdown within the next 6 hours and be in cold shutdown within the following 30 hours, unless corrective actions are complete that permit continued operation (i.e., the bus is returned to service).

d. With both independent offsite sources inoperable, both diesel generators must be operable. In addition, restore one independent offsite source within 72 hours, or reduce to a mode equal to or below hot shutdown within the next 6 hours and be in cold shutdown within the following 30 hours.

e. Operation above cold shutdown may continue if less than 150 amps of battery charging capacity is available to one dc system, provided at least 150 amps of battery charging capacity is available to each dc system within 2 hours. If not available, reduce to a mode equal to or below hot shutdown within the next 6 hours and be in cold shutdown within the following 30 hours.

f. With either Instrument Bus 1A or 1C not energized from its associated inverter:

1. Re-energize the bus within 2 hours (backup or maintenance supply), AND
2. Re-energize the bus from a safety related supply (backup or inverter) within 24 hours, AND
3. Re-energize the bus from its associated inverter within 72 hours, OTHERWISE
4. Reduce to a mode equal to or below hot shutdown within the next 6 hours and be in cold shutdown within the following 30 hours.

g. With Instrument Bus 1B not energized from its associated constant voltage transformer (CVT) from MCC 1C:

1. Re-energize the bus within 2 hours (maintenance supply), AND
2. Re-energize the bus from its associated CVT from MCC 1C within 7 days, OTHERWISE
3. Reduce to a mode equal to or below hot shutdown within the next 6 hours and be in cold shutdown within the following 30 hours.

Safe shutdown of the plant, and (2) the mitigation and control of accident conditions within the plant.

When the RCS is above cold shutdown, both emergency diesel generators are required to be operable. The two diesel generators have sufficient capacity to start and run all the engineered safeguards equipment at design loads. The safeguards equipment operated from one diesel generator can adequately cool the core and maintain the containment pressure within the design value for any loss of coolant incident. The minimum diesel fuel oil inventory is maintained to assure that both diesels can operate at their design ratings for 24 hours. This assures that both diesels can carry the design loads of required engineered safeguards equipment for any loss of coolant accident conditions for at least 40 hours, or for one engineered safety feature train for 80 hours. [1] Commercial oil supplies and trucking facilities exist to assure deliveries within 8 hours.

The offsite power source consists of separate dedicated 34.5 kv-4160 volt station service transformers served by dedicated 34.5 kv lines (12A transformer with dedicated circuit 751, or 12B transformer with dedicated circuit 767) in operable status. Either offsite source of power can supply all auxiliary loads and transfer can be accomplished within the time constraints of GDC 17. Thus, GDC 17 is explicitly met.

With fuel in the reactor vessel a minimum of one offsite source, one onsite source of AC power and one DC power train are required. The offsite power source may be provided by one of three configurations:

1. Transformer 12A served by a dedicated 34.5 kv line (circuit 751), or
2. Transformer 12B served by a dedicated 34.5 kv line (circuit 767), or
3. Backfeed through unit auxiliary transformer 11.

The offsite power source is the preferred source of AC power. Operability of an offsite source requires that one station service transformer served by a dedicated 34.5 kv line is operating and providing power to the unit. The emergency diesel generator provides power upon loss of the offsite source. One emergency diesel generator with 5,000 gallons of fuel can provide power to a minimum level of engineered safeguards equipment for 40 hours (the required safeguards loads at cold shutdown/refueling are significantly less than during power operation). One operable diesel fuel oil transfer pump is required to supply fuel from one of the two fuel storage tanks to the day tank of the operable diesel generator. With less than one offsite AC power source, and one onsite AC power source, one DC power train, and one battery backed instrument bus available, no operations involving positive reactivity changes, core alterations, and movement of irradiated fuel shall occur.

Battery chargers with at least 150 amps capacity shall be in service for each battery so that the batteries will always be at full charge. This ensures that adequate dc power will be available.

The plant can be safely shutdown without the use of offsite power since all vital loads (safety systems, instruments, etc.) can be supplied from the emergency diesel generators and the station batteries. Instrument Buses 1A, 1B, and 1C provide power to vital plant instrumentation. All three buses are backed up by safety related emergency supplies; bus 1A from battery 1A, bus 1C from battery 1B, and bus 1B from diesel generator 1A.

4.6.4 Instrument Buses

Each safety related instrument bus required to be operable, shall be demonstrated operable at least once per 7 days by:

1. Verifying nominal voltage indications on the Instrument Buses 1A, 1B, 1C.
2. Verifying proper supply breaker alignment for Instrument Buses 1A, 1B, and 1C.
3. Verifying proper static switch alignment for Instrument Buses 1A and 1C.

Basis

The tests specified are designed to demonstrate that the diesel generators will provide power for operation of equipment. They also assure that the emergency generator system controls and the control systems for the safeguards equipment will function automatically in the event of a loss of all normal 480V AC station service power. (1)

The testing frequency specified will be often enough to identify and correct any mechanical or electrical deficiency before it can result in a system failure. The fuel supply and starting circuits and controls are continuously monitored and any faults are indicated by alarm. An abnormal condition in these systems can be identified without having to test the diesel generators.

Periodic tests are also specified to demonstrate that the offsite power sources will provide power for operation of equipment.

Offsite power source operability requires correct breaker alignment and indicated power availability from the two preferred power circuits, 767 and 751, to the 4160 volt buses. These requirements are met by monitoring nominal voltage indications on the high-voltage side of transformers 12A and 12B; and on the 4160 volt buses 12A and 12B.

Offsite power source independence requires separate 4160 volt circuits supplying power to the 4160 volt buses. Interlocks prevent concurrent closure of 12AX and 12BX, OR 12AY and 12BY; and surveillance is specified to ensure separation is maintained.

Instrument bus power source operability requires correct breaker alignment and indicated power availability. These requirements are met by monitoring nominal voltage indications on the buses and proper breaker alignment.

Furthermore, to assure independence between redundant Class 1E 480 volt buses 14 and 18 (Train A) and buses 16 and 17 (Train B), tie breakers 52/BT16-14 and 52/BT17-18 are required to be open when the plant mode is above 200°F. Once tie breakers are open, interlocks prevent closure when independent and redundant buses are energized.

Station batteries may deteriorate with time, but precipitous failure is extremely unlikely. The surveillance specified is that which has been demonstrated over the years to provide an indication of a cell becoming unserviceable long before it fails, and to ensure that the battery capacity is acceptable.

The equalizing charge, as recommended by the manufacturer, is vital to maintaining the ampere-hour capability of the battery. As a check upon the effectiveness of the equalizing charge, the battery should be loaded rather heavily and the voltage monitored as a function of time. If a cell has deteriorated or if a connection is loose, the voltage under load will drop excessively indicating replacement or maintenance.

The minimum permissible on-site fuel inventory, 10,000 gallons, (5,000 gallons for each generator), is sufficient for operation under loss-of-coolant accident conditions of two engineered safety features trains for 40 hours, or for one train for 80 hours, or for operation of both diesel generators at their design ratings for 24 hours. (2)

References

(1) UFSAR, Section 8.3

(2) UFSAR, Section 9.5.4