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 PROVISIONAL OPERATING LICENSE

Amendment No. 36
License No. DPR-18

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

   A. The application for amendment by Rochester Gas and Electric Company (the licensee) dated November 12, 1980 (transmitted by letter dated November 17, 1980) 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 by changing paragraph 2.C(2) of Provisional Operating License No. DPR-18 to read as follows:

2.C(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 36 , 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 issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Dennis M. Crutchfield

Dennis M. Crutchfield, Chief
Operating Reactors Branch #5
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 2, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 36

PROVISIONAL OPERATING LICENSE NO. DPR-18

DOCKET NO. 50-244

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages contain the captioned amendment number and vertical lines which indicate the area of changes.

REMOVE	INSERT
ii	ii
3.8-2	3.8-2
-	3.8-2a
3.8-4	3.8-4
3.11-2	3.11-2
3.11-3	3.11-3
3.11-4	3.11-4
4.11-1	4.11-1
4.11-2	4.11-2
-	4.11-3

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least one source range netron flux monitor shall be in service.

d. At least one residual heat removal loop shall be in operation.*

e. Immediately before reactor vessel head removal and while loading and unloading fuel from the reactor, the minimum boron concentration of 2000 ppm shall be maintained in the primary coolant system and checked by sampling twice each shift.

f. Direct communication between the control room and the refueling cavity manipulator crane shall be available whenever changes in core geometry are taking place.

g. In addition to the requirements of paragraph 3.8.1.d, while in the refueling mode with less than 23 feet of water above the top of the reactor vessel flange, two residual heat removal loops shall be operable.*

h. During movement of fuel or control rods within the reactor vessel cavity, at least 23 feet of water shall be maintained over the top of the reactor vessel

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* Either the normal or the emergency power source may be inoperable for each residual heat removal loop.

flange. If this condition is not met, all operations involving movement of fuel or control rods in the reactor vessel shall be suspended.

3.8.2 If any of the specified limiting conditions for refueling is not met, refueling of the reactor shall cease; work shall be initiated to correct the violated conditions so that the specified limits are met; no operations which may increase the reactivity of the core shall be made.

Basis:

The equipment and general procedures to be utilized during refueling are discussed in the FSAR. Detailed instructions, the above specified precautions, and the design of the fuel handling equipment incorporating built-in interlocks and safety features, provide assurance that no incident could occur during the refueling operations that would result in a hazard

provided on the lifting hoist to prevent movement of more than one fuel assembly at a time. The spent fuel transfer mechanism can accommodate only one fuel assembly at a time. In addition interlocks on the auxiliary building crane will prevent the trolley from being moved over storage racks containing spent fuel.

The operability requirements for residual heat removal loops will ensure adequate heat removal while in the refueling mode. The requirement for 23 feet of water above the reactor vessel flange while handling fuel and fuel components in containment is consistent with the assumptions of the fuel handling accident analysis.

References:

(1) FSAR - Section 9.5.2

(2) Table 3.2.1-1

(3) FSAR - Section 9.3.1

e. Charcoal adsorbers shall be installed in the ventilation system exhaust from the spent fuel storage pit area and shall be operable.

3.11.2 Radiation levels in the spent fuel storage area shall be monitored continuously.

3.11.3 The trolley of the auxiliary building crane shall never be stationed or permitted to pass over storage racks containing spent fuel.

3.11.4 Fuel assemblies with less than 60 days since irradiation shall not be placed in storage positions with less spacing between them than that indicated in Figure 3.11-1 by the designation RDF.

3.11.5 The spent fuel pool temperature shall be limited to 150°F.

3.11.6 The spent fuel shipping cask shall not be carried by the auxiliary building crane, pending the evaluation of the spent fuel cask drop accident and the crane design by RG&E and NRC review and approval.

Basis:

Charcoal adsorbers will reduce significantly the consequences of a refueling accident which considers the clad failure of a single irradiated fuel assembly. Therefore, charcoal adsorbers should be employed whenever irradiated fuel is being handled. This requires that the ventilation system should be operating and drawing air through the adsorbers.

The desired air flow path, when handling irradiated fuel, is from the outside of the building into the operating floor area, toward the spent fuel storage pit, into the area exhaust ducts, through the

adsorbers, and out through the ventilation system exhaust to the facility vent. Operation of a main auxiliary building exhaust fan assures that air discharged into the main ventilation system exhaust duct will go through a HEPA and be discharged to the facility vent. Operation of the exhaust fan for the spent fuel storage pit area causes air movement on the operating floor to be towards the pit. Proper operation of the fans and setting of dampers would result in a negative pressure on the operating floor which will cause air leakage to be into the building. Thus, the overall air flow is from the location of low activity (outside the building) to the area of highest activity (spent fuel storage pit). The exhaust air flow would be through a roughing filter and charcoal before being discharged from the facility. The roughing filter protects the adsorber from becoming fouled with dirt; the adsorber removes iodine, the isotope of highest radiological significance, resulting from a fuel handling accident. The effectiveness of charcoal for removing iodine is assured by having a high throughput and a high removal efficiency. The throughput is attained by operation of the exhaust fans. The high removal efficiency is attained by minimizing the amount of iodine that bypasses the charcoal and having charcoal with a high potential for removing the iodine that does pass through the charcoal.

The minimum spacing specified for fuel assemblies with less than 60 days decay is based on maintaining the potential release of fission products that could occur should an object fall on and damage stored fuel to less than that which could have occurred with fuel stored in the original fuel storage racks.

The spent fuel pool temperature is limited to 150°F because if the spent fuel pool cooling system is lost at that temperature, sufficient time (approximately 7 hours) is available to provide back-up cooling, assuming the maximum anticipated heat load (full core discharge & previously stored fuel), until a temperature of 180°F is reached, the temperature at which the structural integrity of the pool was analyzed and found acceptable.

References

(1) FSAR - Section 9.3-1

(2) ANS-5.1 (N 18.6), October 1973

The spent fuel pool temperature is limited to 150°F because if the spent fuel pool cooling system is lost at that temperature, sufficient time (approximately 7 hours) is available to provide back-up cooling, assuming the maximum anticipated heat load (full core discharge & previously stored fuel), until a temperature of 180°F is reached, the temperature at which the structural integrity of the pool was analyzed and found acceptable.

References

(1) FSAR - Section 9.3-1

(2) ANS-5.1 (N 18.6), October 1973

4.11 Refueling

Applicability

Applies to refueling and to fuel handling in the spent fuel pit.

Specification

4.11.1 Spent Fuel Pit Charcoal Adsorber System

4.11.1.1 Within 60 days prior to each major fuel handling*, the spent fuel pit charcoal adsorber system shall have the following conditions demonstrated. After the conditions have been demonstrated, the occurrence of painting, fire or chemical release in any ventilation zone communicating with the spent fuel pit charcoal adsorber system shall require that the following conditions be redemonstrated before major fuel handling* may continue.

a. The total air flow rate from the charcoal adsorbers shall be at least 75% of that measured with a complete set of new adsorbers.

b. In-place Freon testing, under ambient conditions, shall show at least 99% removal.

c. The results of laboratory analysis on a carbon sample shall show 90% or greater radioactive methyl iodide removal when tested at at least 150°F and 95% RH and at 1.5 to 2.0 mg/m^3 loading with tagged CH_3I.

*Major fuel handling is considered as removal of 20% or more of the fuel assemblies from the reactor vessel.

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d. Flow shall be maintained through the system using either the filter or bypass flow path for at least 15 minutes each month.

4.11.1.2 After each replacement of a charcoal filter drawer or after any structural maintenance on the charcoal housing for the spent fuel pit charcoal adsorber system, the condition of Specification 4.11.1.1.b shall be demonstrated for the affected portion of the system.

4.11.2 Residual Heat Removal and Coolant Circulation

When the water level above the top of reactor vessel flange is less than 23 feet, both RHR pumps shall be verified to be operable by performing the surveillance specified in the Inservice Pump and Valve Test Program prepared pursuant to 10 CFR 50.55a.

4.11.3 Water Level - Reactor Vessel

4.11.3.1 The water level in the reactor cavity shall be determined to be at least its minimum required depth within 2 hours prior to the start of and at least once per 24 hours thereafter during movement of fuel assemblies or control rods in containment.

Basis

The measurement of the air flow assures that air is being withdrawn from the spent fuel pit area and passed through the adsorbers. The flow is measured prior to employing the adsorbers to establish that

there has been no gross change in performance since the system was last used. The Freon test provides a measure of the amount of leakage from around the charcoal adsorbent.

The ability of charcoal to adsorb iodine can deteriorate as the charcoal ages and weathers. Testing the capacity of the charcoal to adsorb iodine assures that an acceptable removal efficiency under operating conditions would be obtained. The difference between the test requirement of a removal efficiency of 90% for methyl iodine and the percentage assumed in the evaluation of the fuel handling accident provides adequate safety margin for degradation of the filter after the tests.

Retesting of the spent fuel pit charcoal adsorber system in the event of painting, fire, or chemical release is required only if the system is operating and is providing filtration for the area in which the painting, fire, or chemical release occurs.

Testing of the air filtration systems will be tested, to the extent it can be given the configuration of the systems, in accordance with ANSI N510-1975, "Testing of Nuclear Air-Cleaning Systems".

The operability requirements for residual heat removal loops will ensure adequate heat removal while in the refueling mode. The requirement for 23 feet of water above the reactor vessel flange while handling fuel and fuel components in containment is consistent with the assumptions of the fuel handling accident analysis.

Reference:

(1) Letter from E. J. Nelson, Rochester Gas and Electric Corporation to Dr. Peter A. Morris, U.S. Atomic Energy Commission, dated February 3, 1971