MAY 08 1986

Docket No. 50-244

Mr. Roger W. Kober, Vice President
Electric and Steam Production
Rochester Gas & Electric Corp.
89 East Avenue
Rochester, New York 14649

Dear Mr. Kober:

SUBJECT: TECHNICAL SPECIFICATIONS ON BATTERY DISCHARGE TESTING

Re: R. E. Ginna Nuclear Power Plant

The Commission has issued the enclosed Amendment No.14 to Facility Operating License No. DPR-18 for the R. E. Ginna Nuclear Power Plant. This amendment is in response to your application dated August 1, 1983 as revised by your October 26, 1983 submittal. The amendment approves changes to the Technical Specifications which add the requirement to perform a periodic battery discharge test.

A copy of our related Safety Evaluation is also enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice. This action completes our TAC No. 57797.

Sincerely,

Morton B. Fairtile, Project Manager
Project Directorate #1
Division of PWR Licensing-A

Enclosures:
1. Amendment No.14 to License No. DPR-18
2. Safety Evaluation

cc w/encl:
See Next Page

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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. 14
License No. DPR-18

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

   A. The application for amendment by Rochester Gas and Electric Corporation (the licensee) dated August 1, 1983 as modified October 26, 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-18 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 14 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION

George E. Lear, Director
Project Directorate #1
Division of PWR Licensing-A

Enclosure:
Changes to the Technical
Specifications

Date of Issuance: May 8, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 14

FACILITY 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 are identified by the captioned amendment number and contain marginal lines indicating the area of change.

REMOVE	INSERT
4.6-4	4.6-4
4.6-5	4.6-5
	4.6-5a

c. At each time data is recorded, new data shall be compared with old to detect signs of abuse or deterioration.

d. Each battery shall be subjected to a load test within a twelve-month period from the last load test; however, to permit the load test to coincide with a scheduled refueling, the period may extend for an additional three months. The battery voltage as a function of time shall be monitored to establish that the battery performs as expected during heavy discharge and that all electrical connections are tight.

e. Each battery shall be subject to a discharge test at least once per 60 months. The purpose of this test is to show that the battery capacity is at least 80% of the manufacturer's recommendations. When performed, this discharge test may substitute for the load test.

f. The discharge test shall be performed annually for any battery that shows signs of degradation. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous discharge tests, or is below 90% of the manufacturer's rating.

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 would be signaled without having to place the diesel generators themselves on test.

Station batteries will 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 oil inventory, 10,000 gallons, is sufficient for operation under loss-of-coolant accident conditions of two engineered safety features trains for 48 hours, or for one train for 80 hours, or for operation under hot standby non-accident conditions for 111 hours. (2)

References

(1) FSAR, Section 8.2

(2) FSAR, Section 8.2.3

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 14 TO FACILITY OPERATING LICENSE NO. DPR-18

ROCHESTER GAS AND ELECTRIC CORPORATION

R. E. GINNA NUCLEAR POWER PLANT

DOCKET NO. 50-244

1.0 Introduction

By letter dated August 1, 1983, Rochester Gas and Electric Corporation (the licensee, RG&E) requested an amendment to the Ginna Technical Specifications (TS) which consisted of five parts. Four of these five parts were approved in Amendment 11 to the license, dated July 30, 1985. The fifth proposed change, which relates to battery discharge testing, was revised by RG&E letter dated October 26, 1983 and is discussed below.

2.0 Background

The staff reviewed the testing requirement for the onsite Class 1E station batteries under SEP Topic VIII-3.A, Battery Capacity Tests. The criteria for this review included Regulatory Guide 1.129 Maintenance, Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants, which endorses Institute of Electrical and Electronics Engineers (IEEE) Standard 450-1975, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations." These criteria recommend both service and discharge tests. The purpose of the service test is to verify that the battery capacity is adequate to supply emergency loads for a specified period of time. The battery discharge test verifies that battery capacity continues to meet the manufacturer's rating.

The staff's topic review, transmitted by letter dated July 31, 1981, found that battery discharge tests were not being performed for the batteries at Ginna. The licensee performed a battery discharge test

during the Spring 1982 refueling outage and committed in a January 15, 1982 letter to propose appropriate changes to the Technical Specifications for periodic battery discharge testing. This commitment was reflected in Section 3.3.8 of the Integrated Plant Safety Assessment Report (IPSAR) for Ginna, NUREG-0821.

3.0 Evaluation

In the topic evaluation in 1981 the staff proposed the following addition to the Technical Specifications for testing of station batteries:

> At least once per 60 months, during shutdown, a battery discharge test should be performed to verify that the battery capacity is at least 80% of the manufacturer's rating.

By letter dated August 1, 1983, the licensee submitted an application to amend the technical specifications to add TS 4.6.2.e, to read as follows:

> "Each battery shall be subject to a discharge test at least once per 60 months. The purpose of this test is to show that the battery capacity is at least 80% of the manufacturer's recommendations."

The licensee also proposed an addition to the basis of this TS for consistency. Since this change was responsive to the staff's request for verification of battery capacity, and was an additional requirement on the licensee, the staff would find this proposal acceptable.

During the course of the review of this change the staff noted that IEEE Std. 450-1975 also specifies that the battery discharge test frequency should be increased to annually for any battery that shows signs of degradation. This requirement was not identified in the original staff request. The intent of this requirement is to test more frequently if a battery is losing capacity so as to ensure adequate capacity will be available if battery use is needed. Therefore, the staff requested the licensee to supplement the August 1, 1983 submittal to include such a requirement.

By letter dated October 26, 1983, the licensee proposed to modify the original proposed change as follows:

4.6.2.e Each battery shall be subject to a discharge test at least once per 60 months. The purpose of this test is to show that the battery capacity is at least 80% of the manufacturer's recommendations. When performed, this discharge test may substitute for the load test.

4.6.2.f The discharge test shall be performed annually for any battery that shows signs of degradation. Degradation is indicated when the battery capacity drops more than 10% of rated capacity from its average on previous discharge tests, or is below 90% of the manufacturer's rating.

The definition of degradation proposed by the licensee in the second sentence of 4.6.2.f is the same as specified in the IEEE Standard and in the Standard Technical Specifications (STS) for Westinghouse reactors, NUREG-0452.

The third sentence of TS 4.6.2.3 provides that the performance discharge test, when performed, may substitute for the load (service) test (required per TS 4.6.2.d). The discharge test is a more severe test of battery capacity than the load test and therefore, will also verify conformance with the battery service requirements. This test substitution is also allowed in the STS.

In summary, the staff requested the licensee to propose technical specifications to require a battery discharge test every 60 months, and subsequently requested an annual test of any battery that shows signs of degradation. The TSs proposed by the licensee in the August 1, 1983 and October 26, 1983 submittals provide battery testing requirements that fulfill this intent. Therefore, the staff finds the proposed changes acceptable.

4.0 Environmental Consideration

This amendment involves a change in a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and in surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

5.0 Conclusion

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 Acknowledgement

E. McKenna prepared this Safety Evaluation.

Dated: May 8, 1986

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