



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

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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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