



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 5 TO FACILITY OPERATING LICENSE NO. NPF-69
NIAGARA MOHAWK POWER CORPORATION
NINE MILE POINT NUCLEAR POWER STATION, UNIT NO. 2
DOCKET NO. 50-410

INTRODUCTION

In a letter dated February 3, 1988, the licensee requested the Technical Specifications for Nine Mile Point Unit 2 be revised to allow an alternate method of determining battery operability when visible corrosion appears at either terminal or connectors. Specifically, Technical Specification 4.8.2.1.b.2 would be amended to state that battery operability could be determined by verifying that the resistance of the associated cell-to-cell and terminal connection is less than or equal to 120% of the resistance readings taken during initial installation as an alternate to verifying that there is no visible corrosion. The current Technical Specification would require the batteries to be declared inoperable if visible corrosion is found.

EVALUATION

The operability of the AC and DC power sources and associated distribution systems during operation ensures that sufficient power will be available to supply the safety-related equipment required for (1) the safe shutdown of the facility and (2) the mitigation and control of accident conditions within the facility. The Technical Specifications specify the minimum independent and redundant AC and DC power sources and distribution systems satisfy the requirements of GDC 17 of Appendix A to 10 CFR 50.

Technical Specification surveillance requirement 4.8.2.1 specifies the minimum surveillance to be performed to determine operability of the 125-volt batteries and chargers. The surveillance requirements for demonstrating the operability of batteries is in accordance with the recommendation of Regulatory Guide (RG) 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978 and IEEE Standard 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations." These surveillances are performed at intervals as specified in the Technical Specifications. The surveillances specified to be performed at least once per 92 days (and within 7 days after a battery discharge with battery terminal voltage below 107 volts, or battery overcharge with battery terminal voltage above 142 volts) are as follows, (1) verify that the electrolyte level, float

8804280049 880419
PDR ADDCK 05000410
P PDR



1
2
3

4
5

6
7

8
9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

51

voltage and specific gravity meet the Category B limits specified in Technical Specification Table 4.8.2.1-1, (2) verify there is no visible corrosion at either terminals or connectors, and (3) verify the average electrolyte temperature of one out of five connected cells is above 60°F.

The licensee's proposed amendment of February 3, 1988 would allow battery operability to be determined by verifying that the resistance of the associated cell-to-cell and terminal connections is less than or equal to 120% of the resistance readings taken during initial installation when there is visible corrosion. The surveillance requirements of items (1) and (3) would remain the same.

IEEE Standard 450-1980, section 4.4.1(2) states that corrective action should be taken when the resistance value of battery connections or terminals exceeds its installation value by more than 20 percent. Therefore, a resistance value of up to 120% of the installation value is considered an acceptable value by IEEE Standard 450-1980. In addition, the licensee has stated that it reviewed the as-installed resistance values determined during preoperational testing and determined that a 20% increase will have no effect on the ability of the batteries to carry their rated load. Therefore, allowing the proposed resistance check of the batteries in the event there is visible corrosion will not adversely affect the function or the design of the safety-related DC power systems. The performance and reliability of the DC power sources will not be affected, thus assuring there will still be power available to supply the safety-related equipment required for (1) the safe shutdown of the facility and (2) the mitigation and control of accident conditions within the facility. On this basis the staff finds the proposed change to Technical Specification 3/4 4.8.2.1.b.2 is acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of the facility components located within the restricted areas as defined in 10 CFR 20. The staff has determined that this 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 for the 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.

CONCLUSION

We have 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.

Dated: April 19, 1988

PRINCIPAL CONTRIBUTOR:

M. Haughey

