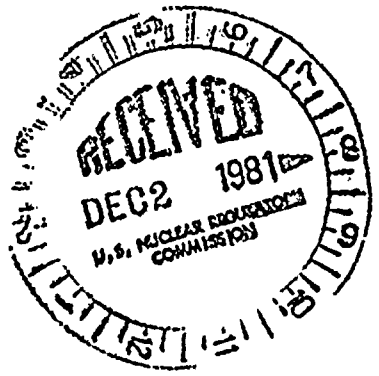
November 27, 1981

Docket No. 50-244
LS05-81- 11-066



Mr. John E. Maier
Vice President
Electric and Steam Production
Rochester Gas & Electric Corporation
89 East Avenue
Rochester, New York 14649

Dear Mr. Maier:

SUBJECT: SEP TOPIC VI-7.C.1, APPENDIX K - ELECTRICAL INSTRUMENTATION AND CONTROL (EI&C) RE-REVIEWS, SAFETY EVALUATION FOR R. E. GINNA

Enclosure 1 is our contractor's final evaluation of this topic. The evaluation has been revised to reflect the additional information provided in your July 14, 1981 letter.

Enclosure 2 is the staff safety evaluation that is based upon Enclosure 1, and your letter, and supplements our contractor's evaluation. Enclosure 2 notes that your design provides an acceptable alternative to current criteria. Accordingly, the staff considers Topic VI-7.C.1 for your plant to have been completed acceptably.

Sincerely,

SE04
S
1/1
DSU use (07)
ADD:
Wang

Dennis M. Crutchfield, Chief
Operating Reactors Branch No.5
Division of Licensing

Enclosures:
As stated

cc w/enclosures:
See next page

OFFICE	SEP	SEP:SL	SEP:BC	ORB#5 PM	ORB#5/C	AD:SA:DL	
SURNAME	RSchaaf:dp	BHermann	WRussell	DSnaider	DCrutchfield	GLainas	
DATE	11/16/81	11/17/81	11/19/81	11/19/81	11/27/81	11/27/81	

NRC FORM 318 (10-80) NRCM 0240 OFFICIAL RECORD COPY USGPO: 1981—335-9

Mr. John E. Maier

cc
Harry H. Voigt, Esquire
LeBoeuf, Lamb, Leiby and MacRae
1333 New Hampshire Avenue, N. W.
Suite 1100
Washington, D. C. 20036

Mr. Michael Slade
12 Trailwood Circle
Rochester, New York 14618

Ezra Bialik
Assistant Attorney General
Environmental Protection Bureau
New York State Department of Law
2 World Trade Center
New York, New York 10047

Jeffrey Cohen
New York State Energy Office
Swan Street Building
Core 1, Second Floor
Empire State Plaza
Albany, New York 12223

Director, Bureau of Nuclear
Operations
State of New York Energy Office
Agency Building 2
Empire State Plaza
Albany, New York 12223

Rochester Public Library
115 South Avenue
Rochester, New York 14604

Supervisor of the Town
of Ontario
107 Ridge Road West
Ontario, New York 14519

Resident Inspector
R. E. Ginna Plant
c/o U. S. NRC
1503 Lake Road
Ontario, New York 14519

Mr. Thomas B. Cochran
Natural Resources Defense Council, Inc.
1725 I Street, N. W.
Suite 600
Washington, D. C. 20006

U. S. Environmental Protection Agency
Region II Office
ATTN: EIS COORDINATOR
26 Federal Plaza
New York, New York 10007

Herbert Grossman, Esq., Chairman
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Richard F. Cole
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Emmeth A. Luebke
Atomic Safety and Licensing Board
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

TOPIC: VI-7.C.1 APPENDIX K - ELECTRICAL INSTRUMENTATION AND CONTROL (EI&C) RE-REVIEWS

I. INTRODUCTION

During the Appendix K reviews of some facilities initially considered, a detailed EI&C review was not performed. Accordingly we intended to re-review the modified ECCS of these facilities to confirm that it is designed to meet the most limiting single failure. Several types of failure were considered as candidates for designation as the most limiting. Because of the scope of the other SEP Topics, it was decided that, for the purpose of this study (and to reduce replication of effort on other SEP Topics), the loss of a single ac or dc onsite power system was the most limiting failure. Accordingly, this topic was limited to an evaluation of the independence between the onsite power systems.

II. REVIEW CRITERIA

The review criteria are presented in Section 2 of EG&G Report EGG-EA-5641 "Independence of Redundant Onsite Power Systems."

III. RELATED SAFETY TOPICS AND INTERFACES

The scope of review for this topic was limited to avoid duplication of effort since some aspects of the review were performed under related topics. The related topics and the subject matter are identified below. Each of the related topic reports contain the acceptance criteria and review guidance for its subject matter.

VI-4	Bypass and Reset of Engineered Safety Features (B-24)
VI-7.A.3	ECCS Actuation System
VI-7.B	ESF Switchover from Injection to Recirculation
VI-7.C.2	Failure Mode Analysis-ECCS
VI-7.D	Long Term Cooling Passive Failures (e.g., flooding)
VI-10.A	Testing of Reactor Protection Systems
VII-1.A	Reactor Trip System Isolation
VII-3	Systems Required for Safe Shutdown
VIII-2	Onsite Emergency Power Systems
VIII-3	Emergency dc Power Systems
VIII-4	Electrical Penetrations
IX-6	Fire Protection

The conclusion that suitable isolation devices are provided is a basic assumption for Topics VI-7.C.2 and VII-3.

IV. REVIEW GUIDELINES

The review guidelines are presented in Section 3 of Report EGG-EA-5641 "Independence of Redundant Onsite Power Systems".

V. EVALUATION

As noted in Report EGG-EA-5641, "Independence of Redundant Onsite Power Systems", the separation between redundant systems does not satisfy the review criteria.

However, the short circuit analysis provided in the licensee's July 14, 1981 letter shows that (1) fusing has been coordinated so that faults will be cleared prior to dc bus transfer; (2) the automatic transfer schemes for buses 14, 16, 17, and 18, DG1A control panel and DG1A control panel have electrical interlocks to prevent the paralleling of the two dc systems; (3) the two dc systems can be paralleled when the two systems are purposely tied together during the test of one set of batteries or during the maintenance or repair of a main 150 ampere charger unit; (4) no credible component failure can cause the paralleling of the two dc systems through the manual switches on the 4KV non-class IE buses; and, (5) the automatic transfer scheme used for the main control board annunciators is designed so that only one of the two dc sources can be connected.

VI. CONCLUSION

As a result of our review of our contractor's work the staff concludes that the subject ac and dc onsite systems do not satisfy the review criteria.

From our review of the licensee's calculations and after consultation with our contractor, we also conclude that the present design and administrative controls provide an acceptable alternative to our criteria provided that fuse types and sizes, battery capacity, and electrical loads are not changed.