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U.S. NRC  
OPERATING REACTORS BRANCH  
REGISTRATION SERVICES UNIT

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REGISTRATION SERVICES UNIT

Docket No. 50-244  
*1505-81-1002*

Mr. John E. Maier  
Rochester Gas and Electric Corporation  
89 East Avenue  
Rochester, New York 14649

Dear Mr. Maier:

SUBJECT: SEP TOPIC III-6, SEISMIC DESIGN CONSIDERATION AND III-11,  
COMPONENT INTEGRITY - ROBERT E. GINNA NUCLEAR POWER STATION

As you are aware, the staff and its consultants have completed the seismic review of Ginna nuclear power plant. Enclosed (Enclosure 1) is a copy of draft of NUREG/CR-1821, "Seismic Review of the Robert E. Ginna Nuclear Power Plant as part of the Systematic Evaluation Program." This report will serve as the principal input for staff's final assessment for Systematic Evaluation Program topics III-6, Seismic Design Considerations and III-11, Component Integrity. Please inform us if your as-built facility differs from the licensing basis assumed in our assessment.

According to our review, some open items have been identified (Enclosure 2) related to these topics. The detailed evaluation of these open items can be found in the attached report.

In order to complete our review on these topics, we require additional information from you. You should submit within 30 days from the date of this letter information which is requested in Enclosure 2. In the event that analysis is necessary for you to complete your evaluation, you should submit a schedule for completion of each open item. Proposed modifications identified in our report are representative of the types of modification which should be considered to upgrade seismic safety margins. Pursuant to 10 CFR 50.59 you should independently evaluate the necessity of any modifications to your facility.

Sincerely,

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

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Enclosure:  
As stated

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555  
JAN 07 1980

Docket No. 50-244  
LS05-81-1-002

Mr. John E. Maier  
Rochester Gas and Electric Corporation  
89 East Avenue  
Rochester, New York 14649

Dear Mr. Maier:

SUBJECT: SEP TOPIC III-6, SEISMIC DESIGN CONSIDERATION AND III-11,  
COMPONENT INTEGRITY - ROBERT E. GINNA NUCLEAR POWER STATION

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Sincerely,

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

Enclosure:  
As stated

cc w/enclosure:  
See next page

Mr. John E. Maier

R. E. GINNA NUCLEAR  
POWER PLANT  
DOCKET NO. 50-244

cc  
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Agency  
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## ENCLOSURE 2

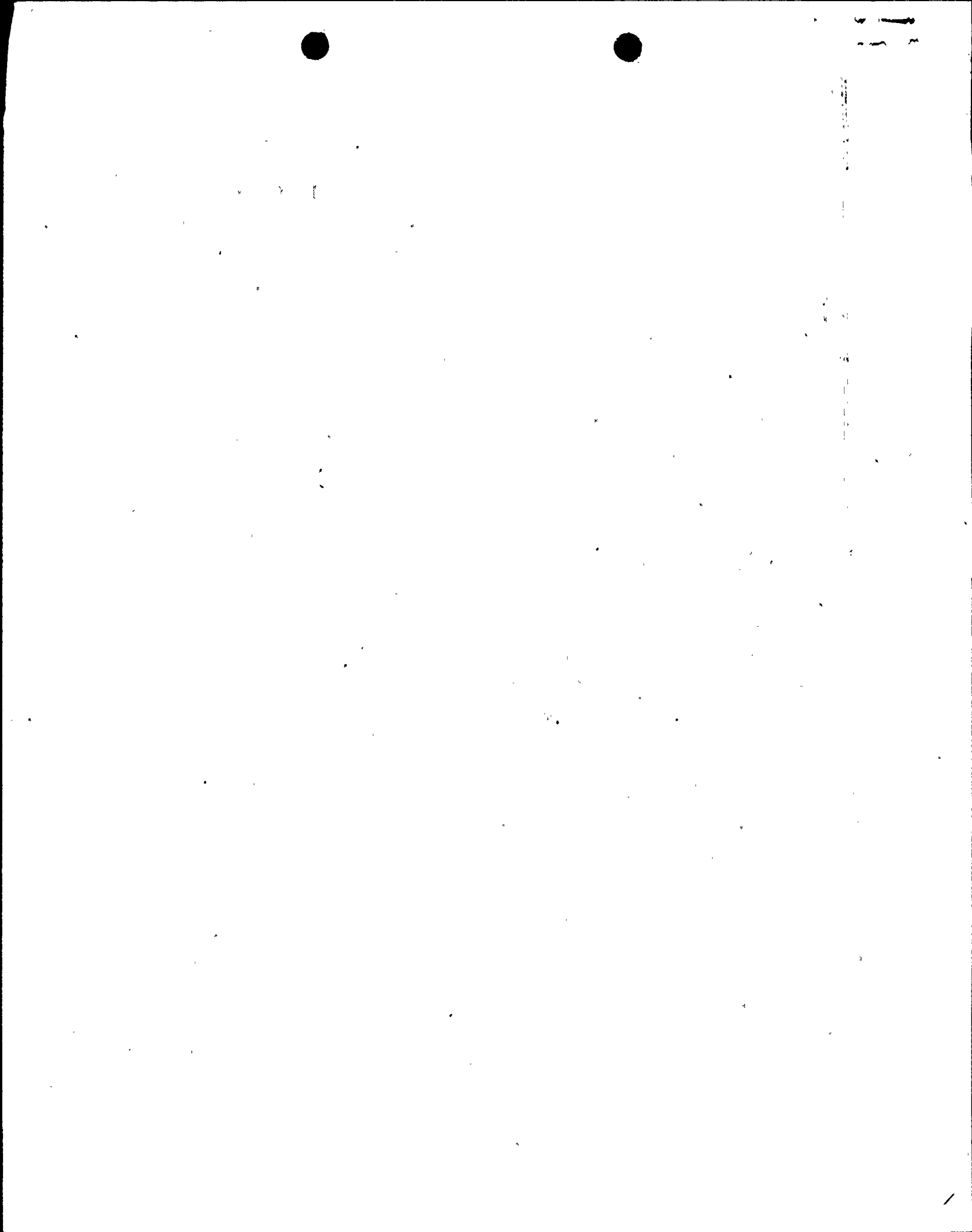
### OPEN ISSUES R. E. GINNA SEISMIC REVIEW

The following list documents issues that developed as a result of our seismic review of the Ginna facility. These issues have been highlighted for a variety of reasons. In some cases, a lack of adequate documentation exists. Designation here does not necessarily imply a safety deficiency. However, the NRC staff has determined that further documentation of the seismic resistance capacity of these items is requested. This documentation should include an evaluation by RG&E.

1. Auxiliary Building Bracing - The N-S steel bracing at northeast corner above the operating floor has a safety factor (defined as  $f_y/f$ ) of about 0.8. An evaluation is required to demonstrate the adequacy of the steel brace for resisting the seismic forces.
2. Turbine Building Bracking - Stress in the cross bracing above the operating floor in the south, north, and west walls exceed yield. An evaluation of these steel bracings is required to demonstrate the adequacy for resisting the seismic forces.
3. Essential Service Water Pump (ESWP) - The stress at suction pipe and anchor bolts was found over yield. An evaluation is required to demonstrate the design adequacy. In addition, 1) information about pump shaft is needed to evaluate its design adequacy and 2) the cast iron discharge bowl may require replacement by steel.
4. Component Cooling Surge Tank - The tank is not positively restrained in the longitudinal direction. Either a more rigorous analysis is required or the tank requires addition of a longitudinal restraint.
5. Refueling Water Storage Tank - High stresses develop in the anchor bolts because of the 0.2 g SSE and the flexible response of the tank. In addition, the shell will buckle from overturning moment effects.

An evaluation needs to be performed to demonstrate its design adequacy.

6. Motor-Operated Valves - Generic analysis of motor-operated valves on lines  $\leq 4$  in. in diameter should be performed to show that resulting stresses are less than 10% of the applicable Condition B (active) or Condition D (passive) allowable stresses. Otherwise, stresses induced by valve eccentricity should be introduced into piping analysis to verify design adequacy. Alternatively you may provide justification that all motor valves  $\leq 4$  in. in diameter are not overstressed and therefore do not require to be externally supported. Seismic testing results supplied on motor operators do not demonstrate functional adequacy for Ginna.



7. Steam Generator - Insufficient information was provided to evaluate seismic design adequacy and reach a definitive conclusion. However, assuming that the stress summary provided is accurate and limiting, the seismic design is adequate.
8. Reactor Coolant Pump - Insufficient information was provided to evaluate seismic design adequacy and reach a definitive conclusion. However, assuming that the stress summary provided is accurate and limiting, the seismic design is adequate.
9. Pressurizer - Insufficient information was provided to evaluate seismic design adequacy and reach a definitive conclusion. However, assuming that the stress summary provided is accurate and limiting, the seismic design is adequate.
10. Control Rod Drive Mechanism - Insufficient information was provided to evaluate seismic design adequacy and reach a definitive conclusion. However, assuming that the stress summary provided is accurate and limiting, the seismic design is adequate.
11. Battery Racks - Racks O.K. with the exception of wooden lateral bracing, which should be replaced or strengthened to carry full seismic inertia loads.
12. Motor Control Center Designated 1M and 1L - A analysis is required to show that resonance will not occur at frequencies below  $5H_z$ .
13. Switchgear - A analysis is required to show that resonance will not occur at frequencies between 15 and  $30 H_z$ .
14. Control Room Electrical Panels - An evaluation was not performed since drawings or design calculations were not made available to us. Provide an analysis of these components.
15. Electrical Cable Raceways - An evaluation was not performed since drawings or design calculations were not made available to us. Provide an analysis of these components.



JAN 26 1981