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SUBJECT: Responds to Suppl 4 to Generic Ltr 88-20, "Individual Plant Exam of External Events for Severe Accident Vulnerabilities." Fire PRA will be performed using guidance in NUREG/CR-1407 & NUREG/CR-2300.

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December 26, 1991

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Allen R. Johnson
Project Directorate I-3
Washington, D.C. 20555

Subject: Individual Plant Examination Of External Events (IPEEE)
180-Day Response To Generic Letter 88-20, Supplement 4
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Johnson:

This letter is Rochester Gas And Electric Corporation's required 180-day response to Generic Letter 88-20, Supplement 4, *Individual Plant Examination Of External Events (IPEEE) For Severe Accident Vulnerabilities - 10 CFR §50.54(f)*, dated June 28, 1991. This generic letter supplement requires licensees to respond to the NRC's request to perform a comprehensive risk review of external events, to be integrated into Individual Plant Examination (IPE) programs committed to in response to Generic Letter 88-20 and Generic Letter 88-20, Supplement 1.

RG&E's response will be divided into three parts: Internal fires; seismic; and, high winds, external floods, and transportation accidents.

1. **Internal Fires** - RG&E is at this time planning to perform a fire probabilistic risk assessment (PRA). This analysis will follow the guidance of NUREG/CR-1407, Section 4.1, and NUREG/CR-2300. RG&E plans to use the new fire events data base that has been compiled by the Electric Power Research Institute (EPRI) as part of this analysis. We also plan to use the EPRI FIVE propagation and damage assessment models for screening purposes and the FIVE walkdown procedures to address Fire Risk Scoping Study (FRSS) issues. The results of this fire PRA will be submitted to the NRC.

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2. **Seismic** - RG&E was one of the eleven participants in the NRC's Systematic Evaluation Program (SEP). Two topics, III-6, *Seismic Design Considerations*, and III-11, *Component Integrity*, specifically dealt with these issues. As part of these topic reviews, the Ginna Station seismic vulnerability was assessed, and appropriate analyses and modifications completed. A ground response spectrum, anchored at 0.17g (versus Ginna's original licensing basis of 0.20g) was transmitted by the NRC to RG&E for use in the SEP seismic analyses. However, RG&E chose to use a more conservative Regulatory Guide 1.60-shaped response spectrum anchored at 0.20g. The NRC issued a Safety Evaluation Report (SER) on this subject on January 29, 1982.

   RG&E started three major seismic initiatives during the SEP at Ginna: The Seismic Piping Upgrade Program; the Ginna Structural Upgrade Program; and, miscellaneous SEP seismic-related analyses and modifications not done under the first two programs.

   All major Ginna piping systems were reviewed to the criteria of Regulatory Guides 1.60 and 1.61 using a safe shutdown earthquake (SSE) of 0.20g as part of our Seismic Piping Upgrade Program (SPUP). All 2½" diameter and larger piping was re-analyzed and re-supported during SPUP. RG&E estimates that it has expended about $38 million on SPUP and SPUP-related modifications.

   The Ginna Structural Upgrade Program (GSUP) reanalyzed, and modified as necessary, the Diesel Generator Building, the Turbine Building, and the Auxiliary Building. RG&E estimates that it has expended about $4 million on the GSUP and GSUP-related modifications.

   Other safety-related equipment, including electrical cabinets, the main control board in the control room, service water pumps, racks for the station batteries, and tank anchorages were also reviewed, and upgraded as necessary during SEP-related activities. In addition, the neutron flux monitoring system has been upgraded to meet seismic criterion. To date, RG&E estimates that it has expended over $5 million on these miscellaneous seismic analyses and their resulting plant modifications.

   At the conclusion of these three major review efforts, two Ginna seismic issues remain unresolved: Seismic adequacy of cable tray systems; and, seismic qualification of safety-related electrical and mechanical equipment. RG&E has committed to address these issues as part of our resolution of Unresolved Safety Issue (USI) A-46, *Seismic Qualification Of Electrical And Mechanical Equipment*, for Ginna. We plan to use the Seismic Qualification Utility Group (SQUG) methodology to resolve USI A-46.

   RG&E is awaiting the NRC's SER on the latest revision to SQUG's Generic Implementation Procedure (GIP) to begin our resolution of USI A-46. RG&E believes that it would not be prudent to proceed with planning and / or scheduling this major effort until the remaining points of contention in the GIP are resolved between the NRC Staff and SQUG.

Given the NRC's review and approval of the Ginna seismic ground response spectra; the extensive RG&E and NRC review of seismic issues, and RG&E's subsequent modifications to Ginna structures, systems and components during the SEP; and our commitment to perform the NRC-suggested review of open items from the SEP as part of Ginna's resolution of USI A-46, RG&E concludes that all seismic-related issues for Ginna have been exhaustively and appropriately addressed, and that no further seismic analyses are warranted at this time. We believe this conclusion is consistent with statements in the NRCs June 29, 1990 SSER relative to the SQUG GIP, which said, *The successful completion of the USI A-46 implementation will constitute compliance with the requirements of GDC-2.*

RG&E does not consider further review of safety-related structures, systems, and components to an earthquake level higher than our current licensing basis, as requested by Generic Letter 88-20 Supplement 4, to provide a cost beneficial improvement to the station's seismic safety margin.

3. **High Winds, External Floods And Transportation Accidents** - As one of the eleven SEP plants, Ginna was reviewed against the 1975 Standard Review Plan relative to high winds, external floods and transportation accidents.

   A. High Winds were reviewed under SEP topics II-2.A, *Severe Weather Phenomena*; III-2, *Wind and Tornado Loading*, III-4.A, T*ornado Missiles*; and III-7.B, *Load Combinations.* It was concluded by RG&E and accepted in an NRC SER that, following appropriate modifications, Ginna Station could withstand a 10^{-5} tornado within design limits, and a 10^{-6} tornado without structural failure. This evaluation meets line (4) of figure 1 of Generic Letter 88-20, Supplement 4.

   B. External flooding was reviewed under SEP Topics II-2.A, *Severe Weather Phenomena*; II-3.A, *Hydrologic Description*; II.3,B, *Flooding Potential and Protection Requirements*; II.3.B.1, *Capability of Operating Plant to Cope with Design-Basis Flooding Conditions*; II-3.C, *Safety-related Water Supply*; III-3.A, *Effects of High Water Level on Structures*; and, III-7.B, *Load Combinations.* This exhaustive review of flooding-related issues concluded that current (1975 SRP) criteria were met, following modifications made to Ginna Station as required by 10 CFR §50.109 to meet a Probable Maximum Flood of 5×10^{-4}.

   C. Transportation accidents were reviewed under SEP Topic II-1.C, *Potential Hazards or Changes in Potential Hazards Due to Transportation, Institutional, and Military Facilities,* and found to meet current (1975 SRP) criteria.

   RG&E concludes that the impact of high winds, external floods, and transportation accidents on Ginna was appropriately analyzed during the Systematic Evaluation Program. Based on the cited NRC SERs for Ginna SEP results, no further submittals for Generic Letter 88-20 Supplement 4 are warranted for high winds, external floods, or transportation accidents, pending our review that there have been no significant changes since this SER. RG&E knows of no other plant unique external events that can potentially initiate severe accidents.

In summary, Rochester Gas And Electric Corporation will submit the results of a fire probabilistic risk assessment, as detailed above, for Ginna to the NRC by June 1994. We believe that seismic, high winds, external flooding, and transportation accidents issues raised in Generic Letter 88-20, Supplement 4 have previously been adequately addressed for Ginna, and that no further analyses or submittals on these topics are justified at this time.

Very truly yours,

Robert C. Mecredy

Subscripted and sworn to before me
on this 26th day of December, 1991

Tracy Payne
Notary Public

TRACY PAYNE
Notary Public in the State of New York
MONROE COUNTY
Commission Expires Nov. 19 93

NSL-PRALT-91.117
Attachment

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Ginna Senior Resident Inspector