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Vice President
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August 21, 2002

Mr. Robert L. Clark
Office of Nuclear Regulatory Regulation
U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Subject: Response to NRC Letter Dated July 25, 2002, Regarding Preliminary White Finding Involving the Alert and Notification System (ANS)
Rochester Gas and Electric Corporation
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Clark,

By letter dated July 25, 2002 (Reference 1), the NRC Staff noted a preliminary determination of a White finding based on the Significance Determination Process (SDP). This finding is associated with a failure to ensure that the alert and notification system (ANS) for Ginna Station was capable of performing its function. Specifically, the letter stated that "long standing problems with the ANS siren feedback system prevented Rochester Gas & Electric (RG&E) or the Counties from being able to identify which, if any, siren(s) activated and to conduct backup route alerting within 45 minutes for the populace covered by the failed siren(s)." The letter further states that this is "an apparent violation (AV) of regulatory requirement 10 CFR 50.47(b)(5), which requires in part that licensees establish a means to provide early notification and clear instruction to the populace within the plume exposure pathway EPZ."

In the July 25, 2002 letter, the NRC Staff offered RG&E the opportunity to provide a written position on our perspectives of the facts and assumptions applied by the NRC to determine this finding and its significance. RG&E acknowledges that the problems associated with the siren feedback system do not meet our expectations for efficiency and expeditiousness. The purpose of this letter is provide additional perspective for consideration with respect to: (1) the basis for the apparent violation, and (2) the safety significance.

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Basis For Apparent Violation

The apparent violation and finding were based primarily on a Federal Emergency Management Agency (FEMA) letter and Quality Assurance Verification Report dated March 7, 1986 (Reference 6), which confirmed the Ginna Station ANS compliance with the applicable evaluative criteria from NUREG-0654/FEMA-Rep 1 (Reference 2) and FEMA-43 (Reference 3)(superseded by FEMA-REP-10 (Reference 5)). This FEMA acceptance letter and report were forwarded to RG&E by NRC letter dated April 22, 1986 (Reference 7). Within the FEMA ANS acceptance letter and report, the supplemental emergency response actions that would occur if one or more sirens were to fail to activate were discussed within the section titled "Special Alerting (E.6.2.4, FEMA-43)". According to FEMA-REP-10, section E.6.2.4.6, with respect to the use of Special Alerting methods, the total elapsed time for alert and notification using police, fire, or rescue vehicles and personnel should not exceed 15 minutes (or 45 minutes, when the design objective of route alerting is to ensure coverage of a population who may not have received the initial alert and notification).

This FEMA position with respect to Special Alerting methods, however, is not applicable in the case of the Ginna Station ANS. As stated in the RG&E ANS design submittal (Reference 4) that was used as the basis for the FEMA evaluation (see Attachment 1):

> "It should be noted that the use of Special Alerting methods (as described in FEMA-43, Section E.6.2.4) has not been employed as an element of the GNPS [Ginna Nuclear Power Station] Prompt Alert and Notification System. Therefore, this section of FEMA-43 is not applicable for this submittal."

The Special Alerting methods as discussed within FEMA-REP-10, and further clarified in FEMA Guidance Memorandum AN-1 (Reference 8) and FEMA-REP-14 (Reference 9), are intended to be alternative primary means of alerting the public which may be more cost effective than the use of sirens. As described in FEMA Guidance Memorandum AN-1, these would typically be used for "rural farms, hunting areas, recreational areas, open water areas, national forests, beaches, and rivers." The use of Special Alerting methods requires specific review and approval by FEMA on a case-by-case basis, including the rationale for requiring up to 45 minutes to alert such areas. As stated within the FEMA ANS acceptance letter for Ginna Station, the backup route alerting was a supplemental action, not a primary means of adequate notification. The RG&E ANS design relies solely on the siren system as the primary means of public notification. Therefore, the 45 minute Special Alerting position as referenced in the apparent violation is not applicable to the RG&E issue.

There appears to be no regulatory requirement in the NRC's regulations, NUREG-0654/FEMA-REP-1, FEMA-43, FEMA Guidance Memorandum AN-1, or FEMA-REP-14 that requires the capability to immediately identify that the sirens have failed to actuate and then complete backup route alerting within 45 minutes. The original Ginna Station ANS siren system design that was evaluated and approved by FEMA in 1986 had no feedback system. The feedback system was installed as an enhancement to the system in 1993. Both FEMA Guidance Memorandum AN-1

and FEMA-REP-14 discuss the use of backup route alerting for a failed siren during plan exercises. FEMA Guidance Memorandum AN-1 states:

> "There is no hard and fast time requirement for completing the backup route alerting process; however, 45 minutes is a suggested objective for completing the process."
>
> "Failure to complete backup route alerting in accordance with the time frames established by the responding organizations should be cited as an 'area recommended for improvement'."

FEMA-REP-14 further states "The suggested time frame for completion of the backup alert and notification process is 45 minutes." Based on the FEMA guidance it would appear that the 45 minute completion time for backup route alerting is a guideline and not a specific formal requirement. This is supported by the fact that failure to complete would be an "area for improvement" rather than a more significant "deficiency." RG&E acknowledges that the backup route alerting should be performed in an efficient and expeditious manner, and has taken action to improve the reliability of the siren feedback system and the timeliness of backup route alerting as explained in Reference 10.

Safety Significance

The July 25, 2002 NRC letter states that the finding is preliminarily determined to be White based on the Staff's evaluation under Manual Chapter 0609, Appendix B of the apparent failure to meet a risk significant planning standard. In characterizing the finding as White, the Staff concluded that the problems with the siren feedback system did not have a substantial impact on the Emergency Preparedness (EP) Cornerstone Objective. The letter further states that the finding"does not represent an immediate safety concern at this time due to the interim compensatory measures that RG&E has put in place," however, the apparent violation is being considered for escalated enforcement since the associated planning standard is risk significant. While the planning standard may be risk significant, when the specifics of the Ginna situation are applied it is clear that the risk significance was negligible and that there was no impact on the protection of public health and safety. This is evidenced by the RG&E risk assessment provided to the NRC in an attachment to Reference 10. As explained in Reference 10:

> RG&E has performed a risk assessment for the potential to have an accident that results in core damage, with offsite releases within 4 hours of declaring a General Emergency, and the failure of a siren within the plume exposure pathway. The results of this assessment are provided in Attachment B. Included within this assessment is the determination that there is significant siren overlap within the 10 mile emergency planning zone (EPZ). In fact, more than one siren would have to fail within the 5 mile radius before there is a reduction in siren audible level below the requirement of 60 dB. For the 5 to 10 mile radius, this is also true except for six small areas that would still have some degree of siren coverage (though slightly below 60 dB). The combined frequency of this scenario with multiple siren failures was determined to be 8.92E-08/year. This

low value is due to the low likelihood of an accident, the high reliability of the sirens (95% over the last five full system tests), and the siren overlap. It should also be noted that this is a very conservative calculation and does not account for the potential of public members being in the area (versus at work, school, vacation, etc.) and the likelihood that they are not notified independent of hearing the sirens (e.g., already watching TV or listening the radio, or called by friends and family).

The July 25, 2002 NRC letter also states that during the May 9, 2002 full activation tests, two adjacent sirens in a "heavily populated zone" failed to actuate. Sirens 44 and 48 primarily serve in the 5 to 10 mile radius around Ginna Station (Siren 44 reaches a very small portion just inside the 5 mile radius). These sirens are located in a population zone of only 500 persons / square mile (using 2010 population projections and the area between 5 and 10 miles of Ginna Station for a 22.5° arc). RG&E does not believe that this constitutes a heavily populated zone. The two sirens are also located in the vicinity of the Lincoln Fire Hall which would normally be staffed during an emergency and able to determine that sirens failed to actuate. Further, there are other adjacent sirens that would have projected to some degree into the areas covered by sirens 44 and 48.

In summary, while RG&E acknowledges the importance of an effective and efficient backup route alerting system and has taken, and continues to take, measures to correct the long-standing problems with the siren feedback system as documented in Reference 10, we believe the basis for the apparent violation and the preliminary White finding as outlined in the July 25, 2002 letter should be further reviewed. If you should have any questions regarding this submittal, please contact Mr. Tom Harding, 585-771-3384.

Very truly yours,

Robert C. Mecredy
Vice President
Nuclear Operations Group

REFERENCES:

(1) Letter from A.R. Blough, NRC, to R.C. Mecredy, RG&E, Subject: *R. E. GINNA - NRC INSPECTION REPORT NO. 50-244/02-04*, dated July 25, 2002.

(2) NUREG-0654/FEMA-REP-1, Revision 1, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*, dated October 1980.

(3) FEMA-43, *Standard Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants*, dated September 1983.

(4) RG&E, *An Off-Site Emergency Plan Prompt Alert and Notification System Addendum for the R.E. Ginna Nuclear Power Station*, dated November 1984.

(5) FEMA-REP-10, *Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants*, dated November 1985.

(6) Letter from Samuel W. Speck, FEMA, to Victor Stello, Jr., NRC, Subject: *Analysis of the Prompt Alert and Notification System for the R.E. Ginna Nuclear Power Station*, dated March 7, 1986.

(7) Letter from Terry L. Harpster, NRC, to Roger W. Kober, RG&E, Subject: *FEMA Report on the Alert and Notification System Surrounding the R. E. Ginna Nuclear Power Plant*, dated April 22, 1986.

(8) FEMA Guidance Memorandum AN-1, *FEMA Action to Qualify Alert and Notification Systems Against NUREG-0654/FEMA-REP-1 and FEMA-REP-10*, dated April 21, 1987.

(9) FEMA-REP-14, *Radiological Emergency Preparedness Exercise Manual*, dated September 1991.

(10) Letter from R.C. Mecredy, RG&E, to R.J. Conte, NRC, Subject: *Update of Interim Compensatory Measures Associated with Prompt Notification System*, dated June 28, 2002.

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Attachment 1

An Off-Site Emergency Plan Prompt Alert and Notification System Addendum for the R.E. Ginna Nuclear Power Station (Selected Portions)

AN OFF-SITE EMERGENCY PLAN
PROMPT ALERT AND NOTIFICATON SYSTEM
ADDENDUM FOR THE
R. E. GINNA NUCLEAR POWER STATION

Prepared in Response to FEMA-43
Documentation Criteria Requirements
Dated September, 1983

Submitted by:

Rochester Gas & Electric Corporation
89 East Avenue
Rochester, New York 14649

November, 1984

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF APPENDICES

ABBREVIATION LIST

The following abbreviations are used in this Addendum.

CRERP - County Radiological Emergency Response Plan

EBS - Emergency Broadcasting System
EOC - Emergency Operations Center
EPZ - Emergency Planning Zone
ERPA - Emergency Response Planning Area

GNPS - Ginna Nuclear Power Station

FCC - Federal Communications Commission
FEMA - Federal Emergency Management Agency

LCS - Local Coverage Siren

NRC - Nuclear Regulatory Commission
NYDPC - New York Disaster Preparedness Commission
NYS EMO - New York State Emergency Management Office
NYS REPP - New York State Radiological Emergency Preparedness Plan

PANS - Prompt Alert and Notification System

RECS - Radiological Emergency Communication System

SPL - Sound Pressure Level

USGS - United States Geological Survey

1.0 INTRODUCTION

This addendum was prepared to assist the Federal Emergency Management Agency (FEMA) in evaluating the "Alert and Notification System" requirements of 44 CFR 350. This report is part of an ongoing process by which FEMA evaluates and approves both state and local emergency plans and preparations to deal with a radiological emergency at Rochester Gas & Electric's Ginna Nuclear Power Station (GNPS).

There are sixteen planning standards identified in 44 CFR 350.5 which are to be used in evaluating, assessing, reviewing, and approving state emergency plans. Of these sixteen planning standards, three apply to alert and notification:

Section E, Notification Methods and Procedures
Section F, Emergency Communications, and
Section N, Exercises and Drills.

This report represents a comprehensive addendum to the existing sections of the New York State Radiological Emergency Preparedness Plan (NYS REPP), the Monroe County Radiological Emergency Response Plan (Monroe CRERP), and the Wayne County Radiological Emergency Response Plan (Wayne CRERP). It is anticipated that once the information presented in this report has been reviewed and approved by FEMA, all the Planning Standards from NUREG-0654/FEMA-REP 1, Rev. 1 will have been satisfactorily addressed; and, therefore, a Final 350 Approval will be issued.

This report has been structured to provide all of the necessary and pertinent information related to the three primary planning standards (E, F, and N) for alert and notification systems requested by FEMA in the "Standard Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants," FEMA-43, dated September, 1983. In addition, this addendum report utilizes the "Recommended Format for Submittals Describing Alert and Notification Systems," FEMA-43, Appendix 1.

It should be noted that three sections in FEMA-43 are not applicable to this submittal. Section E.6.2.2 (Mobile Siren Vehicles), Section E.6.2.3 (Tone Alert Radios), and Section E.6.2.4 (Special Alerting) are not addressed since these three notification methods are not utilized in the Prompt Alert and Notification System (PANS) for the GNPS.

The GNPS Prompt Alert and Notification System uses fixed sirens for alert and notification of the GNPS EPZ 0 to 10 mile radial area.

The use of special alerting methods, such as:

- Utilization of Institutional Alerting Systems
- Use of Aircraft for Alerting
- Use of Automatic Telephone Dialers/Switching Equipment
- Utilization of Modulated Power Lines
- Utilization of Emergency/Law Enforcement Vehicles

is not an active part of this warning network and is not applicable in this submittal.

2.7 Special Alerting (FEMA-43 Ref. E.6.2.4) (Not Applicable)

It should be noted that the use of Special Alerting methods (as described in FEMA-43, Section E.6.2.4) has not been employed as an element of the GNPS Prompt Alert and Notification System. Therefore, this section of FEMA-43 is not applicable for this submittal.