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CRUTCHFIELD,D. Operating Reactors Branch 5

SUBJECT: Forwards response to NUREG-0737,Item III.A.2 & NUREG-0654, Revision 1,App 2 re 810401 as implementation date for meteorological assessment requirements.Upgraded meteorological program will be provided by 810701.

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JOHN E. MAIER
VICE PRESIDENT

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April 28, 1981

Director of Nuclear Reactor Regulation
Attn: Mr. Dennis M. Crutchfield, Chief
Operating Reactors Branch No. 5
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Meteorological Assessment Capability in Response to NUREG-0737 and NUREG-0654 Requirements.
R. E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Mr. Crutchfield:

NUREG-0737, item III.A.2, contained implementation date requirements for meteorological assessment capability. These requirements are also reflected in Annex 1 of Appendix 2 of NUREG-0654, Revision 1. Contained in both documents is a set of alternative actions that may be taken to satisfy the April 1, 1981 date for implementation of certain meteorological program elements. Our previous submittals did not address meteorological assessment, and Attachment 1 indicates our intended means to satisfy these requirements. A more detailed description of the upgraded meteorological program will be provided by July 1, 1981.

We request that you review the information in the attachment and provide us with any comments you have at an early date.

Sincerely,

John E. Maier

John E. Maier

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Attachment 1

Rochester Gas and Electric Corporation

Response To

NUREG-0737, Item III.A.2,
Improving Licensee Emergency Preparedness

and

NUREG-0654, Revision 1, Appendix 2,
Meteorological Criteria for Emergency
Preparedness at Operating Nuclear
Power Plants

Date: 4/28/81

RG&E Response to NUREG-0737, Item III.A.2
and NUREG-0654, Appendix 2, Annex 1

NRC Position

Implementation

Schedule for Operating Reactors -- For operating reactors the following implementation milestones shall be met to address the four basic elements of the introduction to Appendix 2 to NUREG-0654.

Milestones are numbered and tagged with the following code; a-date, b-activity, c-minimum acceptance criteria. They are as follows:

(1) a. January 2, 1981

b. Submittal of radiological emergency response plans

c. A description of the plan to include elements of NUREG-0654, Revision 1, Appendix 2

(2) a. March 1, 1981

b. Submittal of implementing procedures

c. Methods, systems, and equipment to assess and monitor actual or potential offsite consequences of a radiological emergency condition shall be provided

(3) a. April 1, 1981

b. Implementation of radiological emergency response plans

c. Four elements of Appendix 2 to NUREG-0654 with the exception of the Class B model of element 3, or

Alternative to item (3) requiring compensating actions:

A meteorological measurements program which is consistent with the existing technical specifications as the baseline or an element 1 program and/or element 2 system of Appendix 2 to NUREG-0654, or two independent element 2 systems shall provide the basic meteorological parameters (wind direction and speed and an indicator of atmospheric stability) on display in the control room. An operable dose calculational methodology (DCM) shall be in use in the control room and at appropriate emergency response facilities.

[illegible]

The following compensating actions shall be taken by the licensee for this alternative:

(i) if only element 1 <u>or</u> element 2 is in use:

- The licensee (the person who will be responsible for making offsite dose projections) shall check communications with the cognizant National Weather Service (NWS) first order station and NWS forecasting station on a monthly basis to ensure that routine meteorological observations and forecasts can be accessed.

- The licensee shall calibrate the meteorological measurements program at a frequency no less than quarterly and identify a readily available source of meteorological data (characteristic of site conditions) to which they can gain access during calibration periods.

- During conditions of measurements system unavailability, an alternate source of meteorological data which is characteristic of site conditions shall be identified to which the licensee can gain access.

- The licensee shall maintain a site inspection schedule for evaluation of the meteorological measurements program at a frequency no less than weekly.

- It shall be a reportable occurrence if the meteorological data unavailability exceeds the goals outlined in Proposed Revision 1 to Regulatory Guide 1.23 on a quarterly basis.

(ii) The portion of the DCM relating to the transport and diffusion of gaseous effluents shall be consistent with the characteristics of the Class A model outlined in element 3 of Appendix 2 to NUREG-0654.

(iii) Direct telephone access to the individual responsible for making offsite dose projections (Appendix E to 10 CFR Part 50(IV)(A)(4)) shall be available to the NRC in the event of a radiological emergency. Procedures for establishing contact and identification of contact individuals shall be provided as part of the implementing procedures.

This alternative shall not be exercised after July 1, 1982. Further, by July 1, 1981, a functional description of the upgraded programs (four elements) and schedule for installation and full operational capability shall be provided (see milestones 4 and 5.)

RG&E Response

1. Existing Meteorological Assessment Capability

All meteorological measuring devices, with the exception of the precipitation measuring system, are currently mounted on a 250 foot weather tower located on the Ginna Plant site. Wind speed, wind direction and temperature are measured at the 33, 150 and 250 foot levels. The upper level wind speed and direction sensor readings are recorded on the Radiation Monitoring System panel in the Ginna Control Room. Temperatures at the three tower levels are also indicated in the Control Room by digital display. The temperatures and the temperature difference between the 33-ft and 150-ft and between the 33-ft and 250-ft levels are recorded on a panel in the Turbine Building. The Turbine Building panel also records the 33-ft and 150-ft wind speeds, and wind direction. Rainfall is measured by a tipping bucket rain gauge located at the base of the Ginna weather tower. Wind direction, wind speed, and temperature indications from the three tower elevations are also registered on the Ginna plant computer (P-250).

Additional weather instrumentation has been installed and is operational at Ginna Substation 13A, approximately 2900 feet due south of the primary Ginna weather tower. The instrumentation consists of a wind speed/direction unit mounted at the 33-foot level on an existing communications tower. A strip chart recorder provides local readout of wind speed and wind direction inside the adjacent substation building, designated as the back-up Emergency Survey Center. Capability, therefore, exists to quickly access the Substation 13A weather data if necessary, and communicate the readings to the primary Emergency Survey Center or Control Room by intercom, radio or telephone.

2. Dose Assessment

The objective of the Class A model is satisfied by existing site contingency operating procedures, which provide the capability to produce initial transport and diffusion estimates for plume exposure within 15 minutes following the classification of an incident.

Ginna Station Procedure SC-1.13 describes the method by which site meteorological information is used for the estimation of offsite radiation accident doses. Control Room wind direction, wind speed and temperature indications are currently communicated to the Emergency Survey Center. Estimates of downwind radioactivity concentrations and doses can then be made by a Health Physicist in the Emergency Survey Center using pre-printed overlays placed on a regional map. Wind conditions and atmospheric stability can be

derived either from the primary or Substation 13A meteorological instrumentation, under Procedure SC-1.13.

Ginna Station Procedure SC-1.3A provides a rapid dose estimate methodology for Control Room personnel. Estimates of radioactive materials release and projected dose are provided for various accident categories and modes of safeguards equipment operation in Attachment II to SC-1.3A. In addition, offsite dose estimates can be calculated in the Control Room from ventilation monitor readings, using simplified equations contained in the procedure.

3. National Weather Service Data

Contact arrangements have been made to establish and periodically confirm communications with the nearest NWS first order station (Rochester, NY) and NWS forecasting station (Buffalo, NY). Monthly communication checks with both NWS stations have been incorporated in the requirements of Ginna Station Procedure SC-1.15A. In addition, Procedure SC-1.13 has been revised to include the 24-hr private telephone numbers of the Rochester and Buffalo NWS stations, for access to supplemental meteorological data, if necessary.

4. Tower Calibration

It is planned that complete primary tower and back-up weather tower calibrations will be performed on at least a semi-annual basis. Quarterly tower calibrations do not appear to be warranted due to worker safety hazards from performing such work in harsh weather seasons, and because the previous as-found condition of the meteorological measurements system has not differed significantly from the newly-calibrated condition. Furthermore, the more frequent meteorological system surveillance procedure (RD-14) implemented at Ginna Station is intended to identify gross system discrepancies which would in turn call for corrective action to be taken (see item 5).

The readily available alternate source of meteorological data that can be accessed during calibration periods is the Substation 13A instrumentation described under item 1 above. This instrumentation is also available and accessible as an alternate source of meteorological data during unexpected primary tower outages.

5. Meteorological Measurements Inspection Schedule

Ginna Station procedure RD-14, Meteorological System Surveillance, has been implemented and provides requirements for routinely checking the proper performance of the Ginna meteorological measurements system. Meteorological parameters indicated from the primary tower are checked at least 3

times/week, and the Station 13A parameters are checked weekly. A weekly surveillance report form is completed and reviewed by Health Physics.

6. Unavailability of Meteorological Data

The addition of the Substation 13A weather instrumentation provides an independent continuous source of meteorological data in the event the primary Ginna Station weather tower data is unavailable due to component failures or system calibration. Supplementary weather data are also available from local NWS stations on a 24-hour basis as described in item 3 above. Therefore, it is anticipated that meteorological data will always be available, and thus the data unavailability goals outlined in Proposed Revision 1 to Regulatory Guide 1.23, and the reportable occurrence requirements of NUREG-0737 and NUREG 0654 do not apply.

7. Access to Individuals Performing Offsite Dose Projections

Direct telephone access is available to the Health Physicist(s) responsible for making offsite dose projections via the NRC Health Physics Network phones located in both the Ginna Emergency Survey Center and Alternate Emergency Survey Center (Substation 13A). Existing site contingency operating procedures contain instructions for initial NRC notification, a specialized call list containing the HP Network number, and identification of Ginna Health Physicists subject to immediate call-up for emergency response.

8. Upgraded Capabilities

We are currently reviewing the Ginna meteorological program in view of the guidance provided in Appendix 2 of NUREG-0654. Modifications are in progress to upgrade several portions of the existing meteorological monitoring system. The weather tower will be equipped with redundant sensing devices for use as additional indicators of wind speed, direction, temperature, and temperature difference. All meteorological data will be collected and computer-processed to provide estimates of radioactive materials transport and diffusion under routine and accidental conditions. Upgraded capabilities are expected to be in place by July 1, 1982.

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