U. S. Nuclear Regulatory Commission
Region I

Report No.	50-244/91-21
Docket Nos.	50-244
License No.	DPR-18
Licensee:	Rochester Gas and Electric Corporation 89 East Avenue Rochester, New York 14649
Facility Name:	R. E. Ginna Nuclear Power Plant
Inspection:	September 10-12, 1991
Inspection At:	Ontario and Rochester, New York

Inspectors: _____ 10/9/91
L. Eckert, Regional Team Leader date

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Approved: _____ 10/9/91
E. McCabe, Chief, Emergency Preparedness Section, Division of Radiation Safety and Safeguards date

Inspection Summary: Inspection on September 10-12, 1991 (Report No. 50-244/91-21).

Areas Inspected: Announced, routine, safety inspection of the licensee's full-participation emergency preparedness exercise.

Results: The licensee's response actions for this exercise were adequate to provide protective measures for the health and safety of the public. No violations or exercise weaknesses were identified.

DETAILS

1.0 Persons Contacted

The following personnel attended the exit meeting. Unless noted otherwise, personnel listed below are Rochester Gas and Electric Corporation staff.

R. Smith, Senior Vice President
R. Mecredy, Vice President, Ginna Nuclear Production
W. Schrouder, Vice President
F. Maciuska, Supervisor, License Training
P. Wilkens, Department Manager, Nuclear Engineering Services
J. Edmunds, Manager, Public Affairs
R. Morrill, Manager, Operations Assessment
R. Beldue, Corporate Nuclear Emergency Planner
P. Polfleit, Onsite Planner
D. Burke, Emergency Preparedness Contractor, David W. Burke Incorporated
T. Powell, Department Manager, Risk Management
R. Wood, Supervisor, Nuclear Security
W. Dillon, Director, Security
R. Benne, Supervisor, Nuclear Security
E. Adkins, Director, Governmental and Community Relations
T. Marlow, Superintendent Ginna
J. Noon, Division Manager, Information Systems
R. Watts, Director, Corporate Radiation Protection
A. Harhay, Manager, Health Physics and Chemistry
J. Knorr, Manager, Maintenance Training
W. Backus, Operations Manager Technical Assistant

The inspectors also interviewed and observed the actions of other licensee personnel.

2.0 EMERGENCY EXERCISE

The Robert E. Ginna Nuclear Power Station conducted a full-participation exercise on September 11, 1991, from 6:15 a.m. to 3:00 p.m. The Federal Emergency Management Agency (FEMA) observed the offsite performance by the State of New York, Monroe County, and Wayne County.

2.1 Pre-exercise Activities

The exercise objectives were submitted to NRC Region I on February 12, 1991 in preparation for a June, 1991 exercise. Due to the impact on resources to Wayne and Monroe counties caused by the winter ice storm, FEMA and the NRC agreed to delay the exercise until September 1991. The complete scenario package was submitted to the NRC on July 12, 1991. Following the NRC review, Region I

representatives had telephone conversations with the licensee's emergency preparedness staff to discuss the scope and content of the scenario.

Improvement over previous submittals was noted. As a result, only minor revisions were made to the scenario which allowed adequate testing of the major portions of the R. E. Ginna Nuclear Power Station Emergency Plan and Implementing Procedures and also provided the opportunity for the licensee to demonstrate those areas previously identified by the NRC as in need of corrective action.

NRC observers attended a licensee briefing on September 10, 1991 to discuss the revised scenario. The licensee stated that certain emergency response activities would be simulated and that controllers would intercede in exercise activities to prevent disruption to normal plant activities.

2.2 Exercise Scenario

The exercise scenario included the following events:

- Flammable material uncontrollably discharged onsite which resulted in an Unusual Event per EPIP 1-0, "Ginna Station Event Evaluation and Classification" (EAL: Near or onsite uncontrolled toxic or flammable gas release reported to operations personnel);

- Individual commandeering a non-vital area of the plant which resulted in the declaration of an Alert per EPIP 1-0 (EAL: Security; on-going security compromise, Example: Adversaries commandeering a non-vital area of the Plant as reported by the Security Shift Supervisor);

- Emergency repairs on "A" emergency diesel generator;

- "B" emergency diesel generator tripped due to pressure switch malfunction;

- Fire in "A" emergency diesel generator which resulted in a Site Area Emergency declaration per EPIP 1-0 (EAL: Fire; Fire compromising the functions of safety systems as determined by the Shift Supervisor (SS) / Emergency Coordinator;

- Turbine-driven auxiliary feed water pump taken out of service due to low oil pressure;

- Reactor coolant pump (RCP) "A" sustained a locked rotor. Reactor core temperatures increased to 2700 degrees fahrenheit and the containment vessel high radiation monitor readings increased rapidly resulting in a General Emergency declaration per EPIP 1-0 (EAL: Containment System; Loss of 2

of 3 fission barriers and potential loss of the third);

- Operators manually tripped the reactor;
- Residual heat removal pump "A" failed to start;
- Rapid increase in radiation levels in the Auxiliary Building;
- Radioactivity released to the environment; and
- Recovery planning.

2.3 Activities Observed

During the conduct of the exercise, NRC inspection team members made detailed observations of the activation and augmentation of the Emergency Response Facilities and actions of the Emergency Response Organization staff during operation of the Emergency Response Facilities. The following activities were observed:

1. Selection and use of control room procedures;
2. Detection, classification, and assessment of scenario events;
3. Direction and coordination of emergency response;
4. Notification of licensee personnel and offsite agencies;
5. Communications/information flow, and record keeping;
6. Assessment and projection of off-site radiological dose and consideration of protective actions;
7. Provisions for inplant radiation protection;
8. Provisions for communicating information to the public;
9. Accident analysis and mitigation;
10. Accountability of personnel;
11. Nuclear Security activities;
12. Firefighting activities; and
13. Post-exercise critique.

3.0 CLASSIFICATION OF EXERCISE FINDINGS

Emergency preparedness exercise findings are classified as follows.

3.1 Exercise Strengths

Exercise strengths are areas in which the licensee's staff response provide strong positive indication of their ability to cope with abnormal plant conditions and implement the Emergency Plan.

3.2 Exercise Weaknesses

Exercise weaknesses are areas of the licensee's response in which the performance was such that it could have precluded effective implementation of the Emergency Plan in the event of an actual emergency in the area being observed. Existence of an exercise weakness does not of itself indicate that overall response was inadequate to protect public health and safety.

3.3 Areas for Improvement

Areas for improvement are areas which did not have a significant negative impact on the licensee's ability to implement the Emergency Plan. However, these areas should be evaluated by the licensee to determine if corrective action could improve performance.

4.0 EXERCISE OBSERVATIONS

The NRC team noted that the licensee's activation of the Emergency Response Organization (ERO), Emergency Response Facilities (ERFs), and use of these facilities were generally consistent with their Emergency Plan and Emergency Plan Implementing Procedures.

4.1 Overall ERF Observations

The following expected actions were performed well:

- Classifications were timely and correct.
- Emergency Coordinators (ECs) demonstrated proficiency in reaching emergency classification decisions.
- Senior management demonstrated good command and control in all ERFs.
- Senior management maintained good information flow between ERFs throughout the exercise.
- Evacuation and accountability after the Site Area Emergency declaration went smoothly.

4.2 Control Room

Following recognition of an emergency condition, operators enter the Emergency Operating Procedures (EOPs), Abnormal Operating Procedures (AOPs), and Emergency Plan Implementing Procedures (EPIPs). The on-duty Shift Supervisor

(SS) assumes the duties of EC. The Control Room becomes the primary location for initial assessment of emergency conditions and coordination of corrective actions. The SS remains the EC until relieved from the activated Technical Support Center (TSC) by the TSC Director. After the TSC has been activated, the SS communicates changes in plant status to the Plant Operations Assessment Manager (reports to the TSC Director) and coordinates operational activities between the TSC and the Control Room.

The EC is responsible for activities including: notification of augmented onsite emergency organization personnel; incident classification; notification to the State of New York, Monroe County, and Wayne County; accountability of plant personnel; initial dose assessment; and the development of Protective Action Recommendations (PARs), if needed.

Reactor operators recognized symptoms, correlated symptoms with EOP and AOP entry conditions, followed the emergency procedures, and when conditions warranted referred the matter to the TSC. The SS kept apprised of the overall nature of events and how they affected plant status. Crew members were observed to initiate phone calls and enter procedures without requiring explicit direction from the EC (SS). The operating crew properly consulted normal/abnormal/emergency operating procedures, annunciator procedures, and plant and information drawings (P&IDs) when diagnosing or attempting to mitigate adverse plant conditions. The SS and the operating staff were observed to double check TSC assessment and actions by continuing to consult their Emergency Plan Implementing Procedures (EPIPs) after command and control had transferred to the TSC. The EC correctly classified events (Unusual Event and Alert declarations were made from the Control Room); insured that notifications to the State of New York, Monroe County, Wayne County, and the NRC were timely; and responded to a loss-of-coolant accident. Log books and communicator forms were adequately maintained.

The following exercise strength was identified.

1. The SS and the operating staff did a good job in diagnosing and attempting the mitigation of adverse plant conditions.

No exercise weaknesses or areas for improvement were identified.

4.3 Technical Support Center

The TSC must be activated at an Alert or higher declaration. The TSC is headed by the TSC Director (Plant Manager or designated alternate). ERO staff in the TSC are responsible for diagnostic and engineering assistance to the Control Room. Other TSC activities include: tracking of plant conditions; providing plant systems support for management personnel in the EOF; performing dose assessment until the

EOF is activated; and providing operations information to the EOF and the NRC until the EOF is activated. Upon activation of the EOF, the EC transfers overall command and control to the Recovery Manager at the EOF but retains control of on-site activities. The TSC Director then reports to the EOF Nuclear Operations Manager.

The inspectors observed that TSC management gave priority attention to safety throughout the exercise as demonstrated by completion of the comprehensive surveillance procedure series (S-30) and in responding to security events. Log books were adequately maintained.

The following exercise strength was identified.

1. TSC Management displayed good coordination in assessing the priority of tasks and assigning staff to perform these tasks. Additionally, TSC management thoroughly analyzed the impact on plant safety as conditions changed.

No exercise weaknesses were identified.

The following areas for improvement were identified.

1. During the Alert and Site Area Emergency, facsimile transmission of plant trend information to the Monroe County Emergency Operations Center was interrupted. The EOF Monroe County liaison then transmitted this information by phone. This is of concern as the county liaison is not a technical position, there are too many plant parameters sent for this to be an efficient method of information transfer, and the county liaison has other responsibilities.

2. The press release providing information about the Alert used an erroneous description of the plant employee who commandeered the Operations Trailer.

4.4 Operations Support Center

The Operations Support Center (OSC) must be activated within one hour after an Alert or higher declaration. The OSC is directed by the Plant Maintenance Assessment Manager who reports directly to the TSC Director. The OSC is the muster area for shift personnel and a location at which emergency repair teams (ERTs) are organized and briefed on mission requirements by the Plant Maintenance Assessment Manager. ERTs are briefed on radiological conditions and exposure control procedures from the TSC Health Physics and Chemistry Manager. Functions of ERTs include but are not limited to fire brigade, rescue operations, damage control, and maintenance.

ERTs were observed to be well briefed as to mission needs and radiological conditions and debriefed upon return from the plant.

No exercise strengths, weaknesses, or areas for improvement were identified.

4.5 Emergency Operations Facility

The EOF must be activated at a Site Area Emergency or higher declaration. The EOF is the facility in which overall control of Rochester Gas and Electric (RG&E) Corporation emergency response and recovery resources is managed. Emergency response activities are evaluated, coordinated, and communicated with Federal, State, and County emergency response organizations. The EOF Recovery Manager manages the overall recovery operation upon transfer of command and control to the EOF. The Nuclear Operations Manager and the Nuclear Operations Manager Assistant aid the Recovery Manager in coordinating activities of the offsite ERO to support site activities. The Engineering Support Center is directed by the Engineering Support Manager who reports directly to the Recovery Manager.

Official transferral of command and control of the ERO to the EOF was not made until the EOF management felt that they had a good understanding of plant conditions. The Recovery Manager held frequent EOF staff meetings which included representatives of the State of New York, Monroe County, and Wayne County. The Recovery Manager reviewed and approved press releases. EOF access control was maintained. A good demonstration was observed in evaluating the need to requisition diesel generators as a replacement for the out of service emergency diesel generators. Added realism was observed in a simulated NRC Resident Inspector request for administrative assistance from the Recovery Manager for a Region I Site Team. The Recovery Manager was observed to direct the Facilities and Personnel Manager to make sure that preparations had been made for a prolonged emergency, and later notified the simulated NRC Resident Inspector as to what resources were made available to the Site Team. The licensee adhered to established emergency classification levels and emergency plan implementing procedures. Much improvement was noted in Protective Action Recommendation (PAR) formulation. It was apparent that the EOF staff consciously recognized the need to quickly provide a PAR after a general emergency declaration.

The following exercise strengths were identified.

1. Good information flow was observed between the Recovery Manager and staff in apprising the EOF and offsite organizations of current plant conditions.

2. Senior EOF staff members were very active in making engineering requests

and kept good track of changing plant conditions. For example, a request for variance from Technical Specifications per 10CFR50.54(x) was sought from NRR in order to remain at twenty percent power. This was requested because much of the means to maintain power to equipment vital to shutdown operations had been eliminated by various scenario events.

No exercises weaknesses were identified.

The following areas for improvement were identified.

1. EOF staff members did not appear to have a good understanding of what their actions should have been in response to the county's declaration of a "State of Emergency".

2. EPIP 3-1 does not provide specific guidance as to when command and control of the emergency response organization is transferred from the TSC to the EOF after the EOF has been activated.

3. EPIP 1-0 Section 4.6 is not clear regarding classification of events exceeding EALs which are recognized and quickly corrected. One sentence in Section 4.6 appears to indicate that a classification should be made while a second sentence directs only NRC notification of the event without classification. The licensee should address and resolve these conflicting statements.

4.6 Joint Emergency News Center

The Joint Emergency News Center (JENC) is activated at an Alert declaration or higher. The JENC is directed by the News Center Manager and reports to the Corporate Spokesperson who is located at the EOF. The JENC serves as a central location for release of all information from the Rochester Gas and Electric Corporation, as well as local and state agencies, to the news media. The EOF Recovery Manager approves plant status statements sent by the EOF Corporate Spokesperson to the JENC. The News Center Manager is responsible for the following activities: activating the JENC; distributing news releases; coordinating with the EOF Corporate Spokesperson; and activating the inquiry response Rumor Control Center which is within the JENC. Technical advisors are available to clarify media questions of a technical nature.

Press briefings were held and provided an acceptable depiction of plant conditions and were presented in an understandable manner. The inspectors observed that the licensee's representatives answered media questions competently and contacted the EOF for further information when unable to answer a question. JENC access control was maintained.

No exercise strengths, weaknesses, or areas for improvement were identified.

4.7 Security Performance

The following exercise strengths were identified.

1. Site security was observed to quickly and efficiently respond in the uncontrolled propane release, security compromise, and fire brigade mini-scenarios and quickly isolate the affected surrounding areas.

2. Mockups for the propane and fire mini-scenarios helped player response and added realism.

No exercise weaknesses or areas for improvement were observed.

5.0 Licensee Action on Previously Identified Items

Based upon discussions with licensee representatives, examination of procedures and records, and observations made by the NRC team during the exercise, areas for improvement identified during the previous annual emergency exercise (Inspection Report No. 50-029/90-27) were acceptably demonstrated and not repeated.

(CLOSED) IFI 50-244/90-27-01: The TSC declared the general emergency, but did not issue an immediate PAR as described in EPIP 2-1, "Protective Action Recommendations". When the PAR was made from the EOF about 30 minutes later, the basis was not discussed with New York State representatives present in the EOF or with Wayne county officials via the RECS.

The licensee was observed to issue an appropriate PAR following the general emergency declaration. The licensee held a conference in which the PAR was formulated with New York State, Monroe County, and Wayne County officials present so that the basis was clear to all individuals involved.

6.0 Licensee Critique and Exit Meeting

The NRC team attended the licensee's exercise critique on September 12, 1991 during which the licensee's lead controllers and observers discussed observations of the exercise. The licensee's critique was constructive and thorough. Items that require corrective action were identified.

Following the licensee's self-critique, the NRC team met with the licensee's representatives listed in Section 1 to discuss findings as detailed in this report. The NRC team leader

summarized the observations made during the exercise. The licensee was advised that no exercise weaknesses were identified. The NRC team also determined that within the scope and limitation of the scenario, the licensee's performance demonstrated the ability to implement their Emergency Plan and Emergency Plan Implementing Procedures in a manner that would adequately provide protective measures for the health and safety of the public.