

U. S. Nuclear Regulatory Commission
Region I

Docket/Report: 50-244/92-13

Licensee: Rochester Gas and Electric Company (RG&E)

Facility Name: R. E. Ginna Nuclear Power Station

Inspection: October 7-9, 1992

Inspection At: Ontario and Rochester, New York

Inspectors: Lony Eckert 11/6/92
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Approved: E. C. McCabe 11/10/92
E. McCabe, Chief, Emergency Preparedness date
Section, Division of Radiation Safety
and Safeguards

Scope

Routine, announced emergency preparedness (EP) inspection and observation of the annual, partial-participation exercise.

Results

Performance demonstrated the ability to protect public health and safety under an appropriately challenging scenario. Strengths included Simulator Control Room and Emergency Operations Facility command and control. No exercise weaknesses were identified.



DETAILS

1.0 Persons Contacted

The following individuals attended the exit meeting on October, 9 1992.

T. Alexander, Quality Control Engineer - Operations
R. Beldue, Corporate Nuclear Emergency Planner
B. Butler, Technical Instructor
B. Dahl, Senior Chemist
J. Edmunds, Manager, Public Affairs
A. Harhay, Manager, Health Physics and Chemistry
D. Hudnut, Supervisor, Simulator Training
N. Kiedrowski, Senior Technical Instructor
R. Marchionda, Superintendent, Support Services
R. Mecredy, Vice President, Ginna Nuclear Production
F. Mis, Health Physicist
R. Morrill, Operations Assessment Coordinator
J. Neis, Supervisor, Technical Training
F. Orienter, Coordinator, Radiological Safety Communications
P. Polfleit, Onsite Emergency Planner
W. Poulton, Training Specialist
F. Pudda, Operations Assessment
J. Schultz, Technical Instructor
R. Smith, Senior Vice President, Production and Engineering
R. Watts, Director, Corporate Radiation Protection
J. Wayland, Reactor Engineer
J. Widay, Plant Manager
P. Wilkins, Manager, Nuclear Engineering Services
R. Wood, Supervisor, Nuclear Security

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

2.0 Emergency Exercise

The R. E. Ginna Nuclear Power Plant conducted a partial-participation exercise on October 8, 1992, from 7:00 a.m. to 1:30 p.m. The State of New York, Wayne County, and Monroe County participated. Off-site activities were not reviewed.

2.1 Pre-exercise Activities

Exercise objectives were submitted to NRC Region I on June 1, 1992. The complete scenario package was submitted to the NRC on July 22, 1992. Following NRC review of the submitted scenario, Region I representatives had telephone conversations with the licensee's emergency preparedness staff to discuss the scope and content of the scenario. Minor revisions were made



to the scenario, which provided a challenging test of the major portions of the Emergency Plan and Implementing Procedures. The scenario allowed the licensee to demonstrate areas previously identified by the NRC as needing corrective action.

NRC observers attended an October 7, 1992 licensee briefing on the revised scenario. The licensee stated that certain emergency response activities would be simulated and that controllers would intercede in exercise activities to prevent disrupting normal plant activities.

2.2 Exercise Scenario

The scenario provided an appropriately challenging test of the RG&E Emergency Response Organization's (ERO's) ability to respond to a Steam Generator Tube Rupture (SGTR). The scenario was particularly challenging to dose assessment staff and Security. Scenario information was well presented, and included the following simulated events.

- A primary to secondary leak > 0.1 gpm led to an Unusual Event {Emergency Action Level (EAL): primary to secondary leakage > 0.1 gpm as identified by sampling}.
- Steam Generator (SG) Atmospheric Relief Valve (ARV) "A" stuck open.
- SG ARV "A" was isolated.
- A steam leak between SG ARV "B" and its isolation valve.
- Component Cooling Water (CCW) Pump "1A" tripped on over-current.
- A SGTR led to an Alert (EAL: SGTR with primary to secondary leakage > 100 gpm)
- Service Water (SW) Pump "A" tripped.
- Detected Screen House gas leak which led to a Site Area Emergency (EAL: Hazards being experienced or projected; entry of uncontrolled flammable gases into vital areas).
- Recovery plan development and exercise termination.

2.3 Activities Observed

The NRC observed the activation and augmentation of the Emergency Response Facilities and actions of the Emergency Response Organization staff. The following 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 off-site agencies.



5. Communications/information flow, and record keeping.
6. Assessment and projection of off-site radiological doses, and protective action recommendations.
7. Provisions for in-plant radiation protection.
8. Provisions for communicating information to the public.
9. Accident analysis and mitigation.
10. Accountability of personnel.
11. Post-exercise critique by the licensee.

3.0 Exercise Finding Classifications

Emergency preparedness exercise findings were classified as follows.

Exercise Strength: A strong positive indicator of the licensee's ability to cope with abnormal plant conditions and implement the Emergency Plan.

Exercise Weakness: Less than effective Emergency Plan implementation which does not, alone, constitute overall response inadequacy.

Areas for Improvement: An aspect which did not significantly detract from the licensee's response, but which merits licensee evaluation for corrective action.

4.0 Exercise Observations

The NRC team noted that the licensee's activation and use of the Emergency Response Organization (ERO) and Emergency Facilities was generally consistent with the Emergency Plan and Emergency Plan Implementing Procedures.

4.1 Overall Observations

- This was the first time in which the licensee utilized their control room simulator in the dynamic mode of operation. The lack of significant exercise control discrepancies (i.e., timely controller communications allowed the simulator operators to remove simulator faults in a timely manner in accordance with player response actions) showed attention to detail in scenario development and prediction of player responses.
- Recognition of EALs, declaration of EALs, and subsequent notifications to off-site response organizations were timely and appropriate.
- New York State Radiological Emergency Communication System (RECS) data forms were completed in the Simulator Control Room, Technical Support Center, and Emergency Operations Facility. No discrepancies were noted.



- The Senior Vice President, Production and Engineering attended the NRC exit meeting, showing management involvement in EP (He did not play in the exercise.).

4.2 Simulator Control Room (SCR)

Event recognition, classifications, and notifications (Unusual Event and Alert) were prompt and accurate. The Shift Supervisor (SS) kept the crew informed of changing conditions. Operator responses to challenges were effective. Anomalies were rapidly assessed and correct response procedures were immediately implemented. Good communications and very strong teamwork were demonstrated. The operators entered and executed the correct procedures.

The air ejector exhaust radiation monitor (Radiation Monitoring System Channel R-15) Alarm Response Procedure (ARP), AR-RMS-15, was not explicit concerning response to a radiation level which exceeded the Technical Specification (TS) limit. The ARP required actions stated, "if steam generator tube rupture is evident, then go to E-0 (Reactor Trip or Safety Injection)...[if not] then go to procedure O-6.10 (Plant Operation With Steam Generator Tube Leakage Indication)." Per Updated Final Safety Analysis Report (UFSAR) 11.5.2.2.8, "Air Ejector and Gland Steam Exhaust Monitors," R-15 is "usually the first sensor of primary to secondary leakage" and the alarm setpoint (1500 cpm above background) was selected "to provide sensitivity to steam generator tube leakage while avoiding spurious alarms due to background fluctuations." Given that the TS limit (2.3E5 cpm) is two orders of magnitude greater than the alarm setpoint, it was not clear how the operators were to discriminate between SG tube leakage and SG tube rupture.

The inspectors observed that the SS needed further clarification on interpreting the Alert and Site Area Emergency Security EALs. The following table is extracted from EPIP 1.0, Revision 5, 2/3/92, "Ginna Station Event Evaluation and Classification."

INITIATING CONDITIONS	General Emergency Proceed to EPIP 1-4	Site Area Emergency Proceed to EPIP 1-3	Alert Proceed to EPIP 1-2	Unusual Event Proceed to EPIP 1-1
Security	Occupation of vital areas by adversaries as reported by Security Shift Supervisor to Operations personnel	Physical attack on the plant involving imminent occupancy of vital areas by adversaries as reported by Security Shift Supervisor	On-going security compromise, example: adversaries commandeering a non-vital area of the plant as reported by the Security Shift Supervisor	Security Shift Supervisor Reports: - Security Threat - Unauthorized Entry - Attempted Sabotage

The SS was aware that the steam leak discovered near SG ARV "B" was from a hole drilled through a weld and concluded that tampering had occurred. The SS determined that the Unusual Event Security EAL was not applicable as it was not a case of "attempted sabotage;" damage (simulated) had occurred. The SS then had difficulty in discriminating between the Alert and Site Area Emergency Security EALs. The SS was able to determine that there was no on-going security compromise (Security conducted surveillances) and there was no physical attack on the



plant involving imminent occupancy of vital areas. As the SS had concluded that tampering had occurred and no EAL seemed to fit the situation, he sought out other individuals with more comprehensive knowledge on the EAL bases. NRC review concluded that the SS's conclusion that simulated tampering had occurred was reasonable and, therefore, the attempted sabotage criterion had been exceeded. That necessitated an additional Unusual Event entry into the Emergency Plan and communication of that additional entry to off-site agencies. No such entry or notification occurred.

The following exercise strength was identified.

- SCR command and control.

No exercise weaknesses were identified.

The following areas for improvement were identified.

- Review of AR-RMS-15 to ensure explicit direction on transition to other procedures.
- Formalization of the EAL technical bases as an additional tool to facilitate timely classification and/or operator training on additional entries into event classification and the Security EALs.

4.3 Technical Support Center/Operational Support Center (TSC/OSC)

The TSC Director was in place shortly after the Unusual Event declaration and assisted the SCR staff as needed. The TSC was activated at 1012, 46 minutes after the Alert declaration (versus a 60-minute standard). Transition of Emergency Coordinator (EC) duties to the TSC director went smoothly. Command and control in the TSC/OSC was effective. Temporary turn-over of facility command and control was well done.

The EC and TSC staff tracked and analyzed plant conditions, followed trends, and anticipated plant conditions. Event recognition, classifications, and notifications were prompt and accurate. Once the TSC was activated, an intercom was used by the EC to simultaneously brief the TSC and OSC staffs. The briefings were detailed and sufficiently frequent.

The EC conducted periodic meetings throughout the exercise. The first meeting assessed the release and dose projections. A final meeting was held to discuss recovery efforts with the corporate (EOF) staff. The EC appropriately proposed that no Residual Heat Removal pump be started until the CCW pump was repaired.

Good communications were noted between the TSC and SCR. The EC was observed to discuss the Alert and Site Area Emergency classification upgrades with the SS. When TSC personnel noticed that reactor pressure was decreasing on the Plant Process Computer System and R-15 and R-19 were increasing, this information was quickly discussed with the SCR staff.



Two simulated calls from the NRC were directed to the EC. The EC took the first call and proceeded to carry on a conversation for about four minutes and then appropriately directed his assistant to finish the discussion. The assistant was observed to handle the next call in its entirety.

Dose projections were performed as directed by EPIPs. The initial release rate was calculated to be one-third of TS release rate limits. Later dose projections based on the steam jet air ejector release pathway indicated a site boundary dose equivalent of 20 mRem/hour.

The OSC was activated and staffed in a timely manner, i.e. 20 minutes after the Alert declaration. Command and control were good. Prioritization of limited resources (personnel) was good. Personnel were briefed, tracked, and de-briefed well.

A Damage Control Team (DCT) responded well to the high SG "A" primary to secondary leak rate and to SG ARV "A" lifting by isolating SG "A" in a timely manner.

The status of the DCTs was not readily apparent. There was no method in the TSC/OSC to track and indicate the status of the DCTs or Auxiliary Operators other than log books. During the exercise, this information did not become available until disseminated to managers through meetings in the conference room. There was no status board which indicated the number of DCTs, DCT tasks, DCT task priority, and whether the task had been completed, canceled or re-prioritized.

No exercise strengths or weaknesses were identified. The following area for improvement was identified.

- Means of tracking DCTs.

4.4 Emergency Operations Facility (EOF)

There was timely EOF activation (31 minutes after the Alert declaration at 1005). Access control was well coordinated and did not result in undue delay in facility access. Command and control shifted to the EOF at 1120. Shift of command and control was orderly. EOF command and control was good. Information flow between senior RG&E management and County and State representatives was accurate and timely throughout the exercise. The Recovery Manager (RM) ensured that media releases were accurate, properly reviewed and approved, and clearly presented. The RM logbook provided excellent detail. The Dose Assessment Manager logbook was well detailed. The Nuclear Operations Manager logbook was adequately detailed.

The following exercise strength was identified.

- EOF communications.

No exercise weaknesses or areas for improvement were identified.



4.5 Joint Emergency News Center (JENC)

In one media brief, the significance of the TS radioactive gas release rate limit was not made clear. In another media brief, a spokesperson provided erroneous information on the location of the site boundary in regard to a dose projection. The spokesperson said that Lake Road, the owner-controlled area boundary, was the site boundary.

Media releases were candid and provided sufficient indication of the severity of events. However, Media Release #2, issued at 1010, provided information that the classification had been upgraded from an Unusual Event to an Alert and stated that "there has been a confirmed release of radiation to the atmosphere at 9:15 a.m. Monitoring teams are evaluating the levels." Such a statement might cause the public to overreact to an accident. No information on the severity of this release was provided to place it in perspective (e.g., by stating that there were no significant off-site doses involved). The severity of the release was characterized in the next Media Release, which was issued at 1040.

No exercise strengths or weaknesses were identified. The following areas for improvement were identified.

- Accuracy of information disseminated during media briefs.
- Placing releases in perspective during media releases/briefs.

4.6 Corporate Engineering Center (CEC)

The CEC was properly staffed and supplied with appropriate resources (Safety Parameter Display System, Drawings, System Descriptions). There was appropriate assignment of responsibilities in the various engineering disciplines. CEC engineers were cognizant of plant equipment problem status and performed well throughout the exercise. No exercise strengths, weaknesses, or areas for improvement were identified.

5.0 Licensee Action on Previously Identified Items

The following areas for improvement identified during the previous annual emergency exercise (Inspection Report No. 50-244/91-21) were acceptably demonstrated and not repeated:

Technical Support Center

- Provision of information to Monroe County
- Review of media releases

Emergency Operations Facility

- Training on county response actions
- Guidance on command and control shift and facility activation



- Event classification guidance

6.0 Licensee Critique and Exit Meeting

The NRC team attended the licensee's exercise critique on October 9, 1992. Licensee lead controllers discussed their observations. The licensee's critique was constructive and provided a good self-examination. In general, items in need of corrective action were identified. The licensee critique identified most of the concerns noted by the NRC inspection team. Additionally, the licensee critique provided a preliminary characterization of the relative importance of the identified items. This preliminary assessment on finding significance aided licensee management and the NRC in their assessment of exercise performance.

Following the licensee critique, the inspectors met with the licensee personnel listed in Detail 1.0 to discuss the inspection scope and findings. The areas for improvement and exercise strengths identified by the inspection team were discussed. The licensee acknowledged the findings and stated their intention to correct the discrepancies as appropriate.

