

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Docket/Report No. 50-244/93-11
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 At: Rochester and Ontario, New York
Inspection Conducted: May 18-21, 1993

Inspector: Craig Z. Gordon 7/15/93
Craig Z. Gordon, Senior Emergency
Preparedness Specialist, DRSS date

Approved By: Ebe C. McCabe 7/15/93
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SCOPE

Announced safety inspection of the emergency preparedness (EP) program conducted at the Robert E. Ginna Nuclear Power Plant. The inspection areas included changes to the emergency preparedness program; emergency facilities, equipment, instrumentation, and supplies; organization and management control; inspection of emergency response organization (ERO) training; and independent program audits. Within these areas, inspection consisted inspector observations, interviews with personnel, and of examination of selected procedures and records.

RESULTS

The Emergency Preparedness (EP) program was effectively administered and implemented. Emergency response facilities and equipment were operationally ready. Management support to EP was clear. EP training and independent program audits were complete and thorough. Improvements were identified in qualification of personnel prior to assignment in the Emergency Response Organization.

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DETAILS

1.0 Persons Contacted

The following individuals were contacted during the inspection:

- * R. Beldue, Corporate Nuclear Emergency Planner
C. Kulwicki, Lead Auditor
- * K. Larry, Health Physicist
- * R. Lingl, Shift Supervisor
- * T. Marlow, Production Superintendent
R. Mecredy, Vice President, Ginna Nuclear Production
- * G. Meier, Manager, Production Division Training
- * F. Orienter, Communications Coordinator
- * P. Polfleit, Onsite Emergency Planner
- * W. Poulton, Training Specialist
- * R. Ruedin, Operations Supervisor
R. Smith, Senior Vice President, Production and Engineering
- * J. St. Martin, Corrective Action Coordinator
B. Stanfield, Engineer
- * R. Watts, Director, Corporate Radiation Protection
- * J. Widay, Plant Manager

* Attended exit meeting on May 21, 1993.

2.0 Operational Status of the Emergency Preparedness Program

2.1 Changes to the Emergency Preparedness Program

Several changes to the EP program occurred since the last inspection. The inspector reviewed the changes and discussed details with the Director, Corporate Radiation Protection (CRP) and other licensee program staff.

The most significant change came in 1992 and involved an upgrade of the off-site siren system. The computer-based "Siren Activation and Status Monitoring System" was installed, allowing individual county operation and monitoring of sirens. The inspector reviewed the system specification report dated January 1992, and noted that the report identified improved capabilities for off-site alerting of the public and remote interrogation of acoustics, rotation, and electronics associated with the 255 sirens within Wayne and Monroe Counties.

A change to the licensee's meteorological instrumentation was reviewed. To address reliability concerns associated with original equipment on the meteorological tower, the licensee modified tower weather sensors, communications equipment, signal relays, and other electronic and recording

devices. Upgrades appeared to enhance the licensee's ability to obtain meteorological data for use in calculation of radiological releases. The modification received a safety evaluation, review by the Plant Operations Review Committee (PORC), and approval by the Plant Superintendent.

Other program changes since the last inspection were reviewed and discussed with the Director, CRP. These included revisions to the Emergency Plan (E-Plan) and Emergency Plan Implementing Procedures (EPIPs). Review of the E-Plan identified one inconsistency in the licensee's emergency classification scheme. The classification "Local Radiation Emergency" was used to identify on-site events associated with monitoring of radioactive material requiring no off-site response. That definition is not in accordance with the standard emergency classification scheme of 10 CFR 50, Appendix E, IV. B. EP staff indicated that action would be taken to revise the Emergency Plan and clarify how the term Local Radiation Emergency would be implemented during event response. This item is unresolved (UNR 50-244/93-11-01).

Since the last inspection only minor changes in EPIP content were noted; these were reviewed and discussed with the Corporate Emergency Planner. Updates to the Emergency Plan and EPIPs were issued through controlled distribution. Sampling checks of E-Plan and EPIP holders revealed that copies were up to date.

The Director, CRP also provided information about planned program changes. These entailed an agreement between nuclear power plant licensees in New York State to develop a combined emergency action level (EAL) document applicable to each reactor site in the State, development of portal monitors for use in off-site reception centers, and use of the training simulator in upcoming exercises and drills. These will be reviewed after changes are implemented.

Based upon the above review, this area was appropriately implemented.

2.1.1 TSC Ventilation System Functioning and Operability

In response to previously identified NRC concerns about verification of Technical Support Center (TSC) ventilation system capacity and maintenance of positive pressure during emergencies, the licensee replaced the ventilation system control panel and added a remote control panel in the TSC. That allowed system operability to be readily determined. The inspector observed operation of the control design modifications and noted that the system functioned as expected. This was adequate to address NRC concerns and item 50-244/91-28-01 is closed.

2.2 Emergency Facilities, Equipment, Instrumentation and Supplies

Inspection of the Control Room, Technical Support Center (TSC), Operations Support Center (OSC), and Emergency Operation Facility (EOF) indicated that facilities were in a good state of operational readiness. Emergency response facilities (ERFs) were adequate to support emergency response and were in agreement with information specified in the Emergency Plan. Individual ERF capability was satisfactorily demonstrated during the 1992 NRC-observed emergency exercise. The inspector examined a sample of designated equipment and supplies (downwind survey kits, control room respirators) and noted that surveillances of equipment were performed at the prescribed frequencies, instrumentation was calibrated as required, and equipment and instruments were operable.

Based upon the above review, this area was effectively implemented.

2.3 Organization and Management Control

The inspector reviewed the duties and qualifications of individuals assigned to the Emergency Response Organization (ERO) and held independent interviews with senior licensee management.

At least three individuals were qualified in key ERO positions. Site and corporate managers maintained qualification in their assigned positions. Through interviews with the Plant Manager; Senior Vice President, Production and Engineering, and Vice President, Ginna Nuclear Production, involvement in the program and management support for EP was clear; each individual provided good awareness of on-site and off-site EP program details. Managers stated that they met regularly with the Director, CRP to obtain updates on the status of EP program activities. From meeting minutes and attendance records, the inspectors determined the Corporate Emergency Planner routinely met with State and county officials to promote and maintain a cooperative relationship.

Overall responsibility for maintenance of the EP program rested with the Director, CRP. Four full-time EP program staff provided good support to effectively carry out on-site and off-site EP functions. This included the addition of two positions, a communications specialist and an administrative assistant, within the past year. Implementation of administrative and technical functions was adequately maintained, including surveillance of designated emergency equipment and facilities, conduct of drills and exercises, and liaison with State and local officials.

Based upon the above review, this area was well implemented.

2.4 Knowledge and Performance of Duties (Training)

2.4.1 EP Training Program

The inspectors examined the Nuclear Emergency Response Plan (NERP) training program as identified in Procedure TR-C.22, Rev. 1, May 14, 1993, assessed EP training lesson plans, examinations, qualification records maintained via database, historical training records, and interviewed EP instructors.

Overall, the recent NERP revision has improved basic NERP training by eliminating duplication of instruction material. EPIP 5-4 (EPIP Training Program) listed personnel qualified for ERO positions, but did not reflect new ERO positions outlined in the TR-C.22 training matrix. Training records were maintained as specified by administrative procedures. The computerized EP training database was evaluated by comparing individual records of class attendance, qualification cards, and answer sheets from EP examinations to the computer records. No discrepancies were noted in sampled training records. The licensee's training record system identified personnel assigned to ERO positions as properly qualified for those positions.

EP lesson plans (LPs) sampled were adequate in content with several LPs having an excellent level of technical detail. Each LP had specific objectives, including criteria for table-top discussion with subject matter experts. Lesson plans were developed to provide a thorough level of instruction on stated objectives. An examination question bank supporting objectives was developed for each LP. These were being reviewed and updated annually.

The list of qualified ERO staff identified in EPIP 5-4 was reviewed. Training records of individuals who were assigned ERO positions as primary responders were checked to ensure completion of training requirements. No personnel were found to have exceeded the annual EP requalification cycle. Each individual listed for an ERO position had received training within the specified time period and fully met the administrative requirements for qualification with the exception of biannual drill participation. The inspectors found that, in tracking ERO qualification, individuals were credited for biannual drill participation regardless of the type of drill held, i.e., full-participation exercise, ERF drill, table-top demonstration, simulator drill, walk-through exercise. The ERO position in which the individual participated was not documented. If an individual participated in one drill every two years, all qualified positions were credited. For personnel with more than one ERO function, biannual participation in each function could not be determined.

Further, although several personnel were qualified in each ERO function, records and interviews with key licensee staff revealed that either the most senior or most knowledgeable individual ("A"-team/"B"-team concept) had participated in the full-participation exercises, while other ERO members had not similarly demonstrated

their ability to perform in qualified positions. Licensee management stated that revisions to the EP training program would be considered to allow all ERO members to demonstrate their assigned functions.

The NERP training program did not differentiate between control room and TSC Emergency Coordinators (ECs). These functions were staffed by shift supervisors and Operations management staff. Records showed there were 25 individuals qualified for the Emergency Coordinator position. However, only three personnel were qualified to manage TSC activities (senior managers). Shift supervisors were assigned to serve as control room ECs and not expected to handle TSC management activities. The inspector concluded that better definition of the EC role in the control room and TSC should be provided.

2.4.2 Walk-through exercises and ERO interviews

Two shift operations crews were tested during walk-through (table-top) exercises which simulated fast breaking accident scenarios. The crews consisted of a shift supervisor (EC), control room foreman (EC assistant), auxiliary operator (communicator) and a health physics (HP) technician (radiological dose assessor).

Both crews demonstrated thorough EP knowledge and were generally familiar with their emergency response functions. The capability to promptly recognize events and notify the state and local authorities within 15 minutes was demonstrated. In general, dose assessments were properly calculated using the revised EPIP 2-18. Protective actions recommended to the State were proper and conservative.

After completing walk-throughs, to supplement evaluation of knowledge and performance of duties, interviews were held with four other shift supervisors qualified as ECs. Questions asked during interviews were based on the response differences between the crews observed by the inspectors in walk-throughs. Operations staff provided appropriate resolution to these concerns.

Specific walk-through observations were:

- Both shift crews showed proper consideration of evacuating personnel and equipment, but did not identify radiological hazards to ERO personnel reporting to the site for ERF augmentation.
- Although the personnel in all groups made good use of procedures, the ECs failed to check the dose assessment calculations done by the HP technicians. In one case, the HP technician incorrectly rounded off a calculation, providing a low dose rate projection and resulting in a delay in Site Area Emergency declaration.

- The two shifts differed in their opinion of whether the loss of a diesel generator due to fire met the initiating condition of fire potentially affecting safety systems, which is a discrimination between an Unusual Event and an Alert.
- Shifts appeared uncertain when comparing the four-hour default dose of greater than 1 Rem at the site boundary (resulting from the calculations using EPIP 2-18) and the General Emergency initiating condition of greater than 1 Rem per hour dose rate at the site boundary (the basis for the curves in Attachment IV to EPIP 1-0).
- Both shifts delayed the NRC immediate notification, explaining that they had up to one hour to make that notification. When the notifications were made, scenario conditions had degraded to the extent that a release was in progress. However, no additional information was provided to the NRC.
- While determining Protective Action Recommendations (PARs), both crews had difficulty correlating plant conditions (breach of containment with no core failure) with the conditions in Attachment 2 to EPIP 2-1. The training staff indicated that a revision to EPIP 2-1 was in progress and would correct the concern.

Training of shift crews in the aspects noted above was identified for further NRC review (IFI 50-244/93-11-02).

Also, a training session on the new MIDAS computer dose assessment program was observed. The session began with an overview the emergency preparedness program and relevance of dose assessment, followed by a short quiz. The majority of the session was spent by attendees working in groups with the model on computers solving scenario problems through actual computations. This method of EP training was very constructive.

Overall, EP training was assessed as satisfactory.

2.5 Independent and Internal Reviews and Audits

Quality assurance reviews of the entire EP program were conducted independently each year by the Quality Performance Department. The 1992 audit was performed by a Lead Auditor and Responsible Engineer. The licensee used a technical exchange program with other licensees for individuals to assist in independent reviews. The inspectors reviewed the March 9, 1993 audit of the NERP (performed for 1992) and discussed audit conduct with audit team members.

The inspectors determined that the March 1993 audit was sufficient to satisfy the requirements of 10 CFR 50.54(t), identified areas requiring corrective action, and covered a review of off-site interfaces with State and local authorities. The audit finding corrective action request (AFCAR) was in place and was used to track items to completion. Review of the report indicated that activities of the EP program were conducted effectively since the previous audit. Only minor recommendations for EP improvement were made. Audit reports provided good detail for potential EP program enhancement. The EP staff was attentive to resolving items identified by the audit report. Audits and surveillance reports were appropriately distributed to plant and corporate management.

One concern regarding audits was brought to the auditors' attention. Audits were scheduled in the first quarter of each year and were performed over a two or three week period. Audits were not performance-based in that they did not include evaluation of training instruction, drills, or exercises unless such training was scheduled within the audit period. Auditors indicated that drill or exercise surveillance would be considered.

This program area was assessed as being well implemented.

3.0 Licensee Action on Previous Inspection Findings

During the inspection, the inspector reviewed the licensee's progress on previously identified NRC concerns and discussed with the Director, CRP how each item was addressed. All items were adequately addressed and no further concerns were identified. In addition, the following item was reviewed.

CLOSED (50-244/91-28-02) Inability of shift crews to perform dose assessment for a postulated steam generator tube rupture (SGTR).

EPIP 2-18 was developed to provide a less complicated method for the on-shift RP technician to perform site boundary dose assessment for monitored radiological releases. As noted during the NRC-observed walk-through drills, RP technicians showed good familiarity with the revised procedure.

4.0 Exit Meeting

The inspector met with licensee personnel denoted in Section 1 at the conclusion of the inspection to discuss the scope and findings as detailed in this report.

The licensee was informed that no violations were identified. Several areas for potential improvement were discussed. The licensee acknowledged these findings and agreed to evaluate them and institute corrective actions as appropriate.