U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-244/90-15

Docket No. 50-244

License No. DPR-18

Licensee: Rochester Gas and Electric Corporation
89 East Avenue
Rochester, New York 14649-0001

Facility Name: R. E. Ginna Nuclear Power Plant

Inspection At: Newark, Ontario and Rochester, New York

Inspection Conducted: August 13-16, 1990

Inspector: C. G. Amato — October 10, 1990
C. G. Amato, Emergency Preparedness Specialist — date
Division of Radiation Safety and Safeguards,
DRSS, Region I

Approved by: W. J. Lazarus — 10/11/90
W. J. Lazarus, Chief, Emergency Preparedness — date
Section, DRSS

Inspection Summary: Inspection on August 13-16, 1990 (Inspection Report No. 50-244/90-15)

Areas Inspected: Announced, routine, safety inspection of the licensee's emergency preparedness program.

Results: No violations, deviations, or unresolved items were identified.

DETAILS

1.0 Persons Contacted

The following Rochester Gas and Electric Corporation staff personnel were contacted. In addition, County and hospital personnel were also interviewed.

C. Belldue, Corporate Emergency Planner, Emergency Planning Group
N. Keidrowski, Training Instructor, Health Physics and Chemistry
R. Mecredy, Vice President, Nuclear Production
G. Meir, Manager, Training Division, Production Department
G. Nacy, Government and Community Relations Specialist
S. Polton, Training System Specialist, Training Department
C. O'Neil, RN, CEN, Clinical Coordinator, Newark Wayne Community Hospital, Inc.
P. Polfleit, On-Site Emergency Planner, Emergency Planning Group
B. Quinn, Corporate Health Physicist
T. Wideman, Director, Office of Emergency Management, Wayne County
S. Spector, Station Superintendent
R. Woods, Supervisor, Nuclear Security, Ginna Station
B. Zollner, Senior Licensed Instructor, Training Department

The inspectors also interviewed other licensee personnel.

2.0 Licensee Action on a Previously Identified Items

The following item was identified during a previous inspection. Based on observations made by the NRC inspector, review of the Emergency Plan and Implementing Procedures and interviews with Ginna staff, this item was satisfactorily addressed by the licensee and is closed.

(Closed) 50-244/88-14-03 UNR: Since the Emergency Operations Facility (EOF) is located away from and not near or on-site, EOF plans were not reviewed by the Plant Operations Review Committee (PORC). All Emergency Response Facility plans including the EOF's are now reviewed and approved by PORC prior to distribution (refer to Section 3.1 below).

3.0 Operational Status of the Emergency Preparedness Program (EPP)

3.1 Emergency Plan and Implementing Procedures

The inspector reviewed the changes to the emergency plan and implementing procedures made since the last inspection in this area to determine if any of the changes adversely affected the licensee's overall state of emergency preparedness and that changes had been appropriately reviewed, approved, and distributed.

The former Station Contingency (SC) procedures, the Emergency Operations Facility (EOF) procedures and the Nuclear Emergency Response Plan (NERP) were revised, reorganized and following review, distributed. The SC and EOF procedures became Emergency Plan Implementing Procedures (EPIPs). The NERP and EPIPs were reviewed and approved by the Plant Operating Review Committee. The Nuclear Safety Review Board during meeting 186 determined there were no nuclear safety related items. Another review was undertaken to insure that the revised NERP and new EPIPs did not decrease emergency preparedness effectiveness. This was done to meet the requirements of 10 CFR 50.54(q). Following this review, the licensee concluded there was no decrease in emergency preparedness effectiveness and then transmitted the revisions to the NRC in accordance with 10 CFR 50.4(b)(5).

The NERP (Rev. 08) and EPIPs became effective August 1, 1990 after the Emergency Response Organization staff had been qualified in their use. All previous EOP procedure manuals were withdrawn and the Site Contingency (SC) procedures SC-100 through SC-706 were replaced by EPIPs. An index cross referencing SCs and EPIPs was developed and an Emergency Action Level (EAL) basis document was being prepared.

Administrative procedures are in place to control and distribute the NERP and EPIPs.

The inspector reviewed EPIPs for EAL classification, protective action recommendation (PAR) development and projected dose calculations to determine if they were in compliance with NRC requirements and guidance. The following specifics were noted.

- The revised New York State Radiological Emergency Data Form Parts I and II have been incorporated into EPIP 1-5 and were jointly placed in service on August 1, 1990 by the State, Counties and licensee.

- Conditions leading to accident classification are correlated with the control room Emergency Operating Procedures (EOPs). This correlation was developed by a former Ginna Senior Reactor Operator who is now the Corporate Nuclear Emergency Planner. This activity also involved Reactor Operations.

- While natural and security events are included in the classification scheme, there is no correlation with abnormal procedures. The licensee agreed to revise the classification scheme to include this correlation.

- If the release duration is not known and a measured iodine to noble gas (I/NG) ratio is not available, default values will be used. The default release duration is one hour for a rapidly

breaking accident and four hours for all others. The I/NG value is 0.001. These are acceptable to the State and Counties. The I/NG ratio is consistent with measured values for loss of coolant accidents and theoretical considerations.

- The EAL classification scheme has been reconfigured into five columns. The first identifies the symptom or event and one of the remaining columns indicates the classification and refers the classifier to the EPIP for the appropriate classification. Senior Reactor Operators and managers responsible for classification are trained, in keeping with human factor engineering principles, to begin with the General Emergency and work toward the Unusual Event.

- PARs are based on plant conditions and projected dose calculations in keeping with the requirement of 10 CFR 50.47(b)(10). However, Table 5.1 of the NERP implies only projected dose values are used. The licensee agreed to clarify this statement so both plant conditions and projected doses are clearly indicated as the PAR basis.

- A single indicator is identified for steam generator tube rupture (SGTR). The licensee agreed to consider the addition of others, as well as an indicator for identifying a SGTR under accident conditions.

The remaining revised EPIP's will be reviewed and the review documented in a subsequent inspection report.

Based upon the above review, this portion of the licensee's emergency preparedness program is acceptable.

3.2 Emergency Facilities, Equipment, Instrumentation and Supplies

Emergency Response Facilities (ERFs) are designed to meet the requirements of 10 CFR 50.47(b), Section IV of Appendix E to 10 CFR 50, Supplement I to NUREG-0737 and Regulatory Guide 1.97. Equipment, status boards, communications systems, plans, procedures, habitability and access control provisions were reviewed for the control room (CR), Simulator, Technical Support Center (TSC), Operations Support Center (OSC), the Emergency Operations Facility (EOF), and the Emergency Support Facility (ESF).

The inspector determined that the ERFs were maintained in a state of readiness. Instrumentation was functional and within the calibration period. Communication systems tested included the NRC Emergency Notification System, and the Health Physics Network. Notification calls were made and verification received using current procedures.

All tested equipment worked properly. Rapid facsimile machines are also available which can transmit simultaneously to multiple terminals and electronically verify transmission receipt.

The EOF and Engineering Support Facility (ESF) are dedicated facilities. The Technical Support Center (TSC) and Operational Support Center (OSC) are not dedicated. The licensee plans to convert the TSC and OSC to dedicated facility status and is seeking ways to increase the OSC area. The ESF is equipped with the plant computer system and Safety Parameter Display system terminals, and a direct line to the plant. Controlled drawings, procedures, etc. are available.

Based on the above review, this portion of the licensee's emergency preparedness program is acceptable.

3.3 Organization and Management Control

The EPP organizational structure was reviewed to determine whether any significant changes had been made to the emergency organization and/or management control systems and to verify that the licensee continues to meet the requirements of 10 CFR 50.54(t), 10 CFR 50.47(b) and Section IV of Appendix E to 10 CFR 50.

EP is the responsibility of the Director Corporate Radiation Protection (DCRP) who devotes half time to this activity. The EP staff consists of a Corporate Nuclear Emergency Planner and an On-site Emergency Planner who is an experienced radiation protection technician. There is no dedicated administrative support, however, this is being sought. Site Health Physics maintains the Emergency Response Facilities. The DCRP reports to the Vice President, Nuclear Production.

The two emergency planners lack extensive prior EP experience. They have drawn upon the EP experience of the DCRP and the retired Corporate Nuclear Emergency Planner. To-date, nine EP improvement activities have been undertaken, three of which have been successfully completed. The remaining six are in progress or have not begun. Projects successfully completed were: revision of the EAL classification table; conversion of the Site Contingency procedure to EPIPs and development on a joint venture with a contractor to develop a portable portal monitor.

The Emergency Preparedness group is responsible for the development, updating, review and maintenance of the NERP and EPIP. Management review and control involves multiple levels of management including the senior Vice President, the Vice President for Nuclear Production, the Ginna Station Superintendent and the DCRP. The Vice Presidents are actively involved. Tracking of emergency preparedness activities is through staff and one-on-one meetings, resolving audit findings,

if needed, maintaining emergency response organization qualifications, review of scenarios and changes to the NERP and EPIPs, participation in drills and exercises and interface with State and County officials.

Based on the above review, this portion of the licensee's emergency preparedness program is acceptable.

3.4 Knowledge and Performance of Duties (Training)

Emergency Preparedness Training (EPT) activities, training records, lesson plans, Emergency Response Organization (ERO) qualification roster, and the training matrix were reviewed. The Training Department (TD) staff was interviewed in order to verify the emergency preparedness training is in compliance with 10 CFR 50.47(b) and Section IV.F of Appendix E to 10 CFR 50.

EPIP 5-4 outlines the general requirements for EP training. The Corporate Nuclear Emergency Planner is responsible for ensuring the Emergency Preparedness Training (EPT) Program reflects the NERPs and EPIPs. Training responsibility for the Emergency Response Organization (ERO) is assigned to the Training Division (TD). To discharge this responsibility, the TD placed EPT under the policy guidance of the TD Training Manual. An EPT Matrix correlating 20 ERO positions with 23 training modules has been developed, as have lesson plans for each module. Examinations are given and qualification/requalification is required. In addition to lectures, drills are also used as a training vehicle. Reactor operators receive simulator training in EP related procedures. The security contractor trains site security officers. The Corporate Nuclear Emergency Preparedness Coordination is responsible for Emergency Planning Zone emergency worker training in cooperation with local government. Support hospital staffs are trained by medically qualified consultants.

Test results and qualification are tracked using both a manual and computerized data based (CDB) system. The CDB is currently under development and it is scheduled to be phased in as the sole record keeping system by the end of this calendar year. A review of training records indicated NERP and EPIP training had been completed and about 200 station staff were qualified. The qualification list indicated that at least three staff were qualified for each ERO managerial and decision-making position. A record check indicated no rescheduling problems. EPT is given between the conclusion of the scheduled refueling outage and the beginning of the summer vacation period.

EPT training is given by one of four TD personnel assigned to different TD organizations. Operator training, maintenance training, and training system groups participated. About 30 maintenance staff were trained at the time of the inspection. Their training stressed repair and corrective action.

Reactor operators were given six to eight hours of training in the use of Rev. 08 of the NERP and EPIPs for classification, making protective action recommendations (PARs), and notifications. They are examined using the weekly requalification test. If an operator fails, a repeat examination is administered. If this make-up is failed, training is repeated and the operator's name is removed from the shift roster. Simulator training is scenario style training involving the full shift, including auxiliary operators. Classification and notifications are covered. PARs are based on plant conditions. There are six training cycles per year with 12 hours spent on the simulator per cycle. There is no EP training given during two cycles, three cycles go through classification and one through PARs (a comprehensive cycle). During one of the EP cycles, operators are taken to the Emergency Operations Facility (EOF) where they are shown a video tape of its operations. A brief lecture amplifying the purpose and operation of the EOF is also given. Operators are then taken to the Monroe County Emergency Operations Center (EOC) for a similar tour and explanation of EOC functions. The licensee does this to demonstrate the extended team that is formed and the interrelation among components.

Nineteen medically related training activities have been scheduled over a six month period, including plant tours. These activities apply to both on and off-site personnel. FEMA will evaluate the Ginna medical drill and the MS-1 hospital drill. There are two health physics drills per year. One involves the post accident sampling system and the other a vent release. Several licensee staff stated that more "mini-drills" would improve the quality of training. Seventeen training modules for various aspects of radiological assessment had been scheduled over an eleven month period which began January 1990. This training includes a mini drill, core damage assessment, classification, PAR development, make-up sessions, use of dose projection software and field monitoring team training. Licensee technical staff are also trained in EOF procedures, core damage assessment, and accident analysis. This training includes plant systems, engineered safety features, thermal analysis and mitigation of core damage.

Based on the above review, this portion of the licensee's emergency preparedness program in acceptable.

3.5 Independent Reviews/Audits

An independent review/audit is required at least every twelve months by 10 CFR 50.54(t) which includes determination for adequacy of the licensee State/local government interface and the availability of the results of this study to State/local governments.

The audit/review required by 10 CFR 50.54(t) was conducted over a one month period by a team of three auditors one of whom was an experienced, senior emergency planner from another nuclear utility. The audit plan encompassed seventeen items including licensee/State/County interface adequacy. Established quality assurance procedures were followed. The licensee/government interface was determined to be adequate. A letter advising the State and Counties of this determination and enclosing this section of the audit report was transmitted to the State and Counties during this inspection period. In addition, there were three audit findings which the licensee is addressing. One of the audits indicated that training should be improved and that the drill frequency should be increased, including more table-top and mini-drills. Corrective action will be followed by management using the training evaluation reports and the milestone schedule. The auditors concluded that while three improvement areas were identified, the RG&E and emergency preparedness program is adequate to respond to a nuclear emergency.

Based on the above review, this portion of the licensee's emergency preparedness program is acceptable.

3.6 Offsite Support and Training

To determine if the licensee provided required training, maintained the Alert Notification System, distributed public information material, met with State and County officials and maintained medical support capability, the inspector reviewed materials, checked records and interviewed offsite personnel.

Public Information Material (PIM) is distributed to all residents, commercial and industrial organizations, and institutions within the Emergency Planning Zone (EPZ). About 27,000 calendars containing the PIM were distributed. In addition, inserts were placed in the telephone directories for Wayne and Monroe Counties. The New York State Government has prepared and distributed information for farmers. A press briefing is scheduled for the fall of 1990 and a media briefing package is available.

There are frequent interface meetings with government officials, including meetings dedicated to emergency preparedness held during the quarterly New York State Power Pool meetings. Monthly meetings are held with staff of the Emergency Management Agencies of the two counties. Finally, the licensee trains, in appropriate areas, EPZ emergency workers, police, fire and ambulance company personnel who would come on-site to support the Ginna station staff.

Sirens, tone alert radios (TARs) and route alerting are used to promptly notify the public of an emergency. Ninety six sirens are located in the two counties. Seventy-two of these are located in the host county, Wayne County. Sirens may be activated from one of two locations in each county using county radio frequencies. The counties have established procedures for coordinating siren sounding. Inadvertent siren sounding procedures are in place. Route alerting is used to back-up sirens. Siren availability for 1989 was 96.96 percent.

The licensee established and maintains a Radiation Emergency Area (REA) at the Wayne Newark Community Hospital. This is a 140 bed hospital with an Emergency Department classified as Level II by the Joint Accreditation Committee of the American Hospital Associations. Physicians and nurses certified in Emergency Medicine are on staff. A licensee, medically qualified contractor trains the Emergency Department staff in the treatment of injured, contaminated individuals. Training includes both lectures and drills. Upon arrival, an injured, contaminated individual, accompanied by a licensee radiation control staff member, would be decontaminated, if needed, using a plastic decontamination table. Decontamination fluids would be collected and returned to the Ginna Station. Established protocols will be used for diagnosis and treatment. Hospital medical staff specialists are available on an on-call basis. Pregnant staff members would not be permitted to treat a contaminated individual. Arrangements for helicopter transfer to a regional medical center have been established.

The inspector checked supplies, equipment and procedures. Survey instruments were operable and calibrated. Supplies were available as required. A copy of the Emergency Plan was not available in the Emergency Department (ED), however, the licensee agreed to provide one.

The counties have adopted the U.S. FEMA All Hazard Emergency Response Plan (AHERP) format. The Ginna offsite emergency plan is an addendum to the AHERP which retains NRC's four Emergency Action Level (EAL) classifications. The 10 CFR 50 required meeting with offsite officials to discuss EALs has been scheduled. New York State law now requires both public and private schools, including Day Care Centers, to develop plans for all emergencies by October 1990. Those portions of the Ginna offsite emergency plan will become part of the schools' over-all emergency plan. Counties maintain a current mobility impaired list. FEMA, per 44 CFR 350.12, granted favorable review and comment for the Ginna offsite emergency plan during 1986.

Based upon the above review, this portion of the licensee's emergency plan is acceptable.

3.7 Emergency Response Organization Fitness for Duty (FFD)

The inspector reviewed licensee's written FFD policies and procedures to determine if they apply to on-call Emergency Response Organization personnel as required by 10 CFR 50.26(a).

FFD rules have been developed for site and headquarters Emergency Response Organization personnel. Headquarters personnel staff the Emergency Operations Facility, Engineering Support Facility and the Emergency News Center. These policies were stated in a memo dated December 21, 1989 signed by the Senior Vice President. Similar policies have been developed for contractor personnel and consultants.

Based on the above review, the portion of the licensee's emergency preparedness program is acceptable.

3.8 Dose Assessment

Assessment requirements are stated in 10 CFR 50.47(b) and Section IV, B and E of Appendix E to 10 CFR 50. The inspector reviewed changes to the licensee's dose assessment methodology made since the last routine inspection in order to determine if standards and requirements were met.

Two computer systems and a manual method are available to calculate projected dose equivalents and dose commitment equivalents. A vendor supplied system called Metereological Information Dose Assessment System (MIDAS) is the primary dose assessment system. MIDAS accesses the meteorological tower sensors, but release data must be entered manually. The back-up dose projection system is performed on a personal computer. This system is also used by the counties who have been trained by the licensee in its use. The manual method is for control room use and will be phased out and replaced by the personal computer system. The control room will only be required to project doses in the event of a rapidly breaking accident, and then only until the Technical Support Center is fully staffed and functional. Default values for release duration and iodine/noble gas ratios have been established which are acceptable to the State and Counties.

Based on the above review, this portion of the licensee's emergency preparedness program is acceptable.

4.0 Exit Meeting

At the exit meeting on August 16, 1990, the inspector presented the results of the inspection and advised the licensee that no violations or deviations were identified. Licensee management acknowledged these findings and indicated they would evaluate them and take appropriate corrective action regarding the items identified.