

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-244/85-02

Docket No. 50-244

License No. DPR-18 Priority -- Category C

Licensee: Rochester Gas and Electric Corporation

49 East Avenue

Rochester, New York 14649

Facility Name: R. E. Ginna Nuclear Power Plant

Inspection At: Ontario, New York

Inspection Conducted: January 1, 1985 through February 28, 1985

Inspectors: W.A. Cook for
W. A. Cook, Resident Inspector, Ginna

3/13/85
Date

W.J. Lazarus
W. J. Lazarus, Project Engineer, RPS, 2C

3/13/85
Date

Approved By: J. C. Linville for
J. C. Linville, Chief, Reactor Projects
Section No. 2C, DRP

3/13/85
Date

Inspection Summary: Inspection on January 1, 1985 through February 28, 1985
(Report No. 50-244/85-02)

Areas Inspected: Routine, onsite, regular and backshift inspection by the resident inspector (98 hours) and one region based inspector (30 hours). Areas inspected included: plant activities during routine operations; licensee action on previous findings; surveillance testing; plant maintenance; Licensee Event Report review; and inspection of accessible portions of the facility during plant tours.

Results: Of the six areas inspected, no violations were identified.

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DETAILS

1. Persons Contacted

The below listed technical and supervisory level personnel were among those contacted:

E. Beatty, Operations Supervisor
C. Edgar, Instrumentation and Control Supervisor
G. Larizza, Operations Manager
T. Meyer, Technical Manager
B. Snow, Plant Superintendent
S. Spector, Assistant Plant Superintendent
J. Widay, Reactor Engineer

The inspectors also interviewed and talked with other licensee personnel during the course of the inspection.

2. Licensee Action on Previous Inspection Findings

(Closed) Inspector Follow-up Item (83-22-01): Adequacy of Seismic Monitoring Equipment. The licensee's updated Final Safety Analysis Report (FSAR) describes the station's seismic instrumentation as consisting of one accelerometer (Earth Sciences-Teledyne model RFT-250) installed in the sub-basement of the Intermediate Building. The inspector reviewed completed calibration procedures and surveillance schedules to verify that proper operation and maintenance of the monitoring equipment was being performed. The calibration and maintenance procedure is adequately written and the surveillance frequency (three months) appears to be appropriate.

Although the licensee's seismic monitoring instrumentation does not conform to the recommended capabilities prescribed in Regulatory Guide 1.12, "Instrumentation For Earthquakes", Revision 1, April 1974, the existing instrumentation and operability verification program conforms to the licensee's approved licensing commitments.

(Closed) Inspector Follow-up Item (83-22-02): Troubleshoot DC System Trouble Annunciator. The DC Power System was recently modified to provide additional monitoring and annunciating capabilities. During the functional testing of this modification, the licensee identified a problem with the alarm output relay failing to reset upon receipt of repetitive alarm conditions. The licensee initiated a circuitry change which optically isolated the alarm relay and corrected the problem. Upon further testing, it was determined that the newly installed local and remote battery load flow monitors degrade the normal operation of the DC Bus ground detection system. The flow monitor cabinets were designed with a grounded metering circuit which results in false ground indications on the ungrounded DC



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Power Buses. The flow monitoring units have been removed from service and the meter circuits are currently being modified to correct this system design deficiency. The common DC Power System trouble annunciator and monitoring functions are still operable. The inspector will review the final system modification in a subsequent report. (85-02-01)

(Closed) Violation (83-22-03): Failure to take Corrective Action to assure more attentive review of plant logs. An unexplained pressure decrease in the in-service Gas Decay Tank went undetected between July 13, 1983 and July 24, 1983. Follow-up of this event by the inspector determined that the PORC's review and evaluation of the event did not address the need for corrective action, contrary to 10 CFR 50, Appendix B, Criterion XVI.

The inspector reviewed the licensee's corrective actions outlined in the Maier to Murley letter, dated December 21, 1983. Procedure S-14.1, "Radiation Monitoring and Related System Daily Plot Requirements" was revised to include a plot of vent header pressure to trend gaseous waste inventory for possible detection of system losses. Routine log reviews and trending by station Operations staff and shift personnel appears to have improved. Recently observed corrective action assignments by the PORC appear to be both effective and appropriate resolutions to the problems encountered. The inspector had no further questions.

(Closed) Inspector Follow-up Item (84-03-05): Periodic Review of Procedures not on schedule. The inspector reviewed the status of periodic reviews of station procedures required by Technical Specifications 6.8.2. The inspector determined that a computer tracking system has been effectively implemented and that the periodic reviews of each departments' procedures has been accomplished in accordance with the schedule defined in Administrative Procedure (A)-601, "Plant Procedure Document Control". The inspector had no further questions.

(Open) Inspector Follow-up Item (84-03-06): Establish vendor manual controls. The inspector discussed with the licensee the progress in establishing formal control procedures for the storage and updating of vendor drawings and manuals. The inspector determined that, due to the significant man-hours required to complete this task, the licensee's target date for completion has been revised to December 31, 1985.

(Closed) Inspector Follow-up Item (84-16-02): Revision of Administrative Procedure of Post Trip Review. The inspector reviewed Administrative Procedure (A)-25.4, "Reactor Post Trip Review", Revision 5, October 24, 1984, and verified that adequate changes had been incorporated into the procedure to ensure the proper documentation and retention of post-reactor trip reviews. The inspector had no further questions.

(Closed) Inspector Follow-up Item (84-16-04): Review of Administrative Procedure for the Control of Jumpers. The inspector reviewed Administrative Procedure (A)-1402, "Bypass of Safety Function or Jumper Control", Revision 4, January 9, 1985, and determined that satisfactory procedural guidance has been incorporated to ensure proper 10 CFR 50.59 reviews are conducted prior to the authorization of system bypasses or jumpers. The inspector had no further questions.

3. Review of Plant Operations

- a. Throughout the reporting period, the inspector reviewed plant operations. Routine full power operations were conducted this reporting period until the commencement of power coastdown on February 10, 1985 in preparation for the annual refueling outage. Reactor shutdown and cooldown is scheduled to commence March 2, 1985. The inspector reviewed preparations for the Cycle 15 outage which will involve refueling, eddy current inspection of both steam generators and probable steam generator tube sleeving, 'A' and 'B' reactor coolant pump maintenance, main steam isolation and check valve stem replacement, low pressure turbine rotor replacement and routine outage surveillance and maintenance activities.

Upon shutdown, the licensee will have completed the longest continuous power generation run in its operating history, in excess of 270 days. This achievement will place the unit in the top ten of Westinghouse's longest run list.

The following event was reviewed by the inspector:

- On January 21, 1985, at approximately 8:10 A.M., station operators were informed by Rochester Gas & Electric power control personnel that grid frequency was 59.9 hertz due to an imbalance in load demand and electrical generation. In accordance with station procedures, both Emergency Diesel Generators (EDG's) were started and tied into safeguard busses 17 and 18.

Station Emergency Procedure E-4.2, "RG&E Low System Frequency Condition", requires EDG's to be started when grid frequency drops below 59.9 hertz. Procedure E-4.2 also specifies when frequency drops to 58.5 hertz, all four vital busses are to be tied to the EDG's. In addition, Operating Procedure, T-27.4, "Diesel Generator Operation", requires that when EDG's are operating they are to be loaded to ensure proper performance. The inspector verified that the EDG's were not paralleled with the grid during these operations.

Grid frequency was returned to 60 hertz at approximately 9:20 A.M.. The station electrical line-up was restored to normal and both EDG's secured. While restoring the EDG's to an automatic start configuration, the 'B' EDG automatic start relays would not reset. Investigation by the licensee determined that the jacket water pressure sensing lines had frozen during diesel operation. The sensing lines were thawed permitting the pressure contacts and relays to reset. The 'A' EDG was not affected and consequently it was started and loaded to satisfy the limiting condition for operation for the inoperability of 'B' EDG.

The licensee determined that the 'B' EDG sensing lines had frozen because of the low temperatures in the diesel bay resulting from the automatic start of ventilation supply fans coincident with the diesel start. The supply fans intake was direct from sub-freezing outside air. Corrective actions to preclude a recurrence of this event include the opening of the supply fan breakers and affixing a tag with precautions to identify the seasonal requirements for their operation, and procedure revisions to identify unnecessary automatic supply fan actuation during cold winter months (less than 25 degrees F ambient temperatures). The inspector verified that automatic ventilation operation was not a diesel generator operability requirement. Automatic supply fan operation was determined to be a habitability concern only.

The inspector had no further questions.

- b. During the course of the inspection, tours of the following plant areas were conducted:

- Control Room
- Auxiliary Building
- Intermediate Building (including control point)
- Service Building
- Battery Rooms
- Turbine Building
- Diesel Generator Rooms
- Screenhouse
- Yard Area and Perimeter

c. The following areas were observed during the tours:

- (1) Operating logs and records. Records were reviewed against Technical Specifications and administrative procedure requirements.
- (2) Monitoring instrumentation. Process instruments were observed for correlation between channels and for conformance with Technical Specification requirements.
- (3) Annunciator alarms. Various alarm conditions which had been received and acknowledged were observed. These were discussed with shift personnel to verify that the reasons for the alarms were understood and corrective action, if required, was being taken.
- (4) Shift manning. Control Room and shift manning were observed for conformance with 10 CFR 50.54, Technical Specifications, and administrative procedures.
- (5) Radiation protection controls. Areas observed included control point operation, posting of radiation and high radiation areas, compliance with Radiation Work Permits (RWP) and Special Work Permits (SWP), personnel monitoring devices being properly worn, and personnel frisking practices.
- (6) Fire protection. Fire detection and fire-fighting equipment and controls were observed for conformance with Technical Specifications (TS) and administrative procedures requirements.
- (7) Security. Areas were observed for conformance with regulatory requirements and implementation of the site security plan, inclusive of administrative procedures for vehicle and personnel access, and verification of protected and vital area integrity.
- (8) Plant housekeeping. Plant conditions were observed for conformance with administrative procedures. Storage of material and components was observed with respect to prevention of fire and safety hazards. Housekeeping was evaluated with respect to controlling the spread of surface and airborne contamination.
- (9) Equipment lineups. Valve and electrical breakers were verified to be in the position or condition required by Technical Specifications and plant lineup procedures for the applicable plant mode. This verification included routine control board indication review and conduct of a partial systems lineup check of the 1B Emergency Diesel Generator on February 11, the Standby Auxiliary Feedwater System on February 12, and the Containment Spray System on February 15.



- (10) Equipment tagging. Selected equipment, for which tagging requests had been initiated, was observed to verify that tags were in place and the equipment in the condition specified.

The inspector had no further questions.

4. Surveillance Testing

- a. The inspector witnessed the performance of surveillance testing of selected components to verify that the test procedure was properly approved and adequately detailed to assure performance of a satisfactory surveillance; test instrumentation required by the procedure was calibrated and in use; the test was performed by qualified personnel; the test results satisfied Technical Specifications and procedural acceptance criteria, or were properly dispositioned.
- b. The inspector witnessed the performance of portions of the following tests:

PT-36, "Standby Auxiliary Feedwater System Flow Check", Revision 21, dated January 17, 1985, performed on February 13.

PT-3, "Containment Spray Pumps and NaOH Additive System", Revision 36, dated January 4, 1985, performed on February 20.

5. Plant Maintenance

- a. During the inspection period, the inspector observed maintenance and problem investigation activities to verify compliance with regulatory requirements, compliance with administrative and maintenance procedures; required QA/QC involvement; proper use of safety tags; proper equipment alignment and use of jumpers; personnel qualifications; radiological controls for workers protection; and ascertain reportability as required by Technical Specifications.
- b. The inspector witnessed the following maintenance activity:
- PT-11.2, "Security 60 Cell Battery Bank", Revision No. 10, December 6, 1984, performed on February 21.

No discrepancies were noted.

6. Licensee Event Report (LER's)

The inspector reviewed the following LER's to verify that the details of the event were clearly reported, the description of the cause was accurate, and adequate corrective action was taken. The inspector also determined whether further information was required, and whether generic implications were involved. The inspector further verified that the reporting

requirements of Technical Specifications and station administrative and operating procedures had been met; that the event was reviewed by the Plant Operations Review Committee and that continued operation of the facility was conducted within the Technical Specification limits.

84-09: "Inadvertant Start of the 'A' Diesel Generator." A preliminary review of this event was documented in paragraph 2.a. of Inspection Report 50-244/84-19. On August 17, 1984, while performing the monthly surveillance of the undervoltage protection features of safeguards Bus 1B, the 1A Emergency Diesel Generator (EDG) automatically started. The cause of the unplanned start was initially attributed to intermittent contact in test switch S5. Subsequent investigation identified an intermittent 12 volt power source in the control logic circuitry traced from a loose wire lug on terminal board TBD1-1. The intermittent voltage occurred only when the cabinet was bumped or vibrated while operating the test switches. The condition was corrected and all remaining connections in the control cabinet were inspected and found acceptable.

The EDG automatic start was caused by the intermittent 12 volt source tripping the one-out-of-two logic in one protection train. The one-out-of-two logic in both trains is required to energize the bus from the EDG. This connection fault resulted in a conservative failure in the control logic circuit which at no time impaired the operability of the EDG or safeguards bus.

The inspector had no further questions.

84-10: "Inoperable Fire Suppression System. - August 31, 1984." This event was reviewed and documented in Inspection Report 50-244/84-19, paragraph 2.a.. The inspector had no further questions.

84-12: "Damper on 1C Auxiliary Building Exhaust Fan Closed During Fuel Movement." This event was reviewed in detail and documented in Special Safety Inspection Report No. 50-244/84-23. An Enforcement Conference was held on November 5, 1984 to address the Technical Specification violations with licensee management. Subsequent review of licensee corrective actions was documented in Inspection Report 50-244/84-24. The inspector had no further questions.

85-01: "Inoperable Analog Rod Position (Computer Rod Position Deviation Alarm)". On January 16, 1985, while conducting a periodic test on process instrumentation of the reactor protection system which involved plant computer interfacing, plant computer problems were experienced twice within a two hour period at about 12:00 p.m. Blown fuses were identified as the cause of the computer malfunctions. As a result of these computer faults, subsequent troubleshooting, repairs and numerous erroneous computer alarms received, computer control rod bank positions were not updated as required and operators failed to acknowledge the hourly non-audible computer alarms alerting them of this condition. The computer rod bank positions were not updated for approximately five hours until detected and corrected by the afternoon shift during a periodic eight hour computer surveillance.

Personnel error is the cause of this event because operators failed to properly review alarm and trend recorders to detect the missed computer updates. The failure to update computer rod bank positions, utilized in the rod deviation monitor, and not take proper compensatory measures by logging analog rod positions every four hours is contrary to Ginna Technical Specifications Table 4.1-1 and Operating Procedure S-26.2, "Computer Out of Service".

A Notice of Violation is not issued in response to this event in that the licensee identified this Technical Specification violation, promptly reported it to the NRC, the corrective actions are satisfactory (and include more frequent computer program surveillances by operations personnel), and no similar violations have been identified in this area.

The inspector had no further questions.

7. Review of Periodic and Special Reports

Upon receipt, periodic and special reports submitted by the licensee pursuant to Technical Specification 6.9.1 and 6.9.3 were reviewed by the inspector. This review included the following considerations: the reports contained the information required to be reported by NRC requirements; test results and/or supporting information were consistent with design predictions and performance specifications; and the validity of the reported information. Within the scope of the above, the following reports were reviewed by the inspector:

-- Monthly Operating Reports for December 1984 and January 1985.

8. Exit Interview

At periodic intervals during the course of the inspection, meetings were held with senior facility management to discuss the inspection, scope and findings.

Based on the NRC Region I review of this report and discussion held with licensee representatives on March 1, 1985, it was determined that this report does not contain information subject to 10 CFR 2.790 restrictions.

