

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-244/84-16

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: June 9, 1984 through July 31, 1984

Inspectors:

McCollum WJ 8/24/84
W. A. Cook, Resident Inspector, Ginna Date

McCollum WJ 8/24/84
W. U. Lazarus, Project Engineer Date
Reactor Projects Section No. 2C

Approved by:

McCollum 8/24/84
S. J. Collins, Chief, Reactor Project Date
Section No. 2C DPRP

Inspection Summary:

Inspection on June 9, 1984 through July 31, 1984 (Report No. 50-244/84-16)

Areas Inspected: Routine, onsite, regular, and backshift inspection by the resident inspector (221 hours), and one Region-based inspector (20 hours).

Areas inspected included: licensee action on previous inspection findings; plant activities during routine operations; surveillance testing; review of Generic Letter 83-28 response; service water pump motor temporary ventilation; maintenance review; allegation follow-up; jumper control review; Licensee Event Report review; follow-up on IE Bulletins; and inspection of accessible portions of the facility during plant tours.

Results: Of the eleven areas inspected, one violation was identified.

Failure to follow administrative procedures for the control of a Technical Specification designated fire protection system. (para. 3.c.6)

DETAILS

1. Persons Contacted

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

C. Edgar, Instrumentation and Control Supervisor
D. Filkins, Health Physics and Chemistry Manager
G. Larizza, Operations Manager
T. Meyer, Technical Manager
K. Nassauer, Quality Control Supervisor
T. Schuler, Maintenance Manager
B. Snow, Plant Superintendent
S. Spector, Assistant Plant Superintendent
W. Stiewe, Quality Control Engineer
J. St. Martin, Liaison Engineer
R. Wood, Supervisor of Nuclear Security
R. Vanderweil, Project Manager

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

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved (244/82-07-01): Review of material accountability controls log for steam generator modifications. The inspector reviewed the administrative procedure for the control of materials in open vessels, QCIP-78, "Logging of Equipment and Materials Used in Open Vessel" and discussed its usage with representatives of the Quality Control group. As documented in Inspection Report 50-244/84-10, paragraph 9, the inspector reviewed the Open Vessel Log Sheets for the past refueling outage and found no discrepancies. The inspector determined that adequate controls and accountability methods have been established and are implemented. The inspector had no further questions.

(Closed) Unresolved (244/78-18-04): Review of LER on 1B Emergency Diesel Generator testing problems identified on August 16, 1978. The inspector reviewed Licensee Event Report (LER) 78-007/03L-0, "Bus 16 Circuit Breaker for B Emergency Generator", dated September 14, 1978. The inspector determined that the event description accurately reflects the event documented in Inspection Report 50-244/78-18, paragraph 3.b.(1), and that appropriate corrective actions were taken and reviewed.

(Closed) Unresolved (244/80-08-03): Apparent failure to investigate and submit a 10CFR21 report concerning a defective vendor supplied relay cabinet. The inspector reviewed the Preventative Action Report (PAR #93-80, dated 9-23-80) generated in response to this finding. The licensee determined that a Non-Conformance Report (10CFR Part 21) against the manufacturer was not warranted in that upon further review the relay cabinet did meet all the design requirements specified. Subsequent functional testing of the cabinet circuitry confirmed the design criteria requirements were met. The inspector had no further questions.

(Closed) Inspector Follow Item (244/79-08-07): Review of licensee action to provide for Independent Verification of system alignment or return to service. The inspector reviewed the applicable administrative procedures, specific Engineered Safety Feature (ESF) systems' surveillance tests, and the periodic ESF system valve and breaker verifications. The inspector also discussed the station independent verification methods with the licensee and determined that adequate procedural controls are established to assure reasonable confidence in proper ESF systems' alignment. Based on a generally incident free operating history with respect to safety system line-ups, the licensee has determined that the institution of multi-party independent verifications is not warranted. Single party systems verification line-ups conducted at the completion of extended outages, (performed IAW Operations Procedure (O)-1, "Plant Start-Up"), and periodic ESF system valve and breaker verifications conducted in conjunction with surveillance testing, have been utilized by the licensee to meet this intent. In addition, Administrative Procedure (A)-52.4, "Control of Limiting Conditions for Operating Equipment", Attachment I, provides documentation that the system or component controlled has been lined-up and independently verified by an appropriate method. The inspector had no further questions.

(Closed) Inspector Follow Item (244/80-08-04): Environmental qualification of sump 'A' level indication system. The inspector reviewed the Design Analysis performed by the licensee to determine the qualification level of radiation exposure for the containment sump 'A' level transmitters. The analysis concluded that the most limiting components could withstand a total radiation dose of 10,000,000 Rads. To quantify the level of radiation in sump 'A' during normal operations, the licensee conducted a survey using TLD's and an ion chamber. This data was then used to calculate a projected total yearly dose in sump 'A' of 423,000 Rads. It was then concluded that the level transducer's effective radiation exposure lifetime was in excess of 23.6 years, (a conservative estimate due to water shielding), and that the level detection system meets the environmental qualifications for its application as a Category II system. The inspector had no further questions.

3. Review of Plant Operations

- a. Throughout the reporting period, the inspector reviewed plant operations. Activities in progress included routine full power operations, with the exception of the event discussed below.

While performing a calibration of Power Range Neutron Monitor N-43, the Instrumentation and Control technician performing the evolution inadvertently pulled the control power fuses instead of the instrument power fuses as designated by the calibration procedure. The technician immediately recognized his error, however, the momentary interruption of control power simulated a dropped rod signal to the Reactor Protection System and a runback to approximately 90 percent reactor power resulted. All protective features functioned properly and the reactor was returned to 100 percent power after completion of the calibration procedure.

The inspector reviewed the licensee's corrective actions to preclude recurrence and Operations response to the event and 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 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, the inspector's findings are noted below:

During a periodic review of the licensee's Station Hold Record, the inspector noted an apparent violation of Technical Specification (TS) 3.14 pertaining to the operability of automatic deluge system S-29, Control Room/Turbine Building Wall. Further review by the inspector and the licensee determined that on July 25, the fire detection system for zone S-29, was deenergized due to a planned modification involving hot work in the vicinity of the detection system heat sensors. In accordance with TS paragraph 3.14.1, compensatory measures were taken, in that Attachment I to Administrative Procedure (A)-52.4, "Control of Limiting Conditions for Operating Equipment" was invoked and a fire watch patrol was established. In addition, the isolation valves for the associated fire suppression water system were shut and tagged in accordance with A-1401, "Station Hold Rules". However, Attachment I to A-52.4 was not completed to address the prescribed requirements for the fire suppression water system being rendered inoperative.

Upon completion of the modification work on July 25, the detection system was restored to operation and the fire watch was secured. However, the fire suppression water system remained inoperative for a period of approximately 16 hours in that the system isolation valves remained closed and the associated hold tags were not removed until the inspector identified the condition to the Shift Supervisor on July 26.

Although the fire suppression water system was inoperable, the inspector determined that compensatory measures were provided by routine security guards, who receive fire watch training, and conducted hourly tours of the area and stand by fire-fighting equipment which is permanently staged in the area. In that the licensee was not aware that automatic deluge system S-29 was inoperative for a period of approximately 16 hours, the failure to identify the system as inoperable and control its status in accordance with A-52.4, is a violation. (244/84-16-01)

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.

On June 7, the inspector conducted a tour of the site security facilities with the Supervisor of Nuclear Security. Discussion of the security organization and guard force structure took place. The inspector observed an announced security drill and determined the guard force response to be timely and professional.

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.

The inspector identified numerous areas and specific instances where plant housekeeping lacked sufficient licensee attention. Prompt action by the licensee to correct these deficiencies was noted and continued improvement has been demonstrated throughout the reporting period.

This area will continue to be reviewed by the inspector.

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 Residual Heat Removal System on June 29, and the Emergency Diesel Generators Nos. 1A and 1B on July 13.
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.

Except as noted above, 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-5.40, "Process Instrumentation Reactor Protection Channel Trip Test (Channel 4)", performed June 18, 1984.

PT-3.0, "Containment Spray Pumps and NaOH Addition System", performed June 21, 1984 and July 30, 1984.

PT-6.4.1, "Precision Flow Calorimetric", performed July 2, 1984.

Reactor Plant Systems Operations Procedure (S)-15.1, "Flux Mapping, Normal Procedure", performed July 11, 1984.

5. Review of Licensee Response to Generic Letter 83-28

- a. The inspector reviewed portions of the licensee's response to Generic Letter (GL) 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events", to verify that appropriate procedures and administrative controls were in place as specified.
- b. Post-Trip Review (Response to Items 1.1 and 1.2 of GL 83-28)

The inspector reviewed Administrative Procedure (A)-25.4, "Reactor Post Trip Review", Revision 1, September 21, 1983, and determined that an adequate method had been established to define the scope of a post-trip review and to define the duties and responsibilities of those involved in the conduct of the review. In addition, the inspector determined that sufficient criteria has been established to ensure that a thorough safety assessment of the reactor trip is conducted and that the conditions for authorizing a restart are clearly defined.

The inspector attended the Plant Operations Review Committee (PORC), Post-Trip Review conducted on May 31, 1984 for the reactor trip which occurred at 10:21 PM on May 30. The review of the event was comprehensive and well-structured. Data available to review the event appeared to be sufficient. The inspector reviewed the plant process computer sequence of events report, alarm typewriter printout, strip charts and other associated data and was readily able to follow and identify the pre and post-trip events of May 30, 1984.

Subsequently, the inspector reviewed the draft minutes of the PORC review (PORC meeting #84-87) and determined that sufficient information pertaining to the post-trip review was contained in the PORC minutes, however, not all information supporting the review was retained and filed in Central Records. The inspector brought this to the attention of the licensee. The lack of an adequate means to retain the post-trip review data was acknowledged by the licensee and the inspector was informed that a review was currently in progress to make the appropriate changes to A-25.4 to incorporate a method for data retention and that the inspector's recommendations would be considered.

This item will be reviewed in a subsequent inspection upon completion of the procedural revisions. (244/84-16-02)

- c. Reactor Trip System (RTS) Reliability (Response to Items 4.2 and 4.5.1 of GL 83-28)

The inspector discussed with the licensee and reviewed Maintenance Procedure (M)-32.2, "DB-50 Reactor Trip Circuit Breaker Inspection, Maintenance and Test", and Periodic Test (PT)-32.5, "Reactor Trip Breakers A and B Train Response Time Testing". Results of completed procedures for the previous two years were also reviewed. The inspector determined that the licensee is performing independent verifications of the ability to manually trip the reactor trip breakers through use of either the Under Voltage Trip Assembly (UVTA) or the Shunt Trip Coil.

Review of M-32.2 indicates that adequate guidelines have been established to identify potential problems and verify proper operability of the breakers. The currently scheduled annual maintenance and testing appear to be satisfactory. The inspector had no further questions.

6. Service Water Pump Motor Temporary Ventilation

While conducting a routine tour of the Screen House, the inspector observed the use of temporary fans directed on the motors of the operating service water pumps. The inspector inquired as to purpose of these fans other than the obvious provision of additional cooling. The licensee stated that the fans were utilized during the warmer summer months to provide additional cooling and to minimize motor insulation deterioration.

The inspector conducted a review of the service water pump and motor equipment history records and could not find a reference to any evaluation being performed to determine if additional cooling is required for the safe operation of the service water pumps. The inspector did determine that in 1977 all service water pump motors were rewound with an upgraded Class F, 155 degree insulation, due to excessive deterioration of the

vendor installed Class B insulation material. The inspector brought this to the attention of the licensee and the licensee committed to perform an evaluation to verify the necessity for a controlled method of added cooling or to justify that usage is only to minimize long term insulation deterioration.

This item will be reviewed in a subsequent inspection. (244/84-16-03)

7. Maintenance Review

- a. The inspector conducted a review of the licensee's maintenance program to determine the extent to which maintenance practices contribute to system availability.

The inspector reviewed the following station procedures:

Administrative Procedure (A)-1005, "Electrical Preventative Maintenance Program"

A-1010, "Mechanical Preventative Maintenance Program"

A-1603, "Maintenance Work Order and Trouble Report"

A-1705, "Maintenance History Program"

"Substation Maintenance Manual", January 1968.

A-25.2, "I&C/Electrical Equipment Failure (Safety Related) Report"

In addition, the inspector reviewed the Licensee Event Reports for 1983 and 1984 to date, and specific equipment history records of equipment with recently identified failures or functional problems. Additionally, equipment history records for a sampling of major safety-related components were reviewed by the inspector.

- b. The inspector's review and subsequent discussions with members of the licensee's maintenance group determined that there appears to be no direct correlation between the performance of maintenance and subsequent equipment unavailability. The inspector found no evidence of repeat failures or problems encountered with equipment during post-maintenance testing. Similarly, no evidence of redundant components or like equipment being affected by a single root cause was noted.

The inspector did discover examples, which the licensee later confirmed, of high maintenance frequency equipment. Those items include the Continuous Air Monitors, hydraulic snubbers, and Eberline SPING monitors. The numerous problems incurred with these items are hardware vice maintenance related.

- c. The equipment history records reviewed appear to be maintained in accordance with the governing procedure, A-1705. Entries are made on a routine basis and are reviewed in a timely manner by the Maintenance Manager. The inspector discussed the usage of the equipment history records with the Maintenance Manager and determined that in addition to these records, each maintenance shop foreman maintains less formal records to trend the performance of high maintenance frequency equipment.
- d. The inspector reviewed the licensee's root cause and corrective action assessments and determined them to be adequate. A particularly noteworthy program established by the licensee is implemented by A-25.2, "I&C/Electrical Equipment Failure (Safety Related) Report". In the event an electrical equipment failure is identified, this report initiates a post failure investigation to assess not only the root cause, but also the potential for a generic problem.

The inspector had no further questions.

8. Followup on Allegations of Improprieties in the Turnover of Contractor Modifications (Allegation No. RI-84-A-0088)

Region I received a telephone notification of alleged QA improprieties by the Bell-Schneider Corporation in their control and turnover of completed station modifications (SM) at Ginna. Specifically, the concerns were in regard to:

- addition of Weld and Material Requisition documents to modification packages which had been reviewed and signed-off for turnover.
- turnover of systems to the site for operation without the associated documentation.
- non-qualified individuals performing document review of modification packages prior to turnover.

The inspector reviewed the following modification packages which had been identified to Region I, as those to which documentation had been added after review and sign-off for turnover:

- SM 2606.1
- SM 3582.21
- SM 3593.2
- SM 3595.3

Of these modification packages, only SM 2606.1 had been turned over to the site. A review of the associated Final Inspection Report (FIR), indicated that the total numbers for Weld and Material Requisitions had been changed after sign-off, and that the additional documents had been added to the package. The totals were changed openly, by lining-out and initialling

the original numbers. Although it would be expected that the FIR would reflect accountability of all associated documents prior to signoff, nothing precludes correction of errors identified later. As there was no apparent attempt to misrepresent the contents of the modification package, the inspector had no further questions concerning these documents. With regards to modifications 3582.21, 3595.2, and 3595.3, these packages had not been turned-over to the site and were not reviewed by the inspector.

With regard to the concern that modification SM 2512.75 was turned over to the site for operation without review and turnover of the associated documentation, the inspector substantiated that this had occurred as allowed by the licensee's present program which controls modifications. Under this program, after the hardware installation of a modification is completed, licensee QC and construction engineers verify, by field walk-down of the installation, that the design specifications are met and exceptions noted. The "punch list" of open items is then reviewed to determine if there are any items which would preclude operability. If none are identified, the modification hardware is accepted for operation by the Plant Operations Review Committee (PORC). The associated documentation is reviewed and accepted at a later date. The inspector expressed some concern over the practice of accepting a modification without evaluating the work package documentation. The licensee stated that this is normally done in cases where they are convinced, by licensee field inspection and testing, that operability requirements have been met, and that documentation review is only waived to preclude unnecessary delays in system start-up. The licensee is presently re-evaluating modification control and turnover practices in accordance with commitments made in response to a Notice of Violation issued in this area as documented in Inspection Report 83-23. The licensee's corrective actions, which also will address some of these concerns, have not yet been completed and will be reviewed in a subsequent inspection.

With regard to the concerns that modification package documents were being reviewed and FIR's signed-off by non-qualified persons, no such cases were identified.

The inspector had no further questions in this area. As noted, licensee corrective action is still in progress for a previous violation in this area (IR 83-23).

9. Review of Jumper Controls

The inspectors conducted a review of the licensee's administrative controls for jumpers based on the requirements of 10CFR50.59.

The inspectors reviewed Administrative Procedure (A)-1402, "Bypass of Safety Functions or Jumper Control", Rev. 3, and numerous active and closed records. No instances were found of the installation of jumpers which: 1) resulted in a change to the facility or its operation as described in the Safety Analysis Report, 2) provided a change to the Technical Specifications, or 3) involved an unresolved safety question. A-1402 does not specifically identify a means to ensure jumpers are reviewed and a safety evaluation documented should a jumper be required in the above mentioned capacity. The inspectors discussed this with the licensee and the licensee committed to conduct a review of A-1402 to incorporate this change. The revised procedure will be reviewed in a subsequent inspection (244/84-16-04).

10. Licensee Event Report (LER's)

The inspector reviewed the following LER 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.

84-04: Inoperable Waste Gas Oxygen Analyzer - April 23, 1984.

On April 23 at 9:10 AM, a plant radiation protection technician found all sample points on the waste gas system oxygen analyzer to be bypassed. The analyzer was returned to service after the technician obtained a sample from the inservice gas decay tank. Oxygen concentrations were found to be within specification. It was later determined that the sampling points had been bypassed since 10:00 AM the previous day and that during this period four-hour laboratory samples were not taken as required by Technical Specifications Table 3.5-6.

Although corrective action proposed by the licensee appears to be adequate, if properly implemented, the inspector determined that the licensee's event review and LER documentation lacked a specific determination and explanation of the root cause. The inspector discussed this with the licensee and it was acknowledged that a more comprehensive event review could have been performed.

Upon further review of the event by the inspector, it was determined that a complete system line-up verification of the Waste Gas System had not been performed since May 17, 1982 as documented in completed procedure S-4.2.1, "Waste Gas System Valve Alignment for Automatic Operation". The inspector brought this to the attention of the licensee and it was determined that by interpretation of the instructions of Operations Procedure (O)-1, "Plant Start-Up", sufficient guidance is provided to the responsible licensed operator, (Shift Supervisor, Duty Engineer, or Operations

Manager), to waive the performance of a formal system line-up if the system is currently in operation. The licensee agreed, however, that S-4.2.1, as well as all line-ups for systems currently in operation, should be performed prior to all plant start-ups following extended re-fueling outages and that Shift Supervisors will be instructed on the revised interpretation of the instructions of O-1. The inspector had no further questions.

11. IE Bulletin Followup

The inspector reviewed licensee actions on the following IE Bulletin(s) to determine that the written response was submitted within the required time period, that the response included the information required including adequate corrective action commitments, and that licensee management provided adequate dissemination of the bulletin and the response. The review included discussions with licensee personnel and observations of the item discussed below.

IE Bulletin 83-01: Failure of reactor trip breakers (Westinghouse DB-50) to open on automatic trip signal. The licensee has completed their review of the issues first identified by IE Bulletin 83-01. (See paragraph 5. for additional information). The inspector determined that the licensee will be performing a final modification to the reactor trip breakers during the 1985 outage. This modification will involve a circuit change which will cause both the UV coil and the shunt coil to actuate to trip the breaker upon automatic signal.

This bulletin is closed.

12. 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 May and June, 1984.

13. 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.

The apparent violation of Technical Specification requirements noted in section 3.c.6 of this report was discussed with the licensee during a meeting held on August 2, 1984.