

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-244/84-10

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: April 21, 1984 through June 8, 1984

Inspectors:

W. A. Cook Resident Inspector, Ginna 6/19/84

W. J. Lazarus Project Engineer
Reactor Projects Section No. 2C 6/19/84

Approved by:

S. O. Collins, Chief, Reactor Project Section No. 2C
DPRP 6/27/84

Inspection Summary:

Inspection on April 21, 1984 through June 8, 1984 (Report No. 50-244/84-10)

Areas Inspected: Routine, onsite, regular, and backshift inspection by the resident inspector (222 hours), and one Region-based inspector (60 hours). Areas inspected included: licensee action on previous inspection findings; plant activities during the refueling outage, subsequent startup, and routine operations; surveillance testing and maintenance; Licensee Event Report review; follow-up on IE Bulletins; Reactor Coolant System Vent modification review; and inspection of accessible portions of the facility during plant tours.

Results: Of the eleven areas inspected, no violations were identified. An instance of failure to remove and verify removal of hold tags was identified as noted in paragraph 4.

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DETAILS

1. Persons Contacted

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

D. Filkins, Health Physics and Chemistry Manager
D. Gent, Results and Test Supervisor
G. Larizza, Operations Manager
T. Meyer, Technical Manager
K. Nassauer, Quality Control Supervisor
C. Peck, Nuclear Assurance Manager
T. Schuler, Maintenance Manager
B. Snow, Plant Superintendent
S. Spector, Assistant Plant Superintendent
W. Stiewe, Quality Control Engineer
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) Violation (244/83-10-01): Failure to perform surveillance testing of residual heat removal (RHR) pumps during cold shutdown. The inspector reviewed Administrative Procedure (A)-1104, Ginna Station Technical Specification Surveillance Program, Revision No. 7, February 28, 1984 and verified that the monthly surveillance testing of the RHR pumps is incorporated in the station surveillance program. Tests for the previous year were also reviewed and no discrepancies were noted.

The Inspector reviewed the following surveillance and periodic tests to verify the required Technical Specification (TS) testing was performed satisfactorily and prior to the completion of the recent outage:

Refueling Shutdown Surveillance Procedure (RSSP)-1.4, "Valve Interlock Verification-Reactor Coolant System", (per TS Table 4.1-3).

Periodic Test (PT)-14, "Circulating Water Pumps-High Water Trip Logic", (per TS Table 4.1-2).

RSSP-7, "Control Rod Drop Test", (per TS 4.1-2).

Maintenance Procedure (M)-37.2.2, "Inspection and Maintenance of Pressurizer Safety Valves RV-434 or RV-435", (per TS Table 4.1-2).

RSSP-10.2, "Main Steam Safety Valve Test", (per TS Table 4.1-2).

RSSP-2.1, "Safety Injection Functional Test", (per TS Table 4.1-2).

RSSP-1.3, "Valve Interlock Verification Chemical Volume and Control System", (per TS Table 4.1-2).

PT-2.10.1, "RCS and SI Header Check Valves (Loop A and B Cold Legs)", (per TS 4.3.3.1).

PT-2.10.2, "RHR System Core Deluge Check Valves 853A and 853B", (per TS 4.3.3.1).

PT-4.1, "RHR Loop-hydro Test", (per TS 4.4.3.1 a and b).

PT-2.10.5, "MSIV Exercising Requirements-Refueling Outage", (per TS 4.7).

Additionally, the inspector discussed scheduling and tracking of surveillance requirements with the licensee. The inspector reviewed a draft copy of the proposed "Ginna Station Surveillance Schedule" preparation and maintenance guidelines, and also determined that a computer program is being developed to assist the staff in ensuring TS surveillances are properly identified and tracked for all plant operating conditions. The resident inspector will review these items during subsequent routine inspections in this area.

(Closed) Violation (244/83-24-01): Failure to adhere to administrative controls for procedure completion. The licensee's corrective actions as stated in Roger W. Kober (RG&E) to Dr. Thomas E. Murley (NRC) letter dated March 8, 1984 were reviewed. The inspector discussed modifications made to form QA-07 with the licensee and determined that adequate measures had been taken to ensure a comprehensive review of contractor test results. Overall effectiveness of supervisory reviews will be followed by the resident inspector through routine onsite inspection.

(Closed) Follow-up Item (244/83-22-04): Installation of fuses in RCS vent operating circuits. The licensee has satisfactorily calibrated the position indication circuits and has installed the fuses to provide continuous position indication. Emergency Procedure (E)-1.5 has been revised to reflect the installation of the fuses. The inspector had no further questions in this area.

3. Review of Plant Operations

a. Throughout the reporting period, the inspector reviewed plant operations associated with the completion of the annual refueling outage, start-up testing and the return to power operations. With the exception of the events discussed below, routine operations and outage activities included: steam generator tube eddy current testing and repair, 'B' reactor coolant pump shaft and impeller replacement, steam generator crevice cleaning and refueling fuel shuffle. The unit was returned to power operations May 23, 1984.

-- On May 14, while conducting start-up physics testing at 25% power it was determined that normal secondary system clean-up had not taken place during hot shutdown and low power operations because the condensate bypass valve had been mispositioned resulting in bypassing of the condensate polishing system.

Particulate and ionic impurities that would normally have been removed by the condensate demineralizers were instead passed directly to the steam generators. Maximum steam generator impurity concentrations were determined to have occurred about 9:00 am. Peak values for 'A' and 'B' steam generators, respectively, were: 48 μ mhos/cm and 42 μ mhos/cm cation conductivity, 1.7 ppm and 1.6 ppm sodium, and both 2 ppm chlorides. Approximately 10:00 am, the condensate demineralizers were operating normally and secondary system cleanup was commenced. Although steam generator water purity could have been returned to within operational guidelines prior to power ascension, the licensee decided to shutdown and cooldown to repeat recently performed steam generator crevice cleaning to remove impurities already introduced. The shutdown lasted approximately nine days and the unit was returned to service on May 23. Chemistry results subsequent to crevice cleaning were significantly better than previous post-crevice cleaning samples indicating only minor build-ups of impurities following their introduction.

- On May 22, while conducting a plant heat-up per Operating Procedure (O)-1.1, "Plant Heat-up from Cold Shutdown to Hot Shutdown", control room operators permitted primary plant pressure to exceed 2000 psig while secondary pressure was below 514 psig, this resulted in unblocking the safety injection signal and actuation of the safety injection systems. All safety systems functioned as designed and operators responded correctly in accordance with plant emergency procedures. No water was injected into the primary and all systems and line-ups were restored to normal in approximately ten minutes. The inspector reviewed the subsequent corrective actions and had no further comments.
- On May 30, while operating at 83% power the reactor tripped as a result of a turbine trip caused by a loss of excitation to the generator. A small section of gasket material located between the exciter air cooler unit and the dog-house became dislodged and was entrained in the high velocity cooling air flow. A portion of that gasket material was drawn into the exciter and it caused a shorting of the rotating bridge rectifier assembly output. All safety systems responded normally. Repairs were effected and the generator returned to service on June 2.

- b. The inspector witnessed the performance of portions of the following operations:
- Operations Procedure (O)-2.3.2, "Filling and venting the Reactor Coolant System", Revision No. 20, April 21, 1984, performed April 23, 1984.

- Operations Procedure (O)-1.1, "Plant Heatup from Cold Shutdown to Hot Shutdown", Revision No. 67, November 1, 1984, performed April 24, 1984 in preparation for steam generator crevice cleaning, and May 22, 1984 in preparation for plant start-up.
- System Operations Procedure (S)-4.1E, "Waste Condensate Release", Revision No. 13, September 20, 1982, performed June 6, 1984 for release No. 432.

The inspector verified plant conditions met Technical Specification requirements, discussed procedural exceptions with shift personnel, and determined satisfactory compliance with procedural requirements.

No violations were identified.

- c. 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
 - Containment
 - Diesel Generator Rooms
 - Screenhouse
 - Yard Area and Perimeter
- d. 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. The use of hand-written notes taped to the instrumentation and control panels in the control room is discussed in paragraph 7.
 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 firefighting equipment and controls were observed for conformance with Technical Specifications and administrative procedures. While conducting a plant tour the inspector identified a firewatch which appeared to not be properly patrolling and observing the assigned station. After discussion with the firewatch, the inspector brought this to the attention of the firewatch supervisor and plant management. The inspector subsequently reviewed the corrective measures and determined them to be satisfactory. This area will continue to be reviewed in subsequent routine inspections to ensure proper firewatch coverage.
7. Security. Areas 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 line-up procedures for the applicable plant mode. This verification included routine control board indication review and conduct of a partial systems lineup check of the Safety Injection System and Containment Spray System on May 16, and the Standby Auxiliary Feedwater System (SAFS) on May 30. The review of the SAFS is discussed in paragraph number 4.
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.

4. System Operability Verification

The inspector conducted a systems operability verification of the Standby Auxiliary Feedwater System on May 30. While verifying the position of MOV-9704A and MOV-9704B, 'C' and 'D' Standby Auxiliary Feedwater Pumps discharge motor-operated containment isolation valves (respectively), station hold tags identifying the valves to be in the 'closed' position

were found on the valve handwheels. The required and as found position of the valves was 'open'. The inspector notified the shift supervisor of this condition and the actual valve positions were immediately verified to be 'open' by control room indication. The hold tags were then determined to be invalid and subsequently removed.

Followup review by the licensee and the inspector determined that hold tags were installed on MOV-9704A and MOV-9704B during the performance of System Operations Procedure (S)-30.5, "Standby Auxiliary Feedwater Pump Valve and Breaker Position Verification", on May 21. As documented in procedure S-30.5, the cleared Hold Records and by recollection of the operators involved, the hold tags were removed from the valve motor breakers and the control switches, however, the tags on the valve handwheels were overlooked. The valves were opened on May 21 upon clearance of the hold tags and subsequently verified 'open' by control panel indication per procedure S-30.5 on May 22. Verification of actual valve position by physical inspection was not required.

Hold tags on MOV-9704A and MOV-9704B were not removed and properly verified removed on May 21, 1984, as required by Ginna Station Administrative Procedure (A)-1401, "Station Holding Rules". This is considered an isolated instance of failure to follow a procedure and is not cited as a violation. Licensee corrective actions include: discussion and counselling of the operators involved; training and discussion with all Shift Supervisors and operators on the proper administrative control of Hold Cards; and review of A-1401 and Form A-1401.3, "Hold Record", for clarification.

The inspector will review the final corrective actions in a subsequent inspection. (84-10-01)

5. 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; test was performed by qualified personnel; and 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:
 - Periodic Test Procedure (PT)-32.0, Reactor Trip Logic Test "A" or "B" Train, Revision No. 15, March 17, 1984, performed May 2, 1984.
 - PT-7, Hydrostatic Test of Reactor Coolant System, Revision No. 29, April 30, 1984, performed May 7, 1984.

- Refueling Shutdown Surveillance Procedure (RSSP)-2.1, Safety Injection Functional Test, Revision No. 26, April 24, 1984, performed May 4, 1984.

6. 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 implementations 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 limit.

84-03: Potential Loss of Residual Heat Removal (RHR) Capability - March 7, 1984. With the Reactor in cold shutdown, drain down of the Reactor Coolant System (RCS) was in progress in preparation for steam generator annual inspection. While in the process of draining the RCS to the CVCS Holdup Tanks, preparations to shift from draining via the Reactor Coolant Drain Tank Pump to the Low Pressure Purification Pump resulted in valves MOV-851A and MOV-851B (containment sump 'B' suction to RHR) being mistakenly opened prior to shutting valve MOV-850A (downstream of MOV-851A and upstream of RCDT pump suction). This provided a flow path for water being drained from the RCS Loop to be directed to containment sump '60B' and a potential loss of RHR capability. Prompt response by control room operators prevented a loss of NPSH to the running RHR pump. Normal pump flow characteristics were exhibited throughout the duration of the event.

Operator error and procedural inadequacies were attributed to be the cause of the event. Precautions have been added to the applicable operating procedures and training conducted.

The inspector had no further questions.

7. Control Panel Notes

During control room tours the inspector identified what appeared to be frequent and commonplace usage of hand-written notes taped to control panels. The majority of the notes provide amplification of conditions exhibited by control panel instrumentation, however some notes identified precautions and procedural steps to operate the equipment. The inspector discussed the use of these notes with control room operators and licensee management. The licensee acknowledged that such hand-written notes should not be used in lieu of properly approved procedures, and that administratively approved methods would be developed and implemented to control the use of such notes by September 1984. The inspector will follow the licensee actions in this regard. (84-10-02)

8. Followup of IE Bulletins

IE Bulletin 83-08: Electrical Circuit Breakers with an Undervoltage Trip Feature in use in Safety-Related Applications other than the Reactor Trip System. The licensee's review determined that there are no other circuit breakers with the undervoltage trip feature other than the reactor trip breakers and the reactor trip bypass breaker in use at Ginna Station. This bulletin is closed.

IE Bulletin 83-07: Apparently fraudulent products sold by Ray Miller, Inc.. The licensee's review of the procurement activities for Ginna station during the 1975-1979 time frame has determined that no materials have been purchased directly from Ray Miller, Inc. or from any suppliers carrying Ray Miller, Inc. products. This bulletin is closed.

IE Bulletin 84-02: Failures of General Electric Type HFA Relays in use in Class 1E Safety Systems. The licensee has determined that there are no General Electric Type HFA relays used in Class 1E Safety Systems at Ginna station. Westinghouse BF (ac) and BFD (dc) relays are used in these applications and the licensee is current with vendor recommendations to address similar relay problems. This bulletin is closed.

9. Review of Quality Control Records

The inspector reviewed the Open Vessel Log Sheets maintained for 1984 outage work performed on the A and E Steam Generators. The inspector verified that the log sheets reviewed were in compliance with QCIP-78, "Logging of Equipment and Materials Used in Open Vessels", Revision 0, October 29, 1982.

No discrepancies were identified.

10. Reactor Coolant System Vents - NUREG 0737

The inspector reviewed the Reactor Coolant System (RCS) Vent modification to verify that the vents had been properly installed and tested and that procedures controlling the use of the vents had been implemented. The RCS vents were installed in accordance with Station Modification No. SM-80-2447 under Engineering Work Request (EWR) No. 2447. The inspector verified that plant drawing No. 33013-424, "Reactor Coolant System Flow Diagram" had been revised to reflect the vent installation.

During post-installation testing of the valves in accordance with procedure RSSP-17.0, the licensee experienced difficulty in obtaining proper position indication from the vents. Further testing resulted in replacement of the position indication reed switches on two of the valves. A repeat of RSSP-17.0 on May 3, 1984 indicated that the position indication was functioning normally for all valves.

The inspector reviewed Emergency Procedure (E)-1.5, "Void Formation in the Reactor Coolant System", Rev. No. 13 and Systems Operation Procedure (S)-3.3J, "Reactor Head Vent Operation", Rev. No. 4 and verified that appropriate procedures had been implemented to control the use of the vents. The inspector noted that another procedure, S-3.3H, "Non-Condensable Gas Bubble in the RCS", Rev. No. 0, which had been implemented prior to the installation of the RCS vents, was still in effect. As this procedure apparently should have been superseded by procedure E-1.5, the inspector brought this to the attention of the licensee. The licensee agreed that S-3.3H should be cancelled and deleted it from the operations procedures.

Based on this review, the inspector verified that the RCS vent modification has been completed and is operable as required by NUREG 0737 and the subsequent Safety Evaluation Report dated September 28, 1983. A Technical Specification entry addressing RCS vents, as required per Generic Letter No. 83-37, dated November 1, 1983, has not been incorporated to date. This will be reviewed in a subsequent routine inspection. (84-10-03)

11. Review of Periodic and Special Reports

Upon receipt, periodic and special reports submitted by the licensee pursuant to Technical Specifications 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 March and April, 1984.

12. 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 findings noted in paragraph four were discussed with the licensee management on May 30, 1984. Resultant licensee corrective actions were discussed at the final exit meeting conducted on June 11, 1984.