

U.S. NUCLEAR REGULATORY COMMISSION

Region I

Report No. 50-244/86-07
Docket No. 50-244
Licensee 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 1, 1986 through April 30, 1986

Inspectors: W. A. Cook, Senior Resident Inspector, Ginna
T. K. Kim, Resident Inspector (Trainee), Ginna

Reviewed by: J. E. Beall 5/15/86
J. E. Beall, Project Engineer, Reactor Projects
Section No. 2A, DRP Date

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No. 2A, DRP Date

Inspection Summary:

Inspection on April 1, 1986 through April 30, 1986 (Report No. 50-244/86-07)

Areas Inspected: Routine, onsite, regular, and backshift inspection by the resident inspectors (150 hours) and one region based inspector (6 hours). Areas inspected included: plant operations; licensee action on previous findings; surveillance testing; maintenance; licensee event reports; reactor trip breaker on-line testing; control board annunciator review; offsite review committee; general employee training; drug and alcohol abuse allegation; review of periodic and special reports; and inspection of accessible portions of the facility during plant tours.

Results: In the twelve areas inspected, no violations were identified. Reactor trip breaker on-line testing is not conducted at Ginna Station. This item is currently being reviewed by NRR, (see details in paragraph 7). Details of drug and alcohol abuse allegations are detailed in paragraph 11.

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DETAILS

1. Persons Contacted

During this inspection period, the inspectors held discussions with and interviewed operators, technicians, engineering and supervisory level personnel.

2. Licensee Action on Previous Inspection Findings

- a. (Closed) Unresolved Item (79-17-01) On January 4, 1979, a crack developed in the 1A Coolant Charging Pump cylinder block. The crack was discovered during an investigation into an observed increase in the plant ventilation radiation monitor reading. The pump is an Ajax Iron Works triplex T125 vertical plunger pump. The inspector determined that the cylinder block crack was reviewed by the licensee's Engineering staff under Engineering Work Request No. 2437. The licensee determined that the pump block failure was possibly caused by the cavitation of free hydrogen which comes out of solution due to pump suction pulsations. No previous failures were experienced by the licensee nor have there been any failures since. The licensee reviewed the option of installing charging pump suction stabilizers. The modification was disapproved because of the high cost of installing seismically qualified stabilizers compared to relatively inexpensive pump block replacements. The licensee continues to monitor charging pump cylinders for signs of cracking during routine stuffing box replacement and maintenance. This item is closed.
- b. (Closed) Inspector Follow-up Item (84-03-07) During an earlier inspection report period, the inspector determined that stopwatches used in the performance of Technical Specification required surveillance testing were not controlled under a calibration program. Although there are no specific requirements for stopwatches to be calibrated, the licensee agreed that stopwatches used for safety-related systems testing should be periodically checked for accuracy. The inspector reviewed the recently implemented Calibration Procedure (CP)-80.7, "Calibration/Check Procedure for Electronic Stopwatches", Revision 0, dated October 18, 1985, and discussed stopwatch controls with licensee representatives. No discrepancies were noted.
- c. As a result of a meeting held on March 15, 1984, Region I committed to consider and respond to suggestions presented by the licensee for improving the process of conducting requalification program evaluations. The following three suggestions were reviewed:



1. (Closed) Inspector Follow-up Item (84-14-01) Minimize the impact of the inspector's review on the individual licensed operator and inform operators of the rights of their license. Revision I, (October 1, 1984), to Operator Licensing Examiner Standards, NUREG-1021, was issued for use on February 13, 1985 and incorporated comments from Region I. Since the issuance of NUREG-1021, Region I has adopted standard methods for implementing the re-qualification program evaluation in accordance with chapter ES-601. No action is taken on any individual's license as a result of the requalification program evaluation. Any unsatisfactory results are identified to the facility, which then takes corrective action as required by its approved requalification program. The information that an individual participated in the requalification program evaluation is the only information retained in his docket and is used to ensure that he is not selected for future evaluations until all other operators have been examined. An unsatisfactory evaluation of the requalification training program may effect the renewal of individual licenses, but is based on programmatic deficiencies and is not necessarily a reflection of individual deficiencies. The examination of operators is used as a sample of the results of the requalification training program which is being evaluated. This information is provided to the facility during scheduling, administration, and evaluation of the examinations.
2. (Closed) Inspector Follow-up Item (84-14-02) Define "operationally oriented" as used in NUREG-1021. There is no precise definition of "operationally oriented". However, there have been extensive efforts in providing guidance for developing written examinations. The Knowledge and Abilities Catalog for Nuclear Power Plant Operations-Pressurized Water Reactors, NUREG-1122, and Examiner's Handbook for Developing Operator Licensing Examinations, (Draft 9/85), NUREG-1121, have recently been developed. NUREG-1121 discusses criteria for choosing appropriate Knowledges and Abilities (K/A) from NUREG-1122 for examination preparation. One criterion which is discussed is operational orientation. The discussion states that the examiner should pick K/As for the exam that have a direct link to safe and competent operator performance. The Examiner's Standards, NUREG-1021, states that the requalification examinations should emphasize operational knowledge rather than strictly theoretical information. The referenced Regulatory Publications do provide appropriate guidance to understand the meaning of "operationally oriented".
3. (Closed) Inspector Follow-up Item (84-14-03) Provide program review criteria to the utilities. Approximately four months before a requalification program evaluation, the facility training department is contacted by the NRC to schedule the evaluation. Approximately three months before the evaluation, a letter is sent to the licensee advising of the evaluation



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and the extent of NRC involvement. The week of the evaluation an entrance meeting is held with the facility to discuss the details of the evaluation. The purpose, examination format, examination administration and the acceptance criteria of the evaluation are detailed in chapter ES-601 of NUREG-1021. Therefore, the facility has ample notification and opportunity to review and understand the methods and criteria used for a program evaluation.

Based on the information provided above, these three items are closed.

- d. (Closed) Inspector Follow-up Item (84-14-04) Based on NRC review of the licensee's Intermediate Term Program (ITP) for licensed operator requalification Groups One and Two, the Region I staff resumed issuing operator license renewals on May 14, 1984. The Third and final ITP Group completed their requalification training on October 12, 1984. A region-based inspector and the resident inspector reviewed the requalification training results. All six operators in Group III passed the program. Five operators requested license renewal (reference: Morrill to Keller letter, dated October 15, 1984) and the sixth license was allowed to expire. No discrepancies were noted.
- e. (Closed) Inspector Follow-up Item (84-14-05) Following completion of the Intermediate Term Program for licensed operator requalification the licensee committed to implement an upgraded long term program by July 1, 1984. On August 29, 1984, Region I management met with licensee representatives to discuss the revised Long Term Licensed Operator Requalification Program. No significant deficiencies were noted by the Region I staff. During February and March 1985, the licensee administered the first group of annual requalification examinations under the revised program. Thirty-four individuals were examined with one written exam and one oral exam failure. The inspector reviewed written exam results and discussed the operator upgrade program with licensee training representatives. No discrepancies were noted.

More recent revisions have been made to the requalification program. As outlined in Administration Procedure (A)-103.4, "R. E. Ginna Operator Requalification Program", Revision 2, dated March 8, 1986, the requalification training program is currently a two-year cycle and includes training on the site specific simulator. Periodic reviews of the licensed operator requalification program will be conducted during subsequent scheduled License Examiner inspections. This item is closed.



- f. (Closed) Inspector Follow-up Item (84-14-06) During an earlier review of operator requalification written examinations, it was determined that poor exam questions that were deleted from an exam after the exam had been administered were not being properly documented in the original exam. The licensee agreed that for training records to be complete, the removal of any part of an exam may not be appropriate, unless properly annotated in the exam. The inspector reviewed and discussed this policy with the licensee and was satisfied it was being observed. This item is closed.
- g. (Closed) Inspector Follow-up Item (84-19-02) On August 17, 1984, while performing PT-9.1, "Undervoltage Protection - 480 Volt Safeguards Busses", the 1A Emergency Diesel Generator (EDG) inadvertently started. Initial troubleshooting by the licensee indicated that test switch S5 in the Bus 18 relay cabinet was causing an intermittent voltage due to oxidation buildup on the switch contacts. Subsequent investigation by the licensee determined that the intermittent voltage was caused by a loose wire lug on TBD1-1 states deck. An intermittent voltage occurred when the cabinet was vibrated or jarred by operation of the test switches or by bumping. The inspector reviewed the licensee's supplemental Licensee Event Report (LER #84-009-01) dated February 8, 1985 and corrective action. No discrepancies were noted.
- h. (Closed) Inspector Follow-up Item (84-22-02) During modification testing in accordance with SM-3595.5, "Functional Test and Air Balance of Control, Relay, and Computer Room HVAC Systems", the licensee determined that the air-operated solenoid valve, SV-88, associated with the system manual control switch, was improperly installed. The inspector determined that the valve air supply and bleed off ports had been improperly connected. Consequently, the associated isolation dampers were improperly positioned for the desired configuration. The cause of the improper solenoid valve installation was determined to be human error. Appropriate system modification functional testing prevented the error from going undetected. This item is closed.
- i. (Closed) Unresolved Item (85-04-02) During an earlier team inspection, the inspectors determined that the licensee's Reactor Trip Breaker (RTB) maintenance and testing procedure, M-32.2, "DB-50 Reactor Trip Circuit Breaker Inspection, Maintenance and Test", did not include a procedural step to ensure RTB test response data is evaluated against previous RTB test results. The inspector verified M-32.2 has been properly revised to include test result trend analysis and discussed trend analysis results with licensee representatives. This item is closed.



- j. (Closed) Violation (85-05-01) During the review of the spent fuel pool storage rack modifications, the inspector identified that the Dillon Load Cell, used to conduct drag testing of the modified racks, was not properly calibrated or controlled in accordance with station procedures. The licensee responded to this violation via telephone communications with Region I staff and in Kober to Murley letter, dated May 10, 1985. To preclude recurrence, the licensee has included the three Dillon Load Cells utilized on station in Administrative Procedure (A)-1105, "Calibration and/or Test Surveillance Program for Instrumentation/Equipment of Safety Related Components", Revision 20, dated February 17, 1986. This program includes that instrumentation and equipment which is not specifically listed in Station Technical Specifications. The inspector verified by discussions with the licensee and review of records that the specified load cells had been or are planned to be properly calibrated in accordance with the established frequency and station administrative requirements of A-1201, "Calibration and Control of Measuring and Test Equipment, Plant Instruments and Equipment". This item is closed.
- k. (Closed) Unresolved Item (85-05-02) In addition to identifying the violation discussed above (85-05-01), the inspector noted that the Dillon Load Cell (serial number LAB-2791) used for drag testing had a 0-3000 pound range and was graduated in 20 pound increments with no minor graduations. Its application involved a dummy fuel assembly to be inserted and withdrawn from each modified storage rack cell with a drag force not to exceed 50 pounds. Because of the 20 pound graduations, the drag force readings could not be precisely read. The licensee agreed that some inaccuracy was introduced due to the 20 pound scale subdivisions. The specific application of this load cell was for the purpose of acceptance testing the modified fuel storage racks. The test was a "go" or "no-go" measure of acceptability and with only one exception did a drag test exceed 30 pounds. The licensee's resolution of the one cell exceeding the 30 pound drag force was the permanent plugging of that storage cell. This item is closed.
- l. (Closed) Inspector Follow-up Item (85-06-02) During an earlier report period, the inspector identified that the licensee had no formal controls over the installation of temporary equipment on or around safety-related systems. The licensee has since implemented a detailed temporary modification program. The program is outlined in Administrative Procedure (A)-1406, "Control of Temporary Modifications", Revision 0, dated 2/6/86. The inspector reviewed this procedure and supporting Administrative procedures and discussed their implementation with the licensee's designated Temporary Modification Control Coordinator. In addition, the inspector reviewed the current temporary modifications in the plant and their associated paperwork. No discrepancies were noted.



- m. (Open) Inspector Follow-up Item (85-06-05) Review licensee's Generic Letter 83-28 response Safety Evaluation Reports. The NRC staff has not completed their evaluation of the licensee's response to the Salem ATWS Event Generic Letter concerns. (see further details in paragraph 7)
- n. (Closed) Inspector Follow-up Item (85-12-01) In-line flowmeters FI-929, Safety Injection Test Line Flow, and FI-933, Containment Spray Test Line Flow, were scheduled to be replaced in May 1985 as specified in Administrative Procedure (A)-1105, "Calibration and/or Test Surveillance Program for Instrumentation/Equipment of Safety-Related Components", Revision 17, dated 2/27/85. The inspector determined that qualified replacement flowmeters were not available to the licensee and that replacement has been postponed to the 1987 Refueling Outage. The inspector reviewed the installed rotameter procurement documents and instrument specifications and discussed with the licensee the justification for continued use of the flowmeters without calibration. The inspector concurred that limited use and inherent instrument accuracy does not warrant more frequent replacement or calibration for their application and that licensee control of these flowmeters satisfies paragraph IWP-4140 of Section XI of the ASME Boiler and Pressure Vessel Code, 1977 Edition. The inspector also verified that the current revision to A-1105 specifies replacement of FI-929 and FI-933 in 1987. This item is closed.

3. Review of Plant Operations

- a. Throughout the reporting period, the inspectors reviewed routine power operations. The reactor operated at 100% power the entire inspection period, with the following exception:

On April 1, 1986, while operating at 100% power, the control room operators observed that reactor coolant system average temperature (T avg) was increasing and control rods were automatically stepping in. Nuclear power was observed to be increasing and the operators commenced boration while investigating the cause for the apparent dilution. Maximum nuclear power during the transient was observed to be approximately 104%. The overpower rod stop alarm and loop A and B high T avg alarms were received. Boration was stopped and nuclear power stabilized at approximately 90%. The licensee determined that the dilution was the result of placing the cation demineralizer bed in operation to remove lithium ions from the reactor coolant system. The last time the cation bed was in service was prior to the 1986 outage. The much lower boron concentration water in the cation bed and associated piping was introduced to the primary when the bed was placed in service. All reactor control systems functioned properly and control room operators appropriately identified and



responded to the transient. The licensee revised System Operating Procedure S-3.3D, "CVCS Cation Demineralizer Bed Operations Using "A" Deborating Unit", to caution operators against valving the cation bed into service without verifying boron concentration of the water in that system.

The inspectors reviewed this event and determined that the licensee's corrective actions appear to be appropriate to prevent recurrence.

- b. During the inspection, accessible plant areas were toured. Items reviewed include radiation protection and contamination controls, plant housekeeping, fire protection, equipment tagging, personnel safety, and security.
- c. Inspector tours of the control room this inspection period included reviews of shift manning, operating logs and records, equipment and monitoring instrumentation status.
- d. Safety system valves and electrical breakers were verified to be in the position or condition required for the applicable plant mode as specified by Technical Specifications and plant lineup procedures. This verification included routine control board indication review and conduct of a partial systems lineup check of the Safety Injection and Containment Spray Pumps on April 11, 1986, and the Auxiliary Feedwater System on April 15, 1986.

No violations were identified.

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; test instrumentation required by the procedure was calibrated and in use; the test was performed by qualified personnel; and the test results satisfied Technical Specifications and procedural acceptance criteria, or were properly resolved.
- b. The inspector witnessed the performance of a portion of the following tests:

Periodic Test (PT-3), "Containment Spray Pumps and NaOH Additive System", Revision 40, dated 4/4/86, performed on April 10, 1986.

PT-2.1, "Safety Injection System Pumps", Revision 40, dated 2/21/86, performed on April 15, 1986.



PT-16, "Auxiliary Feedwater System", Revision 43, dated 11/1/86, performed on April 17, 1986.

No violations were identified.

5. Plant Maintenance

- a. During the inspection period, the inspector observed maintenance and problem investigation activities to verify: compliance with regulatory requirements, including those stated in the Technical Specifications; 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 reportability as required by Technical Specifications.
- b. The inspector witnessed a portion of the maintenance activities involving the installation of a fire barrier penetration around the reach rod for fire system isolation valve No. 9275. The maintenance was controlled using Ginna Station Maintenance Work Request Trouble Report (MWR) No. 86-1193 and Maintenance Procedure (M)-56.3, "Permanent Fire Barrier Penetration Seal Installation".

No violations were identified.

6. Licensee Event Reports (LERs)

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.

86-03: Inoperable Relay Room Fire Suppression System. On March 13, 1986, while the reactor was shutdown and steam generator crevice cleaning was in progress, an Auxiliary Operator (AO) noticed the cutter actuating hose for Halon bottle #1 of Fire Suppression Zone S-08, Relay Room Halon System, was broken off at the cutter assembly. Upon review of the AO's report, the Shift Supervisor declared Zone S-08 inoperable and took appropriate compensatory action in accordance with Technical Specification 3.14.4.1. Further investigation by the licensee determined that a security officer making rounds on March 11, 1986 had observed some problems with both the Relay Room Halon System and Hydrogen Monitoring System panels located inside the Relay Room. The licensee determined that the specifics of the



Halon System problem were not clear to the Control Room Foreman who received the security officer's report. He failed to realize the significance of the concern and no action was taken until the AO discovered the broken fitting on March 13. The location of the broken fitting was such that should the system be actuated, either automatically or manually, the nitrogen supply to the series of nine Halon bottle cutter assemblies would be bled off through the #1 Halon bottle supply line. This effectively rendered the entire system inoperable. It is postulated that the small fitting was broken unknowingly by a worker moving construction materials in the vicinity of the Halon bottles. The licensee has initiated an Engineering Work Request to investigate the feasibility of installing a supervisory circuit for the Relay Room Halon System's nitrogen actuation system. Contrary to Technical Specification 3.14.4.1, the Relay Room Halon System was inoperable for approximately 35 hours between March 11 and March 13 without a firewatch posted. A Notice of Violation is not issued for this event in that: it was identified by the licensee; it was of minor safety significance; it was properly reported; immediate corrective measures were appropriate and actions are being taken to prevent recurrence; and there have been no previous violations in this area for which licensee actions would have prevented its occurrence.

The inspector had no further questions.

7. Reactor Trip Breaker On-line Testing

Generic Letter 83-28, "Required Actions Based on Generic Implications of Salem ATWS Events", dated July 8, 1983, specified that reactor trip system reliability improvements shall include both system modifications and on-line functional testing of reactor trip breakers (RTB's). As stated in the licensee's original response to Generic Letter 83-28, (Maier to Crutchfield letter, dated November 4, 1983), the licensee does not currently intend to perform on-line testing of RTB's. Based on RTB testing, to date, response times have been much faster than manufacturer's maximum recommended values. Functional testing will continue to be performed on an annual or refueling basis until RTB response times increase or the breakers demonstrate other signs of degradation.

The inspector verified that the licensee has expanded their preventive maintenance and surveillance testing program for RTB's to provide a better data base and has included test results trend analysis. As stated in Fairtile to Kober letter, dated April 10, 1986, the NRC staff is still evaluating the licensee's response to Generic Letter 83-28, Item 4.5, Reactor Trip System Reliability (System Functional Testing).

The inspector will review final resolution of this item in a subsequent report (reference: Inspector Follow-up Item 85-06-05).



8. Control Board Annunciator Review

In addition to the routine acknowledgement and follow-up of control board alarms, the licensee conducts a periodic review of the control board annunciators. The licensee's review is conducted in accordance with Operations Procedure (O)-6.7, "Weekly Alarm Status Check". The purpose of the weekly review is to maintain a current status of the alarms and to provide a method to ensure proper and timely action is being taken to correct the alarm conditions. The procedure is initiated and maintained by the Head Control Operator and reviewed by the Shift Supervisor and station Superintendent, who presents the information to the Plant Operations Review Committee.

The inspectors routinely check the status of control board alarms during daily plant tours and question control room operators on abnormal alarms. During this inspection period, the inspectors reviewed completed O-6.7 procedures back to January 1985 and verified the licensee was properly tracking and reviewing control board annunciator status. No discrepancies were noted.

9. Offsite Review Committee

On April 23, 1986, the inspector observed meeting No. 151 of the licensee's Nuclear Safety Audit and Review Board (NSARB). The meeting was held at Ginna station and chaired by the Executive Vice President, RG&E.

The inspector observed the conduct and reviewed the NSARB meeting agenda to ascertain whether the Offsite Review Committee was functioning in accordance with Technical Specifications and its Charter. The inspector observed that the NSARB members were in agreement with recent NRC perceived concerns for the overall control of maintenance related activities on station (reference IR No. 86-03). The NSARB appears to be an effective independent review committee which holds station management accountable for their actions. No discrepancies were noted.

10. General Employee Training

Personnel working at Ginna Station are required to attend General Employee Training (GET) prior to gaining unfettered access to protected and radiologically controlled areas. This GET is also required on an annual basis for refresher training. The inspector attended GET, April 7, 1986, for annual refresher training. The inspector noted that the training sessions conducted this year were generally much improved from the previous year's programs. The practice of using classroom study/work sheets in the Health Physics portion of the GET program was found to be especially effective in both the presentation and retention of the information.

11. Allegation of Drug Abuse by Contractors

The NRC Region I Office received a phone call from a member of the public that two contractor employees at Ginna Station were allegedly abusing alcohol



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and drugs off-site. Region I contacted the licensee on March 12, 1986 via telephone and subsequently by letter, dated March 20, 1986, informing them of these allegations. In addition, the alleged contractor contacted licensee representatives directly and provided additional information and allegations concerning off-site abuse of drugs and alcohol by both station and contractor employees.

By letter dated April 1, 1986, the licensee informed the NRC Region I of the results of their investigation into the drug and alcohol abuse allegations. Two contractor employees were terminated prior to the conclusion of the investigation. Eight suspected station and contractor employees were requested to submit to voluntary drug screening. One contractor employee declined to submit to the testing and was escorted off the site and access authorization cancelled. Of the seven employees who were screened, one contractor employee was tested positive for the presence of illegal substances and this individual's access authorization was cancelled. The six employees tested negative had their access authorization reinstated and were permitted to return to work. This allegation 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 this scope, the following report was reviewed by the inspector:

-- Monthly Operating Report for March 1986.

13. Exit Interview

At periodic intervals and at the conclusion of the inspection period, 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, it was determined that this report does not contain information subject to 10 CFR 2.790 restrictions.

