U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Report No. 50-244/85-24

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: October 20, 1985 through November 30, 1985

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

Reviewed by: L. T. Doerflein 12/19/85
L. T. Doerflein, Project Engineer, Date
Reactor Project Sect. No. 2C, DRP

Approved by: J. C. Linville 12/19/85
J. C. Linville, Chief, Reactor Date
Project Section No. 2C, DRP

Inspection Summary:

Inspection on October 20, 1985 through November 30, 1985 (Report No. 50-244/85-24)
Areas Inspected: Routine, onsite, regular, and backshift inspection by the resident inspector (118 hours). Areas inspected included: plant activities during routine power operations; licensee action on previous findings; surveillance testing; Review of Part 21 Report; auxiliary building crane modifications; outage planning review; Unusual Event Review; maintenance; spent fuel shipments; and inspection of accessible portions of the facility during plant tours.

Results: In the nine areas inspected, no violations were identified. A reactor trip is discussed in paragraph 3a. A review of the toxic gas monitor alarm annunciation system is discussed in paragraph 3b. Another example of licensee inattentiveness to proper quality assurance and control practices is discussed in paragraphs 5 and 6. A site Unusual Event involving an inadvertent fire system actuation is discussed in paragraph 7.

DETAILS

1. Persons Contacted

During this inspection period, the inspector interviewed and talked with operators, technicians, engineering and supervisory level personnel.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (81-19-01) During an earlier inspection, the inspector identified that the construction of a smoke barrier vestibule at the Intermediate Building entrance to the Cable Tunnel had isolated a portion of the Intermediate Building fire suppression system from the remainder of the fire suppression and detection systems in the Intermediate Building. As a result, a potential fire in this enclosed area would not activate the Intermediate Building fire suppression system. The adjacent cable tunnel fire suppression system may be activated as a result of the communication of smoke between the entrance vestibule and the cable tunnel, however, adequate fire suppression provided by the cable tunnel deluge system could not be guaranteed. The licensee agreed to review the adequacy of this modification.

The inspector determined that the licensee modified the smoke vestibule fire detection and suppression system under Engineering Work Request No. 1833. The modification consisted of the removal of the Intermediate Building suppression system piping and the extension of the cable tunnel suppression system into the vestibule. The inspector conducted a visual inspection of the modification and found no discrepancies.

(Closed) Inspector Follow-up Item (81-21-02) During an earlier inspection of Site Contingency (SC) procedures, the inspector identified minor discrepancies in several procedures indicating a lack of thorough review by the Plant Operations Review Committee (PORC). To improve the SC procedures review process, the licensee established a pre-PORC review committee which functions under the guidelines of Administrative Procedure (A)-205.2, "Radiation Emergency Plan Implementing Procedures Committee". The inspector reviewed this procedure and discussed the pre-PORC committee functions with the committee chairman. A sampling of SC procedures were reviewed and no significant discrepancies were noted.

(Closed) Inspector Follow-up Item (81-22-26) During an earlier inspection, the inspector determined that emergency supply lockers located throughout the plant may lack a sufficient inventory of damage control and repair equipment which may be required during a plant fire or similar emergency. The inspector determined that the licensee conducted a review and has since augmented the repair locker inventories. In addition, several designated "Appendix R" lockers have

been stationed at specific locations in the plant to satisfy licensee commitments to revised 10 CFR 50, Appendix R requirements. The inspector reviewed site procedure (SC)-3.15.0, "Fire Equipment and Instrumentation, Inspections, Inventory and Maintenance", and a sampling of completed SC-3.15.15, "Emergency Fire Equipment Locker Inventory and Inspection", procedures to verify adequate maintenance of these designated repair locker inventories.

(Closed) Inspector Follow-up Item (81-24-01) This item involved the inspector review of a Quality Assurance (QA) Fire Protection Audit. Numerous discrepancies in the modification to the Fire Signaling System (Engineering Work Request No. 1832B) were identified by the inspector during an earlier inspection period. In addition to the correction of inspector identified discrepancies, the licensee committed to perform a QA Audit to review the modification design control, implementing procedures revision control, and modification turnover to Ginna Station controls. The inspector reviewed QA Audit 82-06:RD, "Special Audit of Ginna Station Fire Protection System" to determine its scope and to verify that all audit findings were resolved.

3. Review of Plant Operations

a. Throughout the reporting period, the inspector reviewed routine plant operations. The reactor operated at full power with the following exception:

On November 25, 1985, at 1:36 P.M., the reactor tripped from approximately 85% power due to low B steam generator level (30%) coincident with a feed flow/steam flow mismatch. The plant transient and subsequent reactor trip was initiated by a trip of the B circulating water pump. Control room operators immediately commenced a manual turbine load reduction. The presumed sequence of events leading to the reactor trip signal are as follows: a high hotwell level resulted from the circulating water pump trip and load reduction; upon receipt of the high hotwell level (40 inches) signal, the third condensate pump auto started; the third condensate pump start resulted in a condensate system pressure spike greater than 425 psig; both operating condensate booster pumps tripped, as designed, at 425 psig discharge pressure; condensate system pressure dropped to 80-90 psig and could not be restored; the resulting low main feed pump suction pressure caused the feed flow/steam flow mismatch and eventual low steam generator levels. All safety systems responded properly to the reactor trip and the plant was stabilized in the hot standby condition. Following a Plant Operating Review Committee (PORC) Post-Trip Review and the performance of minor maintenance, the reactor was returned to criticality at 6:10 A.M., November 26 and synchronized with the grid 12:37 P.M. the same day. The inspector verified that the licensee made the appropriate notifications to the NRC Headquarters duty officer via the Emergency Notification System (ENS).

The licensee established a special review group comprised of both station and corporate engineers to assess the sequence of events leading to the reactor trip. Information available on the plant computer sequence events and alarm printers was not sufficient to completely reconstruct secondary plant response. The suspected cause of the B circulating water pump trip was the actuation of the power factor trip relay. Subsequent testing determined the relay drifted from its original setting of .90 to .95. The power factor trip relay resets automatically when the pump breaker trips.

The inspector attended the PORC post-trip reviews and verified the licensee adequately assessed reactor plant response and restart considerations. Corporate engineers were included in the review via a telephone conference line. The inspector observed that the presentation of the entire sequence of events was somewhat disjointed and led to some confusion. The lack of recorded secondary plant response information contributed to this confusion. During previous Post-Trip Reviews observed by the inspector, one or two licensee representatives were tasked with assembling all of the computer printouts and interviewing personnel who witnessed the plant transient event. This information was then compiled and presented as a complete scenario. This coordinated effort was not observed during the November 25 Post-Trip Review, even though all the available plant response information and personnel observations were presented during the PORC meeting. The inspector discussed this observation with the licensee and they acknowledged a similar concern for the lack of continuity in the event analysis. The inspector will review licensee efforts to improve their Post-Trip Review in a future report.

b. During the inspection, accessible plant areas were toured. On November 22, the inspector identified a Loss of Flow alarm on the Control Room Toxic Gas (Ammonia) Monitor. The alarm only indicates locally and the inspector notified the control room operators of the condition. Appropriate compensatory action was taken and a Maintenance Work Request Trouble Report was initiated to correct the alarm condition.

The inspector questioned the licensee as to the adequacy of the Toxic Gas Monitor (including the Chlorine Monitor) annunciation capability. A loss of flow to the ammonia or chlorine monitors may go undetected by plant operators for several hours because of the lack of remote alarm capability. A loss of flow to the detectors affects the operability of the monitors.

The licensee agreed that system annunication capability could be improved upon and has initiated an Engineering Work Request to have this issue reviewed and resolved by Engineering. In the interim, the licensee is conducting more frequent visual checks of the monitors. The inspector will review the licensee's resolution of this item in a subsequent report. (85-24-01)

c. Inspector tours of the control room this inspection period included review of shift manning, operating logs and records, and 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 Standby Auxiliary Feedwater System on October 31, 1985 and the 1A Emergency Diesel Generator on November 27, 1985.

While performing a walkdown of the Standby Auxiliary Feedwater Systems, the inspector noted that pressure gauges at the suction of both Standby Auxiliary Feedwater (SAFW) pumps were reading approximately 150 psig. In addition, the suction relief valve to the D SAFW pump (set at 150 psig) was leaking by as a result of the high suction pressure. The inspector informed the licensee of this condition to ensure corrective action. The inspector later determined that condensate is lined up to the suction of the SAFW pump to provide a positive pressure against the service water suction isolation valve. Service water contamination of the SAFW system is thereby reduced and a less corrosive environment is maintained. The licensee reduced condensate pressure to approximately 100 psig to minimize the differential pressure and stop the relief valve from leaking by. The inspector conducted a follow-up visual inspection of the SAFW system and found no further discrepancies.

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 38, dated 10/30/85, performed on November 26,1985.

PT-17.4, "Control Room Radiation R-36, R-37, R-38 and Toxic Gas Monitor Operability Test", Revision 1, dated 11/13/85, performed on November 27, 1985.

While performing PT-17.4, the solenoid, which operates to expose the check source for the particulate monitor, failed to actuate. The technicians manually operated the exposure mechanism and verified proper operation of the detector. The inspector verified that a Maintenance Work Request Trouble Report was initiated to correct the solenoid problem.

5. Review of Part 21 Report

A 10 CFR Part 21 Report was submitted to the NRC by the licensee on August 23, 1985. The report identified a design error made on the main hoist backup hydraulic brake system modification to the Auxiliary Building overhead crane. The error resulted from a misinterpretation by the vendor, Micro Instruments Corporation, of the conceptual design and manifested itself in the misapplication of a hydraulic valve in the braking system. Testing of the system after installation identified the problem. The hydraulic valve was replaced with one of the proper design and the system was retested satisfactorily.

The inspector reviewed the written report for completeness, accuracy of information, timeliness of reporting and adequacy of licensee corrective actions taken. No discrepancies with the written report were identified.

Further review by the inspector of events related to this Part 21 Report are discussed in paragraph 6.

6. Auxiliary Building Overhead Crane Modification Review

Commencing in early January 1985, modification work started on the Auxiliary Building overhead crane in accordance with Engineering Work Request (EWR) No. 3651, "40 Ton Auxiliary Building Crane Upgrade to Single-Failure-Proof Requirements". The modification consisted of the replacement of the rope, drum and reeving system; a new hook block; seismic bridge restraints; installation of a backup hydraulic braking system and additional structural improvements to meet the requirements of NUREG-0554. The majority of the work was performed by RG&E General Maintenance under the supervision of Ginna Project Engineering.

In June 1985, functional testing of crane electrical systems commenced and numerous deficiencies were being identified. Upon closer investigation of these deficiencies by the licensee Quality Assurance engineers, it was discovered that electrical quality assurance requirements specified in the original EWR No. 3651 "Design Criteria", Equipment Specifications and system drawings issued for procurement and construction, were not fully implemented. The licensee promptly issued a stop work order on crane modification activities and placed a hold on lifting spent fuel with the Auxiliary Building crane until quality assurance deficiencies were evaluated and properly resolved.

The licensee concluded that the major causes for the failure to implement appropriate quality assurance practices were: 1-confusion over how the Quality Assurance Program applies to non-1E safety-related electrical items, and 2-the failure to obtain proper reviews and approvals of deviations from approved specifications, drawings and design criteria by cognizant Engineering and field personnel.

The inspector determined that electrical modifications quality control inspection requirements, specified in approved Equipment Specification CE-118, were deleted by Engineering Change Notice (ECN) No. 3561-3. The decision to delete these requirements was made by Electrical Engineering and concurred with by the Responsible Engineer, the Construction Engineer and Project Quality Control. Electrical Engineering concluded that since the modification electrical design was not required to meet Class 1E seismic criteria, the electrical portion of EWR 3561 did not require extensive quality assurance controls during installation. Accordingly, ECN No. 3561-3 deleted specific quality control verifications from the approved electrical specification procedure EE-29, "Equipment Specifications for the Installation, Inspection, and Testing Details for Electrical Equipment, Cable and Raceways". In addition, the inspector determined that ECN No. 3561-3 was approved for implementation without the required Quality Assurance engineer review.

The inspector reviewed and discussed with the licensee the corrective actions taken to address this problem. The corrective action plan, specified in RG&E Corrective Action Report No. 85-07, is divided into interim and final plans. The interim plan addressed the immediate concerns to: reinstitute quality assurance requirements; conduct a comprehensive Electrical Engineering review of completed electrical work; disposition nonconformances identified; and, perform a comprehensive functional test of electrical circuits which could have an impact on the modification. The final plan addressed the programmatic changes necessary to: clarify electrical design classifications; identify Engineering responsibilities for multi-discipline modifications; develop an electrical specification for non-safety related electrical work; and provide training to Engineering and Project personnel on revised guidelines.

The inspector concluded that the corrective actions taken by the licensee to address this specific problem provide the necessary mechanisms to prevent recurrence. However, this event does provide another example of the licensee's inattentiveness towards quality assurance and quality control practices which was addressed in the last SALP report (SALP Report No.50-244/85-99). This event occurred approximately the same time period that the SALP was presented to the licensee. Therefore, this event does not reflect a recurrence of previously identified concerns. A meeting to discuss, in part, the licensee's progress in addressing the SALP concerns was held on December 4, 1985. It was apparent from this meeting that a significant management commitment has been initiated to assist in improving the

overall licensee philosophy and attitude towards quality assurance and control. Licensee management goals and objectives have been formulated, however, implementing procedures and programs to achieve them have not yet been established. The inspector will continue to track licensee progress in this area.

7. Review of November 6 Unusual Event

While operating at 100%, at 4:55 A.M. on November 6, 1985, the Cable Tunnel Fire Suppression System (S-05) inadvertently actuated. The control room operators immediately dispatched the fire brigade to the cable tunnel area. The brigade found that the deluge suppression system had actuated and reported what they thought was the smell of burning electrical insulation. At 5:00 A.M. the control room began to receive intermittent grounds on Non-Vital 480 volt Electrical Bus 15. At 5:05 A.M. the site declared an Unusual Event in accordance with Site Contingency Procedure SC-100, "Ginna Station Event Evaluation and Classification" due to a suspected fire lasting ten minutes or more.

At 5:30 A.M. the fire brigade declared the suspected fire under control and secured the deluge. Subsequent investigation of the cable tunnel by the fire brigade and electrician Foreman could not identify any source of fire or smoke. The Bus 15 intermittent ground was traced to the Intermediate Building sub-basement sump pump. The pump's electrical junction box was wetted by the fire system deluge water flooding from the cable tunnel area into the Intermediate Building sub-basement. Troubleshooting of the Cable Tunnel Fire Detection/Actuation System indicated that a spurious signal spike on the second alarm module most likely caused the actuation.

The Unusual Event was terminated at 12:20 P.M. after the results of the above investigations were reviewed by the Shift Supervisor and Station Superintendent. The inspector observed licensee response to this event and verified appropriate notifications were made to the NRC Headquarters via the ENS. Additional details of this event are identified in a Kober to NRC letter dated November 7, 1985.

8. Review of Annual Refueling and Maintenance Planning

On November 21, 1985 the inspector attended an Outage Planning Meeting at the Brookwood Training Center. The meeting was well attended by station staff, corporate engineering personnel and licensee management. Outage planning progress since the previous meeting was discussed by the responsible lead engineers and plant staff. Major outage work conflicts were identified for resolution and a draft critical path schedule was discussed. The outage is currently scheduled to commence on February 8, 1986.

9. 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. On November 27, 1985, the inspector witnessed a portion of the maintenance performed on the A coolant charging pump in accordance with Maintenance Procedure (M)-11.4.6, "Charging Pump Stuffing Box Maintenance", Revision 6, dated 2/15/84. No discrepancies were noted.

10. Review of Spent Fuel Cask Shipments

As of the end of this inspection report period, the licensee has received 58 spent fuel assemblies from the West Valley Demonstration Project in West Valley, New York. The inspector has periodically reviewed licensee receipt inspection, radiation/contamination surveys, cask unloading and decontamination activities. No discrepancies have been noted.

Health Physics technician coverage, radiological control practices, cask decontamination methods, Quality Control oversight and general supervisory control and involvement in the spent fuel cask activities appear to be appropriate.

11. 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 October 1985.

12. Exit Interview

At periodic intervals during 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, it was determined that this report does not contain information subject to 10 CFR 2.790 restrictions.

NRC Form 766 U.S. NUCLEAR REGULATORY COMMISSION

Principal Inspector:
Cook, William, A.
Reviewer: J. Linville

INSPECTOR'S REPORT

Office of Inspection and Enforcement

Inspector's:	Transaction Type	Docket #/Inspect#/Seq#	
Cook, William, A.		05000244	85-24

Licensee/Vendor:
Rochester Gas and Electric Corporation
49 East Avenue
Rochester, New York 14649

*I-Insert
M-Modify
D-Delete
R-Replace

Period of Inspection: From	To	Inspection Performed By:	Organization Code of Region: Region	Division	Branch
10/20/85	11/30/85	1 - Region Office Staff *2 - Resident Inspector (s) 3 - Performance Appr. Team - Other	RI	B	B

Regional Action:
1 - NRC Form 591
*2 - Regional Office Letter

Type of Activity Conducted (* one only):

*02-Safety	07-Special	12-Shipment/Export
03-Incident	08-Vendor	13-Import
04-Enforcement	09-Mat. Acct.	14-Inquiry
05-Mgnt. Audit	10-Plant Sec.	15-Investigation
06-Mgnt. Visit	11-Invent. Ver.	

Inspection Findings

A	B	C	D	
*				-Clear
				-Violation
				-Deviation
				-Violation & Deviation

MODULE INFORMATION

Record	Mod. No.	Direct Insp. Hrs.	Percentage Complete	Status	Module Followup
B-530703		008			
B-561726		004	100	C	
B-562703		003	100	C	
B-571707		032	100	C	
B-590712		005	100	C	
B-590713		002	100	C	
B-592700		004			
B-592704					
B-592705					
B-592701B		004			37701
B-592702					
B-592703					
B-571710		006	100	C	
B-593702		016			
B-572700					
B-571711					
B-537701					
B-564703					
B-537700		020			
B-525565					
B-560705		002			
B-592716		012			

NRC Form 6 Rev. Oct. 80

Transaction Type
_x_ New Item
_x_ Modify
_x_ Delete

OUTSTANDING ITEMS FILE
SINGLE DOCKET ENTRY FORM

Docket Number
50-244

Cook
Originator

Linville
Reviewing Supervisor

Item Number	Type	Module#	Area	Resp	Action Due Date	Updt/Close Date	O/M/C
85-24-01	IFI	71707	OPI	Z/	04-30-85		85-11-30

Originator: Cook
Modifier/Closer:

Description: Review licensee action to improve control room toxic gas monitor annunciation system.

Item Number	Type	Module#	Area	Resp	Action Due Date	Updt/Close Date	O/M/C
81-19-01	UNR	37701B	FDP	E/Z		85-24-C	85-11-30

Originator:
Modifier/Closer: Cook

Description:

Item Number	Type	Module#	Area	Resp	Action Due Date	Updt/Close Date	O/M/C
81-21-02	IFI	92706	EPP	Z/		85-24-C	85-11-30

Originator:
Modifier/Closer: Cook

Description:

Item Number	Type	Module#	Area	Resp	Action Due Date	Updt/Close Date	O/M/C
81-22-26	IFI	99002	EPP	A/		85-24-C	85-11-30

Originator Modifier/Closer
Cook

Description:

Item Number	Type	Module#	Area	Resp	Action Due Date	Updt/Close Date	O/M/C
81-24-01	IFI	64704B	FDP	Z/		85-24-C	85-11-30

Originator Modifier/Closer
Cook

Description:

Item Number	Type	Module#	Area	Resp	Action Due Date	Updt/Close Date	O/M/C
84-20-04	IFI	83723	OEP		08/31/85	85-18-O	85-09-06

Originator Modifier/Closer
Cook

Description: Document training for environmental technician and provide specific training and job description for this position.

Item Number	Type	Module#	Area	Resp	Action Due Date	Updt/Close Date	O/M/C

Originator Modifier/Closer

Description:
