



ROCHESTER GAS AND ELECTRIC CORPORATION • 89 EAST AVENUE, ROCHESTER, N.Y. 14649-0001



ROGER W. KOBER
VICE PRESIDENT
ELECTRIC & STEAM PRODUCTION

TELEPHONE
AREA CODE 716 546-2700

April 11, 1986

Dr. Thomas E. Murley, Regional Administrator
U. S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Subject: I & E Inspection Report 86-02
Notice of Violations
Effectiveness of QA and QC
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Dear Dr. Murley:

The purpose of this correspondence is to address the specific concerns identified in Appendix A Notice of Violations and provide our Action Plan regarding the overall issue of Quality Assurance and Quality Control Effectiveness.

The following is in response to Violation A:

- A. 10 CFR 50, Appendix B, Criterion XVI states: "Measures shall be established to assure that conditions adverse to quality, such as failures... and nonconformances are promptly identified and corrected."

Contrary to the above, as of January 31, 1986, the nonconformances identified in Audit No. 84-15 and again in Audit No. 85-11 to address the inadequacies in the inspection of critical welds on the reactor vessel head and internals lifting rigs were not adequately corrected in that: (1) Refueling Procedure RF-60 was not revised to clarify the visual inspection requirements for the lifting rings and (2) the hold/witness point in the RF procedure (paragraph 8.2.2) did not require confirmation of the completion of MHE-1100 procedure steps as stated in the corrective actions for the finding in Audit 84-15:SB.

We agree with this item as stated and believe the root causes associated with this violation involve the following:

- Communication process associated with procedure requirements and scheduled hold points
- Accountability for inspection performance
- Training of personnel
- Audits (84-15 & 85-11) and inspection process effectiveness.

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We have taken the following actions to address this violation. Accountability for inspection of special lifting devices has been assigned to the Materials Handling Equipment (MHE) group. MHE Procedures 1100-1 has been revised to clarify inspection requirements of the heavy load program. The MHE group were trained in procedural requirements of the MHE 1100-1 prior to the start of the February 1986 outage. All required annual inspection of critical welds on the Reactor Head Lifting Device (RHLD) and the Reactor Internal Lifting Device (RILD) were performed per MHE 1100-1 prior to first use during the recent outage.

→ We intend to complete additional corrective actions prior to the next scheduled refueling outage in 1987. Review and revision of refueling procedures will be performed to assure QC hold points relative to MHE 1100-1 are established. We will revise Materials Engineering QA procedures to require manager's approval of MHE procedures. We will establish a formal training program to assure new MHE personnel and/or those receiving new assignments will receive indoctrination and training in procedural requirements. We intend to formalize new ISI inspection requirements associated with major program commitments (i.e., Heavy Loads Program) with Engineering Specifications where appropriate.

We will be seeking relief from the Heavy Loads Program requirements to perform PT examination for welds 2a, 2b, 2c (MHE 1100-1) on a 10-year interval. These welds cannot be examined nondestructively because of their initial design configuration.

We will include special lifting device inspections on both the ISI Maintenance and Materials Engineering computerized requirements tracking programs. We will also seek to formalize communications between the Materials Handling Equipment group (offsite) and the onsite Maintenance and Outage Planning (P-2) group relative to schedule of inspections.

Our new Audit Severity Program and Audit Reporting Procedures will be revised to focus Management's attention on recurring problem areas. Finally, we will conduct training of QC personnel to ensure effective verification of work in their surveillance activities.

The following is in response to Violation B:

- B. 10 CFR 50, Appendix B, Criterion VII states: "Measures shall be established to assure purchased material... conform to the purchase document... These measures shall include provisions, as appropriate for source evaluation ...examination of product upon delivery..."

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1. Ginna Station Quality Assurance Manual Section 4, Paragraph 3.2.7 states: "The receipt inspection method shall be utilized for procurement of off-the-shelf-items...and for which neither quality assurance controls exist nor are necessary to ensure a quality product acceptance...the suppliers of items procured utilizing the Receipt Inspection method need not be evaluated and qualified as required by Section 7 of the Quality Assurance Manual. Items are normally accepted by performing receipt inspection for identification, damage and attributes important to safety."
2. Section 7 of Quality Assurance Program for Station Operation (Revision 11) states: "Ginna Station, General Maintenance, Quality Assurance and Electric Meter and Laboratory evaluate the suppliers of inspection, test and calibration services which they intend to use."

Contrary to the above, as of January 31, 1986:

1. Safety related stainless steel wire rope for the auxiliary building crane, an item purchased under Purchase Order No. NEG 50942, from a supplier not evaluated and qualified as required by the Quality Assurance Manual, was accepted without performing a receipt inspection to verify that the chemical composition and the breaking strength, two attributes important to safety, were traceable from the product to the reports provided by the supplier.
2. Calibration services for direct readout gauges for HY 10SL Hydraulic Torque Wrenches were purchased from a supplier who was not evaluated by Ginna Station, General Maintenance, Quality Assurance and Electric Meter and Laboratory.

We agree with this violation.

During procurement planning for both of the steel wire rope purchase orders it was determined that standard commercial quality wire rope produced to industry standards would be acceptable for use. This determination was based on the large safety factors involved, industry practice and item complexity. The RG&E method of procurement of commercial grade items not requiring a supplier's quality program is the "Receipt Inspection Method." The Receipt Inspection Method was chosen for these procurements and under this method, suppliers need not be listed on the Qualified Suppliers List.



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The majority of commercial quality items purchased under the Receipt Inspection Method are supplied without supplier test reports since standard commercial quality practice does not require this assurance. However, due to the standard safety concerns of the lifting equipment industry, test reports and certifications are routinely provided as assurance that industry standards are met. These test reports were therefore requested and received for this product.

Strict traceability from test report to product markings is not however, a commercial quality requirement. Traceability (e.g. heat numbers marked on items) is therefore not required for the Receipt Inspection Method (commercial grade). Traceability of manufacturers test reports to the RG&E purchase order is required for all procurements.

To remedy this deficiency, corrected test reports are being obtained from the material supplier with the appropriate purchase order identification.

Each of the other noted deficiencies with these procurements have been reviewed and are being resolved as follows:

- Purchase order review and approval is documented on the purchase requisition which are separately filed with the originating department and Purchasing Department. Requisitions for Purchase order NEG 50942 were verified to be appropriately filed.
- Reference to an incorrect purchase order number was obviously a typographical error of which only one digit was different. The error is being corrected.
- Certification stating the product was undamaged was not provided as required for the original order. This omission should have been identified during receipt inspection. The undamaged condition was ascertained upon receipt and during installation. Quality Control personnel have been reminded of the need to assure purchase order requirements are met.
- Oil free verification, while not specifically documented, is typically incorporated as a part of the Material Inspection step on the procurement control form (QA-07). The crane inspector who performed the material inspection step verified the oil free condition during his inspection to ensure that the item received met the purchase order requirements.
- Placement of the wire rope in the warehouse without tags is contrary to established procedures. Unloading directly to the warehouse occurs for items too large for the receiving hold area. Procedures are being reviewed and clarified to ensure proper notification and timely tagging for bulk items received in the warehouse.

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The causes associated with this part of the violation are personnel error and confusion over the handling of manufacturer certification during the receipt of commercial grade items.

To eliminate future problems, RG&E will be clarifying the procurement policy for the receipt method including commercial grade items. In addition, the Ginna procurement group will ensure future purchase requisitions clarify the need for suppliers to indicate Purchase order information of the purchaser on all documentation provided.

Expected completion of these actions is anticipated prior to October 1, 1986.

Measures being taken to improve QC inspector effectiveness, described later in this response, will also enhance future procurement receipt efforts.

Regarding the Hytorque wrenches the supplier should have been evaluated and placed on the Qualified Suppliers List prior to placing the purchase order. An investigation revealed that the hydraulic torque wrench was only used on one safety-related job during the 1986 annual maintenance outage and not used previous to this due to wrench re-design by the supplier. The torquing for this job was re-verified by using a mechanical torque wrench calibrated by a qualified supplier. A nonconformance report has been written to place the hydraulic torque wrench and gauges on "hold" until an evaluation of the supplier can be performed by Quality Assurance and Ginna Station personnel. Discussions were held with personnel involved to remind them of the requirement to select calibration suppliers from the Qualified Suppliers List. RG&E does not believe this is a widespread problem based upon our Quality Assurance audit program results and the evaluation and use of the 14 calibration suppliers currently listed on the Qualified Suppliers List.

Completion of the supplier evaluation and nonconformance report resolution is anticipated by September 15, 1986.

The following is in response to Violation C.

- C. 10 CFR 50, Appendix B, Criterion III states: "The design control measures shall provide for verifying or checking the adequacy of design . . . The verifying or checking process shall be performed by individuals other than those who performed the original design . . ."

Rochester Gas and Electric Procedure QE 303, (Revision 8) paragraph 3.6.4 states: "The Engineering Manager or Lead Engineer shall review the (Engineering) drawing for compliance with this procedure and technical adequacy . . ."

Contrary to the above, as of January 31, 1986, the circuit

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schedule which specified cable conductor terminations for circuits G-1234, G-1235, G-1237 and G-1244 in safety related Engineering Work Request No. 4067 were prepared and reviewed by the same responsible engineer.

We agree with this item as stated and believe the root cause of the violation to be failure to follow good design control practices for circuit schedule preparation.

Several circuit schedules associated with EWR 4067's installation of 115 KW Bench Board were reviewed by the same individual that prepared the circuit schedule. This is contrary to Engineering QE Procedures which requires an independent review of the engineering drawing. Engineers have been instructed that circuit schedules are no longer to be prepared and reviewed by the same individual. We will revise QE 303 to explicitly address design control practices for all circuit schedules.

The following is submitted in response to violation D.

- D. 1. 10 CFR 50, Appendix B, Criterion V states in part: "Activities affecting quality shall be prescribed by documented instructions, procedures or drawings of a type appropriate to the circumstances and accomplished in accordance with these instructions procedures and drawings. Instructions, procedures and drawings shall include appropriate quantitative and qualitative acceptance criteria . . ."

Ginna Station Procedure M-32.1 on page M-32.1-7 requires a megger test for circuit breakers.

2. 10 CFR 50, Appendix B, Criterion II states: "The (Quality Assurance) Program shall provide for indoctrination and training for personnel performing activities affecting quality as necessary to assure that suitable proficiency is achieved and maintained. . ."

Contrary to the above, on January 30, 1986:

1. Procedure M-32.1 for performing maintenance of the circuit breakers for component cooling system "B" pump was inappropriate to the circumstances in that it did not specify the acceptance criteria for measuring the resistance of the circuit breaker.
2. The personnel performing the activity and the quality control technician witnessing the activity were not proficient in that the maintenance personnel meggered the above circuit breaker using an instrument (Biddle Catalogue No. 21805-1) whose calibration expired on April 27, 1984 and the quality control technician who



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monitored the activity failed to verify the calibration status of this instrument prior to its use.

The Corrective Actions listed will be completed by September 30, 1986, and will correct the items of violation, and prevent similar occurrences.

1. Meggers will be incorporated into the Ginna Station Measuring and Test Equipment Program.
2. Other Measuring and Test Equipment (MT&E) presently not under the MT&E program will be evaluated for adequate controls.
3. The Applicable Electrical and Quality Control personnel will be trained on the revisions to Measuring and Test Equipment Program. We agree with the evaluation.
4. Appropriate acceptance criteria will be incorporated into procedures requiring use of the megger equipment.

The following is submitted with regard to our plans to improve Quality Assurance and Quality Control Effectiveness. Background information, status of current plans and future plans will be discussed.

We believe we have a good quality program at Ginna. We have experienced people doing a good job, the commercial consequences of doing otherwise are unacceptable.

However, we have had a program underway since mid 1985 to increase the effectiveness of our QA/QC program since we agree there is room for improvement.

After our review of the 1985 SALP report we formed a QA/QC Task Force with the following objectives:

1. Identify means to improve management utilization of the QA/QC program.
 2. To provide an overview of the QA/QC program with respect to the responsiveness of the audited organizations.
 3. To review concerns of the audited organizations with respect to QA/QC program effectiveness.
 4. Develop an implementation program to institute any changes required.
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This Task Force developed nine recommendations to meet the above objectives and we are listing them here with the current status.

<u>Recommendations</u>	<u>Status</u>
1. QA Manager have accountability to the Executive Vice President and Chairman of the NSARB with day-to-day direction from Chief Engineer.	Complete
2. Establish a formal objectives program for QA Group.	Complete
3. Establish a severity system for audit findings.	Complete
4. Maintain this Task Force as a subcommittee of the NSARB to review and report to the Board on QA/QC matters. (This Group would address Items 2 and 3 of Page 2 Objectives on an ongoing basis.)	Complete
5. Simplify paper system -- streamline reporting requirements.	In Progress TCD 6/1/86
6. Develop education and information program on the importance of QA/QC (Communications.)	In Progress TCD 5/1/86
7. Formalize the interface between Divisions.	Complete
8. Specify the responsibility for the program and its implementation.	Complete
9. Review manpower requirements and establish a program to provide the proper people to do the job.	In Progress On-going

It's important to understand that many of the organizational and accountability issues covered by these recommendations had to occur before we could take the next steps. We believe that the following program will get to the heart of the problem and provide the overall improvements needed.

The following discussion provides our future actions with respect to results we expect to be achieved and an Action Plan that we believe will achieve these results.



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The following are the results that we wish to achieve:

- Immediate awareness of quality responsibilities down to the worker level.
- Improved understanding of responsibility and awareness of Quality Program at all levels.
- User responsive Quality Program.
- Improved Quality Control Surveillance Effectiveness.
- Quality Worker Performance.

Our Action Plan to immediately increase the awareness of Quality responsibilities is as follows:

- Initiate by May 1, 1986 a Communications Program that is designed to raise the level of awareness of the Quality Program.
- Additionally, we plan to continue the "Back-to-Basics" Training that was initiated last fall. Management and supervision input, as appropriate, will be well sought in developing the curriculum and schedule. At Ginna, approximately a class a month will be presented through the year with time off for the summer months.

The following is our Action Plan designed to improve Quality Control Surveillance Effectiveness:

1. -- We will perform an Assessment of Quality Control which will consider:
 - o Surveillance Effectiveness
 - o Conduct of Surveillance
 - o Personnel Performance

This will be accomplished by June 1, 1986.

2. -- From this assessment we will develop plans to address concerns. This will be accomplished by July 1, 1986.
3. -- The next step will be to implement plans developed and should include clear definitions of accountability and any appropriate training that is deemed appropriate.

No committal dates are offered at this time pending the results of our assessment.

4. -- We have determined that a Performance Feedback System needs to be developed.

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Several approaches are being considered but, of necessity, the design of the system can't be finalized until after the assessment phase. It is intended that this system could be in place by the fall of 1986.

The following is our Action Plan to continue the Assessment Phase commenced by the QA/QC Task Force:

1. Station Management will perform an assessment of the Quality Program similar to efforts of the QA/QC Task Force, with emphasis on the Station level viewpoint. This will be accomplished by June 1, 1986.
2. Based on the above review we will develop a plan to address concerns of assessment. This will be accomplished by July 1, 1986.
3. Implement plans as developed above. Target dates will have to be identified.
4. During the assessment we will identify and implement any actions that are deemed necessary to implement immediately.

Following the assessment phase, our action plan will then shift to implementation phase which will include:

1. An improvement of accountability and definitions of responsibility with appropriate goals and objectives set with management input. This will be accomplished by August 1, 1986.
2. An improvement in the training program based on:
 - Our Accreditation Program
 - Interim Training as identified
 - Augmentation of the Accreditation program depending on our assessment.

This will be accomplished in accordance with the Accreditation Schedule that currently is committed to be completed by the end of 1986.

The aspect of Quality responsibilities will be included in the curriculum.

Our Action Plan then will enter the "on-going" phase which includes the following aspects:

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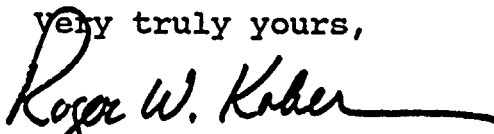
1. An improved Performance Monitoring/Feedback system at various levels i.e.
 - Corporate level system
 - Department level system
 - Individual performance.
2. Feedback system to management to provide an early alert to problems.

This is planned to be in place by the end of 1986.

There are some open ended commitments in this response due to the fact that we are still assessing the situation.

We would like to meet with you in mid-summer to update you on our progress.

Very truly yours,


Roger W. Kober

