U. S. Nuclear Regulatory Commission Region I

Docket/Report No. License No.

50-244/84-14

DPR-18

Licensee:

Rochester Gas & Electric Company (RG&E)

89 East Avenue

Rochester, New York 14649

Facility:

R.E. Ginna Nuclear Power Plant

Ontario, New York

Inspection Period:

January 3 - May 11, 1984

Inspectors:

Zimmerman, Senior Resident

Inspector, R.E. Ginna

Examiners:

inger (Examiner) RPS No. 1D

F. Johnson Lead Reactor Engineer (Examiner) RPS No. 1D

R.M. Keller, Chief Section No. 1D, Operator Licensing

Approved by:

Chief Project

Kister, Chief Project

Branch No. 2

Purpose

To conduct an NRC evaluation of the licensee's licensed operator requalification program. The method of auditing, evaluating criteria and action guidelines used during the evaluation are contained in NUREG-1021, Examiner Standard (ES)-601, Administration of NRC Requalification Program Evaluation, Rev. O dated September 1, 1983. This evaluation to date has involved 280 hours by the Region I staff.

2. Program Description

Section 50.33 of Title 10, Code of Federal Regulations (10 CFR) requires that each licensed individual demonstrate his continued competence every two years in order for a Reactor Operator (RO) or Senior Reactor Operator (SRO) license to be renewed, pursuant to 10 CFR Part 55. Competence may be demonstrated, in lieu of NRC reexamination, by satisfactory completion of a Requalification Program which has been reviewed and accepted by the NRC, License Qualification Branch, DHFS, NRR. Appendix A of 10 CFR 55 specifies the requalification program minimum acceptable requirements for content and provides evaluation criteria which must be used by the facility in order to judge licensed operator continued competency.

Historically, the NRC has relied on an audit of the licensee's requalification program to provide assurance that it was being effectively implemented. Most recently, the NRC operator requalification program evaluation criteria was established in a letter from Mr. H. Denton to Regional Administrators dated September 30, 1983 in which the final format of ES-601 was transmitted. The guidance and policy contained in NUREG-1021 and the September 30th Denton letter constitute the basis of the Region I evaluation program.

3. Background

Prior to the conduct of the evaluation at R.E. Ginna, the Region I Operator Licensing Section had completed reviews of site programs at Indian Point Units 2 and 3, Haddam Neck, Susquehanna Station, Shoreham and Salem using NUREG-1021, ES-601 guidance. At each of these sites operators were chosen and the licensee's requalification program effectiveness was judged by performing oral interviews with the licensed operators to determine their knowledge level. Based on the results of the interviews and walk throughs, the examiners determined that each site requalification program was being effectively implemented.

4. Requalification Program Evaluation at R.E. Ginna Nuclear Power Plant

4.1 Persons Contacted

Principle Licensee Employees - RG&E

R.W. Kober, Vice President Electric and Steam Production G.F. Larizza, Operations Manager

J.E. Maier, Senior Vice President Operations and Engineering

R.A. Marchionda, Assistant Training Coordinator

R.C. Mecredy, Nuclear Engineering Manager

R.W. Morrill, Training Manager

B.A. Snow, Superintendent Muclear Production and Plant Superintendent

S.M. Spector, Assistant Plant Superintendent

Westinghouse

K. Larsen, Training Contractor

Professional Reactor Operator Society (PROS)

D.E. LaBarge, President Region I

4.2 Initial Site Review

During the week of January 3-6, 1984, a Region I Lead Examiner conducted an initial review of the licensed operator requalification program at R.E. Ginna per NUREG-1021, ES-601 guidelines by interviewing six licensed operators who were participating in the current requalification cycle. The individuals were selected based on a review of training records and with the goal of providing a representative sample of plant license holders.

The examiner selected:

3 Staff SRO license holders

2 on shift operator SRC license holders

• 1 on shift operator RO license holder

Based on the results of the examiner conducted oral interviews, the examiner informed Region I management on January 6, 1984 that four of the six licensed individuals (2-staff SRO, 2-on shift SRO) did not exhibit a satisfactory knowledge level within the scope of the oral interview.

A conference call was conducted on January 6, 1984 between Region I management and the Senior Vice President and RG&E staff to verbally present the results of the requalification program review to the licensee. The licensee noted that the on shift operators had completed the annual requalification examination on January 6th and committed that they would not assume license duties until the examination had been graded and the NRC notified of the results. Additionally, the licensee would conduct oral interviews with the individuals. On January 9, 1984, the licensee informed Region I that the two on shift SRO license holders had passed the requalification program examination with overall grades of 87.8 and 89.6 percent. The individuals had also passed an oral interview conducted by the training department with a good overall knowledge level exhibited. Based on these results, Region I released the hold on performance of licensed duties for the on shift operators

and notified the licensee that further program reviews would be conducted by Region I to establish the effectiveness of the site requalification program.

4.3 Followup Evaluation of Requalification Program

During the week of January 24-27, 1984, a team of four Region I personnel (2-lead examiners, 1-operator licensing section chief, and 1-project section chief) conducted an on site followup review of the licensed operator requalification program. A group of licensed individuals were selected and given expanded oral interviews during January 25-26, 1984.

The team selected:

• 3 staff SRO license holders

· 2 on shift operator SRO license holders

· 1 on shift operator RO license holder

· 1 on shift auxiliary operator RO license holder

The interviews were conducted by members of a three man examiner team with oversight provided by the project section chief. Based on the results of the oral interviews, the team determined that:

· 6 formal interviews were satisfactory

 1 formal interview with an SRO license holder indicated an unsatisfactory knowledge level within the scope of the oral interview

Additionally, reviews of the licensee's requalification program implementation indicated a weakness in the annual requalification exam content, a lack of commitment to requalification training by the staff license holders, and an apparent over emphasis on the annual examination as the sole measure of requalification program effectiveness.

Based on these issues, a meeting was conducted on site with licensee representatives on January 26th to present the preliminary evaluation findings. In accordance with the approved Requalification Program the licensee committed to assess the individuals weaknesses and provide upgraded training for the SRO license holder who had failed the NRC oral (the licensee subsequently informed Region I that for medical reasons the individual would not maintain his SRO license effective February 23, 1984). At the exit meeting, the licensee was notified that the NPC would continue with the requalification program evaluation on January 27th by administering a full, previously prepared NRC written exam to the seven individuals who participated in the oral interviews. The licensee indicated they would comply with the additional evaluation request but had the following comments:

 Would the licensee be able to review and comment on the NRC prepared examination? Some individuals had not completed the entire requalification cycle and therefore would not normally be subjected to the annual regualification examination at that time.

 The methods being imposed to evaluate the program did not minimize the impact on the individual license holder.

 The NRC had conducted a program review of licensed operator training in December 1983 and found no violations of license requirements.

 The licensee questioned the validity of the NRC prepared requalification examination as a tool to measure program performance.

 The licensee questioned how performance on the exam would effect the individual's license.

In reply, the licensee was informed that the exam would be implemented using the initial or "new license" criteria for examination control and review. It was stressed to the licensee that the additional evaluation was required as a tool to measure the program's effectiveness since the two previous reviews indicated isolated instances of weakness. and that the licensee's program should be structured to achieve a constant upgrading of licensed operator knowledge, not an accumulation of knowledge timed for an annual requalification examination. The additional stress of taking a full NRC exam unannounced and its potential impact on the exam results was acknowledged. The licensee was informed that the results of the exam would be handled within the scope of the approved Requalification Program, in that individuals who were determined to need upgrading would return to the requalification program and individual licenses would not be effected. The NRC acknowledged the previous on site inspection 50-244/83-26 conducted during December 12-16, 1983 and noted that this was a review of the licensee's program with regards to the requirements set forth in the accepted Operator Requalification Program and not a determination of actual program implementation effectiveness.

On January 27th the NRC conducted the full written examination to the licensed individuals using the implementation criteria of a new license examination. Prior to administering the exam, the team received two letters of official protest from licensed individuals (these letters were forwarded to the Regional Administrator, Region I and replies were subsequently provided to the individuals). Following initiation of the exam, two members of the licensee's training department reviewed the examination in conjunction with a lead examiner and the project section chief. The licensee provided comments which were agreed upon by the examiner and incorporated into the exam to increase its accurate and applicability to the R.E. Ginna site. The overall conclusion by the training department manager and coordinator following their review was that the exam was typical of areas taught and representative of the planned requalification examination for the current training cycle.

Following completion of the examination, an exit meeting was held with the training manager and the Plant Superintendent. The licensee

5 was notified that results of the exams would be forward to the licensee when available and an overall assessment of the requalification program would be provided. The training manager noted that the length of the exam seemed to have impacted on the ability of most individuals to complete the questions within the imposed time period. On February 1st, the Senior Vice President, RG&E was informed by Region I management that the requalification training program effectiveness had been determined to be unsatisfactory based on the results of the initial and followup evaluations of the program. Specifically: 4 of 6 licensed operators exhibited unsatisfactory oral interviews during reviews conducted on January 5-6, 1984 1 of 7 licensed operators exhibited an unsatisfactory expanded oral interview during reviews conducted on January 25-26, 1984 6 of 7 licensed operators exhibited weaknesses in response to the written examination administered on January 27, 1984 4.4 Corrective Actions 4.4.1 Immediate Corrective Actions The licensee responded on February 1, 1984 by removing one on shift operator from licensed duties based on results of the written examination and implementing upgrade training for the individual. On February 3rd a meeting was held in Region I between RG&E Corporate and Site management, including an operations staff representative and Region I staff to discuss the evaluation of the licensee's program. In summary, based on the results of the on site audits the licensee was informed tha Region I perceived the following deficiencies existed in the implementation of the R.E. Ginna licensed operator requalification training program: Supervisory licensed personnel including plant management and staff were not directly responsible for training of personnel and did not actively participate in all phases of the program. Plant staff licenses were not maintained with proficiency. The licensee training department did not appear to implement a strong, dedicated, effective program with adequate management involvement to ensure the department mandate was achieved. Recent requalification examination questions appeared to be lacking in depth and scope to adequately evaluate the technical competence of licensed personnel.

the contractor and utilized by RG&E as the annual requalification examination for the candidates involved.

 An upgrade of the requalification program was under review consisting of an Intermediate Term Program (ITP) and subsequent long-term actions based on the results of the intermediate actions. The ITP would be presented to the NRC following evaluation of the contractor administered written examination.

Region I acknowledged the licensee's actions and confirmed that the NRC would not validate the Westinghouse examination but reserved the option to audit the exam adequacy and grading. Region I requested that the licensee notify the staff of their intention to return the individuals to licensed duties following evaluation of the exam results.

On February 14, 1984 the Westinghouse contractor met with the Region I staff and conducted a review of the proposed SRO and RO licensed operator requalification examinations to be administered on site February 17th. The staff concluded that the exams were adequate and no changes were mandated. Several suggestions and clarifications were discussed with the contractor. It was agreed that any subsequent changes would be transmitted to Region I.

On February 17th the licensee contacted Region I and proposed an implementation schedule for the ITP as follows:

- · February 17, develop ITP candidate selection process
- · February 23, implement candidate selection process
- February 27, present ITP plan and schudule to RG&E management
- March 1, present ITP to NRC Region I
- March 5, implement ITP to Group 1 candidates

On February 21st the licensee notified Region I of the results of the contractor administered annual requalification written exam. Of the seven individuals who participated in the NRC written examination of January 27th, five were subject to the contractor examination (of the two remaining, one clearly passed the NRC examination and one retired his license following the NRC reviews). The results of the contractor administered examination were as follows:

- 2 staff SRO license holders took the exam 1 failed the overall grade requirement
- 2 on shift SRO license holders took the exam 1 failed the overall grade requirement
- 1 on shift RO licensed auxiliary operator took the exam - no failure

Based on these results the licensee returned the three individuals who passed the exam to licensed duties and committed to include the remaining two in the Intermediate Term Program upgrade prior to the their return to licensed duties.

On March 1st the licensee met with the Region I staff to discuss the implementation of the ITP to upgrade the requalification program. The discussion topics included:

The selection process for participants in the ITP.

· The duration and scope of the ITP.

The ITP implementation program.

 Proposal for a future meeting to discuss the lessons learned from the Region I evaluation of the Licensed Operator Requalification Program at R.E. Ginna.

Region I acknowledged the licensee's intentions to implement the ITP and noted that the requalification program remained under the oversight of the NRC and the processing of license renewals had been suspended pending: implementation of the ITP; subsequent review by the NRC, and successful program completion by the candidates.

On March 15, 1984 the licensee met with Region I staff to discuss the overall impact of the Licensed Operator Requalification Program review at R.E. Ginna. The licensee presented suggestions for improving the process with the goal of:

 Minimizing the impact of the review on the individual licensed operators and informing operators of the duties and rights of their license (follow item 84-14-01).

Clearly defining NUREG-1021 criteria for an acceptable program.

 Defining "operationally oriented" as used in NUREG-1021 (follow item 84-14-02).

 Providing criteria and review methods to the industry prior to implementation (follow item 84-14-03).

Standardizing review methods to eliminate subjective conclusions.

The Region noted the licensee's comments and confirmed that the NRC administered written examinations of January 27th were a tool used to measure the programs effectiveness. The Region I staff stressed that the exams were being returned to the individuals and were not a part of the license holders NRC docket file.

4.4.2.1 Intermediate Term Program Implementation

On March 5th the licensee implemented Group 1 of the ITP consisting of eight candidates participating in a five week program administered jointly by the licensee's training department and a contractor training consultant group (Westinghouse). Upon program completion,

the annual requalification written examination was provided by, administered and graded by the contractor. Additionally, oral exams were administered and graded by Westinghouse.

On April 9th the licensee notified Region I that Group 1 had completed the ITP with the following results:

Seven of the eight candidates successfully completed the program.

 One candidate, a staff SRO, will not be assigned licensed duties pending an evaluation and successful completion of the requalification program.

 Group 2 of the ITP consisting of seven individuals commenced on April 9th and will conclude May 11, 1984.

The NRC acknowledged that the seven individuals had completed the program based on the contractor provided results and had been returned to licensed duties.

By letter, R.E. Ginna Training Manager to Region I Operator Licensing Section Chief, dated April 13, 1984, the licensee requested license renewals for four of the individuals who had completed the Group 1 ITP.

On May 7th Region I notified the licensee that an inspection would be conducted on site from May 9-11, 1984 to review the implementation of the ITP and provide the basis for a review of the adequacy of the licensee's intermediate corrective actions.

4.4.3 Region I Evaluation of the Intermediate Term Program (ITP)

4.4.3.1 Background

NUREG-1021, Operator Licensing Examiner Standards, ES-601 Section G, Renewals, specifies that following an unsatisfactory evaluation of a licensed operator requalification program, license renewals will be issued only for those operators who pass an examination administered in whole or in part by the NRC until identified corrective actions have been implemented. The Standard further states that the regional administrator or his designee may agree to accept facility certification and issue renewals based on this certification when they have determined that program quality has been upgraded to satisfactory as indicated by additional audits, inspections, or other reviews of the licensee's performance. This policy is implemented by Region I DPRP Policy Statement No. 8.22, Requalification Evaluation Program, Section C.6.5.

4.4.3.2 During May 9-11, the region conducted an onsite review of the Intermediate Term Program (ITP) content and implementation to determine whether the licensee's interim corrective actions provided a basis for the resumption of issuing operator license renewals.

The inspectors reviewed the ITP content and results for:

 Group 1 consisting of eight candidates participating in a five week full time program during the period of March 5 - April 6, 1984.

 Group 2 consisting of seven candidates participating in a five week full time program during the period of April 9 - March 11, 1984.

The following areas were reviewed by the inspectors:

- Training material, lesson plans, procedures, training aids and course summaries for Group 1.
- Separate subject matter quizzes given at the end of each course topic segment for Group 1.

· Attendance for Group 1.

- A spot-check of grading on quizzes for each course topic segment for Group 1.
- Final requalification examinations given at the conclusion of each five week program were reviewed for Group 1.
- A spot-check of grading for four RO and SRO examinations (2-RO, 2-SRO) for Group 1.
- Noted the overall Group 1 grades for the final requalification examinations.
- A spot-check of the oral examination sheet for both RO and SRO (2-RO, 4-SRO) candidates in Group 1.
- Final requalification examinations were reviewed for Group 2.
- Observed 2-SRO oral examinations conducted by contract trainers (Westinghouse-Zion) for Group 2 candidates.

The evaluation results are noted below:

• The training material used for Group 1 was acceptable. Subjects covered included: Reactor Theory; Heat Transfer and Thermodynamics; Radiological Control and Safety; Emergency Safety Features; Emergency Procedures; Electrical Systems, Instrumentation and Controls; System Procedures; Reactor Protection System; Main, Auxiliary and Emergency Feedwater Systems; and Accident Analysis.

• The training course segment quizzes given for Group 1 were acceptable. Of a total of 56 quizzes given, five were graded below the 80% level. All quizzes were reviewed with the candidates following grading.

 Course attendance for Group 1 was acceptable. One individual did not attend two classes during the course, however the course topics were made-up by the candidate.

 The quiz grading for Group 1 was acceptable. The licensee assigned grades were within 10% of the inspectors regrade. The final requalification examination was determined acceptable. The exam questions adequately covered the training program material presented to Group 1.

 Grading of the Group 1 final requalification examination was acceptable. The licensee assigned grades were

within 10% of the inspectors' regrade.

• The final results of the Group 1 requalification exam were acceptable. All candidates except one received overall grades above 80% with no sections below 70%. The failed candidate had been temporarily reassigned to non-licensed duties pending an evaluation of his training requirements.

 The Group 1 oral examination records were acceptable, the questions covered the required topic areas and

overall were judged to be extensive.

 The final requalification examination for Group 2 was determined acceptable. The exam questions adequately covered the training program material presented and the point values assigned to the questions were appropriate.

 The Group 2 oral examinations monitored by the inspector were acceptable. Questions covered the required topic areas, including licensee event reports. The evaluations overall were judged to be extensive.

4.4.3.3 Conclusion

Based on the reviews conducted onsite during May 9-11, 1984 the inspectors determined that the Intermediate Term Program content provided satisfactory interim corrective action to upgrade the Licensed Operator Requalification Program. Additionally, reviews of training records for Groups 1 and 2 of ITP indicated that the program was being effectively implemented.

On May 11th an exit meeting was conducted with RG&E management to present the preliminary findings of the ITP review. The licensee was informed that the interim corrective actions appeared adequate and the inspectors would conduct a briefing with Region I management on May 14th to discuss resumption of licensed operator renewals.

On May 14th Mr. R. Kober, Vice President Electric and Steam Production, RG&E, was informed by Mr. S. Collins that per NUREG 1021, Standard 601 Section G, Region I would accept certification by RG&E that a candidate had successfully completed the Intermediate Term Program as the basis for operator license renewals.

Mr. Kober confirmed that all operators who are required to be requalified in 1984 will complete the ITP and other operators may participate in the program based on the licensee's evaluation of each individual.

12 To date Region I has received a request for renewal dated April 13th for four operators who completed the Group 1 ITP. Additionally. on May 14th Region I received a request for renewal for six operators who completed the Group 2 ITP. The licensee intends to conduct a final Group 3 ITP for the remaining operators whose license renewal is due in 1984 commencing in September, 1984. Region I will review, the implementation of the ITP for Group 3 (follow item 84-14-04). 4.4.4 Long-Term Corrective Actions By phone call on May 17th the licensee notified Region I that the long-term corrective action proposal for the licensed operator requalification program had been formulated. The licensee intends to provide a written description to Region I with a goal of implementing the program on July 1, 1984. Acceptance of license renewal based on licensee certification of completion of a requalification program incorporating the long-term corrective actions is pending the following: Long-term corrective action description. Implementation schedules description. Review of long-term program implementation and results (follow item 84-14-05). Allegation Followup (84-A-0064) On April 25th while conducting an on site inspection, a Region I representative received an allegation from an individual who forwarded concerns regarding the Licensed Operator Requalification Program at R.E. Ginna. During the site reviews conducted from May 9-11th the inspectors reviewed the areas of concern which were identified as follows: A question confiined in an ITP course segment quiz was inappropriately deducted from the quiz final results. In general, the training staff is not a full-time dedicated organization due to assigned collateral duties. Reviews of training records and interviews with licensee personnel resulted in the following evaluation: The training department acknowledged that a question had been removed from the candidates quizzes following grading and that the question had been removed from the answer key. The training manager noted that the question was removed not in an attempt to improve grades but because it was determined during quiz review by the instructor and the manager that the question was not appropriate. The licensee noted that the subject matter was later covered in followup training. The inspectors confirmed the findings by an interview with the course instructor and agreed with the

licensee's position on the suitability of the question.

• The inspector noted to licensee management that all training records must be complete and that removal of a record may not be appropriate, wherein deletion with remarks to note the basis for the change provides for a suitable record. The licensee's followup actions will be reviewed in conjunction with the review of Group 3 of the ITP (followup item 84-14-06).

The licensee acknowledged the inspectors comments.

• The issue of training department staff work load was reviewed by requesting a list of duties and establishing a work load table for each instructor. Based on the information provided and interviews with the training staff the inspector concluded that in some cases adequate time was not provided to course instructors to prepare for training assignments. This situation resulted primarily from a combination of the increased training staff workload caused by the operator requalification program upgrades and collateral duties assigned to instructors.

The inspectors noted to licensee management that RG&E had an outstanding commitment to review the training department organization and staffing as a part of its proposed long-term corrective action implementation. Additionally, it was noted that long-term corrective actions may result in additional training related duties being assigned to the instructors and collateral duties should be evaluated for their impact on overall training program effectiveness. Region I will review this area in conjunction with the licensee's operator requalification program long-term corrective action proposals (follow item 84-13-07).

The licensee acknowledged the inspectors comments.

6. Additional Region I Actions

6.1 Professional Reactor Operator Society (PROS)

As a result of the program review conducted at R.E. Ginna, Region I perceived there was a need to communicate to the industry licensed operators the purpose and background of the requalification program evaluations.

On January 20, 1984 Region I contacted Mr. D.E. LaBarge, Region I President of the Professional Reactor Operator Society. An invitation was extended to Mr. LaBarge to participate in an open meeting with the Region I staff to discuss the ongoing evaluation at the R.E. Ginna Station and the requalification program in general.

On February 17th Mr. LaBarge met with Region I Messrs. E.G. Greenman, Chief, Project Branch No. 2, S.J. Collins, Chief, Reactor Projects Section 2C, D. Johnson, Senior License Examiner and Mr. R.W. Starostecki, Director, Division of Projects and Resident Programs. As a result of the discussions Mr. LaBarge published an article in the PROS News Letter, the "Communicator", which was issued to the organization membership.

ATTACHMENTS

- 1. letter J.T. St. Martin to T. Murley, 1/27/84 and reply dated 4/2/84
- 2. letter F.L. Maciuska to T. Murley, 1/26/84 and reply dated 3/16/84
- 3. meeting notice No. 84-13 for 2/3/84 meeting
- 4. meeting notes S.J. Collins to R.W. Starostecki, 2/14/84
- 5. meeting notice No. 84-21 for 3/1/84 meeting
- 6. Meeting notice No. 84-23 for 3/15/84 meeting
- 7. letter W.J. Dircks to Congressman F. Horton, 3/28/84