



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

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AREA CODE 716 546-2700

July 11, 1989

Mr. William T. Russell  
Regional Administrator  
U. S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

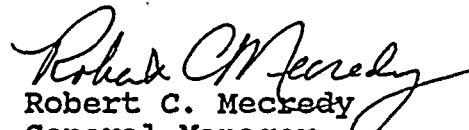
Subject: Operator Regualification Examinations  
R. E. Ginna Nuclear Power Plant  
Docket No. 50-244

Dear Mr. Russell:

During the week of June 19, NRC administered license requalification examinations to three shifts of Ginna license holders, two operating shifts and one shift comprised of staff individuals. Following independent evaluation of the examinations by RG&E and NRC, several license holders were identified as having failed at least one portion of the examination.

As a result, RG&E met with members of the NRC Region I Staff to discuss the continued adequacy of the RG&E license training program, the replacement operating shift for the crew that experienced a team failure, and the status of implementation of an upgraded set of Emergency Operating Procedures. The attachment to this letter documents our presentation at that meeting as well as additional justification which has been developed subsequently.

Very truly yours,

  
Robert C. Mecredy  
General Manager  
Nuclear Production

Att.

xc: Senior Resident NRC Inspector



## ATTACHMENT I

LICENSE REQUALIFICATION EXAMINATION

During the week of June 19, the NRC administered license requalification examinations to three shifts of licensed RG&E personnel, two operating shifts and one shift composed of licensed staff personnel. The examinations consisted of simulator exams, Job Performance Measures (JPMs), and a written examination. The simulator exam was assessed for team and individual performance. During the examination, licensed personnel were graded first by the RG&E Training Department and then by the NRC Staff, thus providing the NRC with an assessment of the RG&E license requalification training program.

1. RG&E TEST RESULTS:

Following review of the examination results, NRC Staff requested that RG&E review the adequacy of the training program, adequacy of the remaining shifts, adequacy of the replacement crew which replaced the four individuals who failed as a team, and the status of implementation of upgraded Emergency Operating Procedures, which will implement Rev. 1A of the Westinghouse Owners Group Emergency Response Guidelines.

Test grading by the NRC and by RG&E were very similar in all examination areas. The licensed individuals who failed at least one portion of the examination are as follows:

	SCENARIO 89-7 STEAM BREAK			SCENARIO 89-9 ATWS			JPM	WRITTEN TEST
	POS	I	T	POS	I	T		
INDIVIDUAL A				CRF	X	X	X	
INDIVIDUAL B	CRF	X		SS		X		X
INDIVIDUAL C				CO	X	X		
INDIVIDUAL D				HCO	X	X		
INDIVIDUAL E	CRO	X					X	
INDIVIDUAL F								X

POS = POSITION  
I = INDIVIDUAL  
T = TEAM  
X = FAILURE



2. IMMEDIATE ACTIONS:

Immediately after the USNRC Exit on June 23, 1989, the Operations and Training staffs met with the affected licensed individuals to review the test results. A letter was initiated and posted in the Control Room for immediate removal of the licensed operators from shift. Additionally, a License Review Board, consisting of Training, Operations and Plant Management, convened to concur with this course of action. At no time were these individuals allowed back on-shift.

Also, a letter and acknowledgement form was posted in the Control Room to reinforce consistency and timely transition in Emergency Operating Procedure, E-1. One transition resulted in operator difficulty during the requalification exam. It should be noted that the EOPs have mechanisms included to correct for the inappropriate transitions.



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3. OPERATIONAL READINESS:

a. Assessment of our other operating staff crews:

The integrity of the operating crews is based upon a system of checks and balances that is formally implemented through the License Review Board. This provides for an unbiased process based on all available data. Typically this board reviews the recommendations provided by training instructors and supervision and prescribes the appropriate actions necessary to remedy any deficiencies in individual or team knowledge or performance. This procedure was utilized to process actions necessary as a result of the RG&E administered 1989 Annual Exam results and is the same process that was employed to determine the appropriateness of recommending the individuals that would be permitted to qualify for taking the 1989 NRC initial license and license upgrade program. For the latter, this process resulted in the decision that two individuals be withheld from this examination until such time as their credentials meet the high standards of our program. Thus, our program is designed to continually monitor individual and team performance and to take timely corrective action, as necessary.

Independent simulator crew performance assessments are also conducted by INPO. During the May 1989 simulator evaluation, the program and operations were evaluated as satisfactory by observation of two crews, different from the two involved in the 1989 USNRC Requalification Exam. In addition, INPO observed Simulator training sessions involving the same two crews for a total of 16 hour assessment time. An improvement was also noted in the crew communications from the 1988 evaluation.

In addition, on-going operations and plant management review of our operating staff performance is conducted regularly. This is implemented by backshift tours conducted on a weekly basis by the Duty Engineer, Shift Supervisor observations, and Operations Manager critiques of routine or off-normal operations.

Based upon the aforementioned and specific reviews of the other licensed individual performance, it can be concluded that both our program and our operating staff can safely and effectively operate Ginna.





b. Shift Schedule:

In order to provide an effective and stable crew to replace those removed from shift for remediation, the decision was made to complete the staffing of the existing shift team. This was due to the fact that five of the nine individuals on the shift continue to be qualified for their position.

The decision to supplement the existing shift was also based on the following factors:

- o 6 Shift rotation provides the circadian techniques, sufficient time off-shift, and accomplishes all necessary training.
- o 5 Shift rotation provides less flexibility.
- o Some extra licensed individuals are available due to postponement of the new license class for approximately 6 weeks.
- o Once achieving a license, each operator is additionally qualified by RG&E individually for the specific job (Control Operator, Head Control Operator, etc.), by a process involving Shift Supervision and Operations management. Thus, all Shift Supervision personnel are familiar with each licensed person.
- o In order to provide such scheduling flexibility for interchange of operators, all licensed shift individuals at Ginna have progressed from the auxiliary operators positions up to their licensed position. At one point or another, all operators have familiarity with each other. Currently, the newest licensed Control Operator has been on shift for a minimum of 4 1/2 years.

One of the five individuals remaining on the shift is a recently licensed SRO who has demonstrated strengths in the Control Room Foreman position for a period of several months. We transferred a recently licensed RO to this shift. This individual trained and licensed on the simulator with the SRO on the shift. We have transferred a Shift Supervisor who is currently filling the position of Operations Supervisor Assistant on days, to the Shift Supervisor position. This Shift Supervisor has previously worked with the other two individuals. Filling three out of four licensed positions with these individuals provides a strong nucleus for the crew and will stabilize the shift. The remaining RO position will be staffed on an overtime basis. The resulting shift is a well qualified, strong shift.

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3,b (continued)

In addition, in order to provide an added degree of confidence in assuring the high level of capability of the reconstituted shift, the following augmented management oversight has been provided:

The Duty Engineer, a senior staff individual, is conducting his weekly backshift assessment to coincide with this operating shift. In addition to this assessment, the Shift Technical Advisor, who is a senior licensed trained individual, is providing random shift assessment coverage during his duty day. This will be done on a daily basis for the reconstituted shift and as a minimum provide at least one hour of shift coverage. The Operations Manager is providing an independent assessment of crew competency during his daily routine shift critique on normal work days. These assessments will be documented on our existing Operations and Management Crew Performance Review Form. With this added degree of coverage, the level of performance will be assessed and evaluated. This coverage will continue until this crews' performance has been evaluated and found satisfactory during their scheduled simulator training.

In addition, this shift received 4 hours of simulator team training with emphasis on crew communications. This was completed by July 8, 1989.

c. EOP Upgrade Status:

The existing Emergency Operating Procedures (EOPs) are based on the Westinghouse Owner's Group (WOG), Rev. 1 Guidelines, which was the most appropriate guidance available when the new format was introduced. Since the existing EOPs became effective in December, 1985, there have been more than 50 changes submitted and implemented to provide the operator with up-to-date, usable procedures.

There are many continuing feedback processes which are used to ensure the operators ability to mitigate events using the EOPs, including the following:

- o Regualification Simulator Training and Exams
- o NRC License Exams
- o INPO Simulator Evaluations
- o EOP Validation Process

The operating staff has been highly successful in using the existing procedures during these processes.



3c. (continued)

There are several methods available in the EOPs to aid the operator to optimal recovery:

- o EOP Step Transition
- o Foldout Page
- o Rediagnosis
- o Critical Safety Function Status Trees

Reliance on all these methods is necessary to ensure appropriate recovery techniques are employed. Concerning one of the transitions which resulted in operator difficulty during the exam, the E-1 transition step, a WOG maintenance item was submitted by RG&E in 1985, to address clarification of this item. This was classified as a technical improvement only (lower level category) by the WOG Operations Subcommittee. Subsequent discussions with industry experts indicated that although transition to ES-1.1, SI Termination following Steam Generator Dryout is most desirable, transition to ES-1.2, Post LOCA Cooldown and Depressurization will accomplish the same results with no adverse consequences, although with some delay.

Regarding the RG&E program to assess and upgrade the existing EOPs to the Westinghouse Owner's Group, Rev. 1A Guidelines, the current schedule was for implementation by July 30, 1989. This was necessary due to the extensive effort required to apply the revised guidelines to the Ginna specific design, justify/document all deviations, and perform the verification/validation processes required by the Procedure Generation Package and Ginna Administrative Procedures.

As for concerns involving implementation of revised EOPs during mid-cycle operations versus during outage situations, an assessment was made prior to the decision on the implementing date. The following factors were used in reaching our decision:

- o The EOP upgrade has resulted in no changes to major action categories in any EOP nor has there been any major change in mitigation strategy.
- o The EOP upgrade has been an attempt to provide more detailed and standardized guidance to improve operator proficiency.
- o Licensed Operators have been heavily involved in the EOP Upgrade process involved in verification, validation on simulator, training, and Emergency Procedure Subcommittee review.



3c. (continued)

- o The EOP process itself contained a detailed review to determine if the Rev. 1A guidelines required any immediate changes and as a result, several changes were incorporated prior to the startup from the 1989 Refueling Outage.
- o Licensed operator feedback has been very positive regarding acceptance of the upgraded EOPs.

Nevertheless, following the meeting, we will expedite implementation of the upgraded EOPs. This will be accomplished in accordance with Ginna procedures and policies. We expect full implementation by July 21, 1989.





4. CORRECTIVE ACTIONS:

a. Communications:

In May 1988, INPO identified that simulator training did not maintain and reinforce desired high standards for communications skills as evidenced during the simulator evaluation of two shift crews.

As part of our efforts to improve communications skills, we employed a contractor to conduct a one-day seminar entitled Conduct of Operations. This session contained a segment on Control Room communications. In addition, training objectives involving crew communications were developed.

From 1988 through 1989, simulator training was conducted with increased emphasis on crew communications using these objectives, with an improvement noted.

During May 1989, although INPO had identified an improvement in simulator crew communications, our Training section identified the need for a more consistent approach to applying communications techniques from crew-to-crew. As a result, members of the Nuclear Training Management Committee, consisting of Training, Operations, Plant and Upper Management participation, directed the Operations Manager to develop an Operations Communications Standard.

A draft Standard was developed during June, 1989 and is currently being implemented during simulator and on-shift operations. As we finalize this standard, management and training will continue to emphasize and assess crew communications for continuing improvement.

b. Root Cause Analysis:

The training section conducted a preliminary root cause analysis the week following the examination. Although the results of this analysis are not conclusive, there were several factors that appear to have contributed to the examination results. The following were preliminarily identified as probable contributors:

o Knowledge

Deficiency in training operators in "response not obtained" column for immediate actions.



4b. (continued)

o Stress

Unusually high levels of stress were noted by observers and acknowledged by operators during post-test interviews.

o Examination Format

Long time delays between simulator scenarios and the length of time to administer all ten job performance measures were thought to have an adverse impact.

o Artificial Environment

The STA and the Shift Supervisor were unable to perform during the examination as they would in the plant under similar circumstances. The Training Supervisor-Licensing, is now aware that the NRC permits total shift participation. This will allow a more realistic shift response, and the likelihood of improved test performance.

o Communication

There was agreement among RG&E observers of the dynamic simulator tests that the level of communications among the crew members, in terms of both quantity and quality, was clearly below the normal levels seen at Ginna. The training section has been working to improve operator communications. In 1988, an enhanced simulator audit from INPO pointed out several weaknesses in Control Room communications. Using the INPO Good Practice on communications as the foundation, an aggressive program to improve communications was used this past year. Based on this year's INPO audit, it can be shown that the program was a moderate success.

A draft communications standard has been issued and its basic principles are already being incorporated into the daily operator training at Ginna.

The training section will conduct a more rigorous analysis beginning this week. It is unlikely that any of the above items will be ruled out as contributing factors, but it is anticipated that the more detailed analysis will provide us with a greater insight into the causes that affected performance. This should result in a more effective action plan.



c. Remediation:

In accordance with our accredited program, any comprehensive examination failure results in the immediate removal from license duties. A License Review Board, whose members are from Operations, Training and senior Plant Management, must be convened within two weeks to review all pertinent factors surrounding the event. The Review Board also reviews and approves the remediation plan submitted by the training section.

The License Review Board ensures that the failure is properly reviewed, appropriate remediation plans are put into effect, and that only safe, fully qualified operators are returned to the controls of Ginna Station.

The remediation plans for Individuals A and C are attached since they are representative of the approved programs for simulator and walkthrough failures. The written examination failures are being analyzed to develop appropriate remediation plans. The next step is for instructors and instructional technologists to review the individual questions and responses to determine weak areas. This is underway and should be completed shortly.

Any failure will receive training and successfully pass all portions of the examination he failed. For example, in the case of a walkthrough failure, the person will be retrained on the job performance measures he missed, and will then be required to pass a complete (ten JPMs) walkthrough examination.

It is important to note that even those who passed the walkthrough test but missed any job performance measure will be retrained and tested on the missed tasks.



5. CONCLUSIONS:

RG&E has reviewed the license requalification program, the replacement crew, and the implementation status of upgraded EOPs. The training program, including the license requalification program, is reviewed by RG&E management and supervision and is audited by the RG&E Quality Assurance Department. In addition, INPO recently evaluated two operating crews in simulator training sessions with successful results. Further, RG&E results for the NRC requalification exam are virtually identical to the NRC results. Also, our requalification program is consistent with our initial license training program, in which we have consistently had a very high pass rate. Thus, we continue to have confidence in our license requalification program and therefore other operating crews.

The individuals selected to replace those removed from shift for remediation will form a strong operating shift. They are capable individuals, are familiar with each other, and have received simulator team training. An augmented management oversight program has been implemented in the interim for this crew. Thus, we continue to have confidence in this shift to safely operate Ginna.

RG&E was completing final review and approval, including training, of revised EOPs. The implementation of these EOPs has been advanced to July 21, 1989.





ROCHESTER GAS and ELECTRIC CORPORATION

Inter-Office Correspondence

JUNE 26, 1989

SUBJECT: License Remediation

TO: Individual A

In accordance with the minutes of the License Review Board of 6/27/89, the following requirements must be met or made up prior to restoring you to Active License status:

A. Self Study

1. Immediate Actions  
(complete by 7/10/89)

E-0

NAME / DATE

ECA-0.0

NAME / DATE

FR-S.1

NAME / DATE

AP's

NAME / DATE

2. Procedure usage A-503.1  
(complete by 7/10/89)

NAME

3. Proposed communication standard  
and review with Operations Manager  
(complete by 7/15/89)

OPS MGR

4. View communication tape  
(complete by 7/15/89)

NAME

- B. Attend E Procedure Regual week of July 10  
and satisfactorily complete weekly exam

INST SIG / DATE

- C. Observe operating shift on simulator week  
of July 10 and critique with simulator  
booth instructor

INST SIG / DATE

- D. Observe video of NRC simulator exam and  
critique (complete by 7/15/89)

INST SIG / DATE



E. Complete 20 hours on simulator

4 hrs 7/15/89

\_\_\_\_\_  
INST SIG

4 hrs 7/17/89

\_\_\_\_\_  
INST SIG

4 hrs 7/18/89

\_\_\_\_\_  
INST SIG

8 hrs 7/20/89

\_\_\_\_\_  
INST SIG

F. Satisfactorily complete simulator exam  
7/22/89

\_\_\_\_\_  
INST SIG

G. Self Study

1. System description AFW

\_\_\_\_\_  
NAME / DATE

2. System description Rod Control

\_\_\_\_\_  
NAME / DATE

3. System description NIS

\_\_\_\_\_  
NAME / DATE

4. PT-1

\_\_\_\_\_  
NAME / DATE

5. ER-NIS.3

\_\_\_\_\_  
NAME / DATE

6. SC-3.30.1/3.30.2

\_\_\_\_\_  
NAME / DATE

H. OJT Walkthrough

1. PT-1

\_\_\_\_\_  
INST SIG

2. ER-NIS.3

\_\_\_\_\_  
INST SIG

3. Local Start AFW

\_\_\_\_\_  
INST SIG



I. Complete JPM

1. PT-1

\_\_\_\_\_  
INST SIG

2. ER-NIS.3

\_\_\_\_\_  
INST SIG

3. AFW Start

\_\_\_\_\_  
INST SIG

Upon successful completion of all of the above items, a letter restoring you to Active License status will be sent to Operations.

If there are any questions regarding this program, please feel free to contact me at ext. 577.

Very respectfully,



Frank L. Maciuska  
Supervisor  
License Training

FLM/smc

xc: R. [REDACTED]  
File completed copy in  
T. Schuler



ROCHESTER GAS and ELECTRIC CORPORATION

Inter-Office Correspondence

JUNE 26, 1989

SUBJECT: License Remediation

TO: Individual C

In accordance with the minutes of the License Review Board of 6/27/89, the following requirements must be met or made up prior to restoring you to Active License status:

A. Self Study

1. Immediate Actions  
(complete by 7/10/89)

E-0

NAME / DATE

ECA-0.0

NAME / DATE

FR-S.1

NAME / DATE

AP's

NAME / DATE

2. Procedure usage A-503.1  
(complete by 7/10/89)

NAME

3. Proposed communication standard  
and review with Operations Manager  
(complete by 7/15/89)

OPS MGR

4. View communication tape  
(complete by 7/15/89)

NAME

- B. Attend E Procedure Requal week of July 10  
and satisfactorily complete weekly exam

INST SIG / DATE

- C. Observe operating shift on simulator week  
of July 10 and critique with simulator  
booth instructor

INST SIG / DATE

- D. Observe video of NRC simulator exam and  
critique (complete by 7/15/89)

INST SIG / DATE





Complete 20 hours on simulator

4 hrs 7/15/89

\_\_\_\_\_  
INST SIG

4 hrs 7/17/89

\_\_\_\_\_  
INST SIG

4 hrs 7/18/89

\_\_\_\_\_  
INST SIG

8 hrs 7/20/89

\_\_\_\_\_  
INST SIG

F. Satisfactorily complete simulator exam  
7/22/89

\_\_\_\_\_  
INST SIG

Upon successful completion of all of the above items, a letter restoring you to Active License status will be sent to Operations.

If there are any questions regarding this program, please feel free to contact me at ext. 577.

Very respectfully,

*Frank L. Maciuska*

Frank L. Maciuska  
Supervisor  
License Training

FLM/smc

xc: ~~SECRET~~  
File completed copy in  
T. Schuler

