

U. S. NUCLEAR REGULATORY COMMISSION  
REGION I  
INSPECTION REPORT

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REPORT NO: 93-19  
LICENSE NO: DPR-18  
LICENSEE: Rochester Gas and Electric Corporation  
89 East Avenue  
Rochester, N. Y. 14649-0001  
FACILITY: Ginna Nuclear Generating Station  
DATES: September 20-24, 1993  
INSPECTORS: J. D'Antonio, Operations Engineer  
P. Bissett, Senior Operations Engineer  
G. Bryan, Contractor, COMEX

LEAD INSPECTOR:

J. D'Antonio  
J. D'Antonio, Operations Engineer  
PWR Section, Operations Branch  
Division of Reactor Safety

10-13-93  
Date

REVIEWED BY:

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Glenn W. Meyer, Chief  
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10/25/93  
Date

APPROVED BY:

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Division of Reactor Safety

10/28/93  
Date

**INSPECTION SUMMARY:**

An announced inspection was performed to evaluate the licensed operator requalification program in accordance with Temporary Instruction (TI) 2515/117, and to determine the status of training programs that were placed on probation by INPO for 180 days in 1991.

The inspectors determined that the requalification program was generally good. The examinations were prepared in accordance with the Examiners' Standards, tested at an appropriate level, and were graded fairly. The facility had programs to ensure appropriate topics are incorporated into training. The program was particularly strong in the high degree of operations management involvement in evaluating operators in the simulator, and in operations department representation in meetings for scheduling program content and simulator usage. Another strength was the tracking of and responsiveness to trainee feedback.

Despite these strengths, the examination results were weak. One of two crews and four of seven individuals failed one or more portions of the examination. These results also indicated a weakness in remediation and ongoing evaluation of poorly performing individuals in that two of the individuals who failed this examination had failed one or more prior annual examinations.

For those training programs formerly under INPO probation, the inspectors found no particular strengths or weaknesses, and concluded that corrective actions for these programs had been adequate.

## DETAILS

### 1.0 BACKGROUND AND INTRODUCTION

An NRC Temporary Instruction (TI) 2515/117, "Licensed Operator Requalification Program Evaluation," has been developed because of proposed rulemaking that would delete the requirement for the NRC to examine each licensed operator for purposes of license renewal. This TI evaluates the requalification program through observation of the administration of a facility requalification examination, interviews with facility personnel, and reviews of training procedures, records, and materials. The instruction does not specify quantitative criteria by which a program is to be considered satisfactory or unsatisfactory. Instead, weaknesses are evaluated and followed up as deemed appropriate by the NRC.

### 2.0 REQUALIFICATION PROGRAM AREAS INSPECTED

#### 2.1 Simulator Examination

The inspectors considered the simulator scenarios to be good evaluation tools. The inspectors reviewed the scenarios administered for all 6 weeks of examination. The scenario sets for weeks 1 through 5 either met or exceeded the quantitative criteria of the Examiners Standards. The set for week 6 met the criteria with the exception of the total number of failures after entering emergency operating procedures; one additional such failure was needed to meet the criteria. The facility stated that they would review these scenarios. Another criterion was that each scenario have objectives. The existing objectives appeared to be a "laundry list" requiring proper response to individual scenario events and did not indicate an overall evaluation goal for each scenario. The facility stated that this was because they were developing scenarios based on Westinghouse Owners' Group templates and had not evolved this methodology to the point of having overall objectives. Interviews with facility evaluators indicated that the scenarios run during the week of this inspection did have overall goals in that the events chosen were based on operational events at Palo Verde and Crystal River.

The administration of simulator examinations was observed for one staff crew and one operations crew. Two scenarios were administered to each crew. There were two SRO positions in the control room: the Shift Supervisor and the Control Room Foreman. Crew positions were rotated to ensure that each SRO was evaluated in an SRO position. The facility did not place each SRO in both positions for examination purposes; however, this was an acceptable practice. The examinations began on time, and the individual scenarios ran within a few minutes of the validated time. No difficulties occurred with simulator operation or exam conduct.

The inspectors observed that at the completion of each scenario, the facility evaluators briefly discussed their observations. After each scenario set, a more complete discussion was held. These observations were generally complete and accurate, and evaluated the operators fairly. The evaluations were performed in accordance with the facility's Operator Training Guidelines, which used forms similar to those in the NRC Examiner's Standards. The

results of these evaluations were that the staff crew failed due to a missed critical task; two members of this crew were also failed as individuals based on competencies described on the facility forms. The missed critical task was to ensure reactor coolant pump (RCP) seal cooling was isolated before restoring power following a loss of all AC power. As a result of misreading a step in ECA-0.0, component cooling water pumps were not locked out and, thus, automatically started when power was restored, resulting in a thermal shock to the RCP seals. The critical tasks were appropriate and were based on the Westinghouse Owners' Group templates from which the scenarios are developed.

The inspectors attended two critiques conducted by the facility evaluators with each crew. One critique was held upon completion of the grading of the scenario set. Crew performance was discussed, but pass/fail results were not given. Later in the week, when all exam sections were complete, a second critique was held. The NRC noted a weakness in evaluation in that the inspectors considered poor communications to be a contributing factor to the missed critical task. The crew was extremely quiet, making it impossible for crew members to be aware of any order not specifically directed at them, and repeatbacks or verifications of communication were intermittent. The NRC did not observe this aspect of performance to be discussed until a member of the crew that failed, who did not himself fail as an individual, questioned why he was faulted with the rest of the crew. The facility evaluators were surprised by this NRC comment because communications had been described as a strength noted during initial licensing examinations administered the previous week. The facility also stated they considered the problem to be poor crew interaction, a broader problem than just communication.

## 2.2 Job Performance Measures

Seven job performance measures (JPMs) were used during the examination. The inspectors judged these JPMs to be acceptable. The JPMs were reviewed by the NRC using the TI 2515/117, Appendix A, checklist and all applicable quality criteria were met. None of the JPMs were time critical and none were alternate path JPMs. One of the JPMs had alternate path options, but these options were not used during this examination. In some instances, the facility identified as critical steps certain "verify" tasks that the NRC would not have used as critical steps due to difficulty in evaluation. This was acceptable since it resulted in the facility grading more stringently than the NRC on these tasks.

The inspectors observed the administration of the JPM examinations to all individuals. A minor inconsistency was observed in administration of the in-plant JPMs in that some operators stated that they would go to the control room for procedures and keys, while other operators simply asked the evaluator if he had these items. Overall, the conduct of the JPM examinations was well controlled and ran smoothly.

The results of the JPM examinations were that three individuals failed a control room JPM to perform immediate actions of E-0, "Reactor Trip or Safety Injection," and four individuals failed an in-plant JPM to perform locally a section of a containment isolation procedure.

Two individuals who failed the control room JPM missed "verify" steps and would not have been failed by the NRC. One individual failed two JPMs, and thus this portion of the examination. This individual had also failed as an individual in the simulator examination.

The inspectors discussed this performance deficiency with the facility. The facility stated that the operators are trained on approximately 30 JPMs per year out of the 130 JPMs in their bank and that this bank is available in the control room for self study. There is no requirement that such self-study be performed. A possible reason for the difficulty with the in-plant JPM is that the stated task was to operate all applicable valves in a specific area of the plant, but the procedure used does not state exact locations for every component. Nonetheless, the inability of four of seven operators to locate the required components indicated a training deficiency.

### 2.3 Written Examinations

Written examinations were reviewed for three of the six examination weeks. The inspectors found the examinations to be prepared in accordance with the facility sample plan, and considered the exam technical content and overall length to be good. In most cases, the questions were appropriate for an open reference examination; however, some questions were found in the examinations that were identified as "closed book" by the facility's coding scheme, which the NRC considered to test at too low a level of knowledge. These amounted to approximately 3% of the questions reviewed. Approximately 15% of the questions appeared to contain wording or distractor difficulties. These were discussed with the facility.

The results of the written examinations were two failures.

### 3.0 OBSERVATIONS OF TRAINING ACTIVITIES

The inspectors observed two meetings related to requalification program activities and one training class. These activities were productive, and showed a strong interest and involvement in training on the part of operations management.

A license review board is a meeting in which facility training personnel determine remedial action for individuals who fail examinations or quizzes. The inspectors observed this meeting for an individual who had failed his annual examination the previous week. Operations management as well as training department personnel were present and participated in determining a remedial program for this individual. The level of attention and the actions to be taken showed a strong management commitment to upgrading poorly performing individuals. The inspectors reviewed minutes of previous board meetings and concluded that the facility was not exaggerating their actions for the benefit of the NRC observers.

The inspectors observed a scheduling meeting in which future training activities and coordination of training were discussed. The Operations Manager was present at this

meeting, and changes were made to simulator scheduling (increased time available for operators by shuffling other activities) and lecture topics as a result of his input.

One training class was conducted following the examinations and was observed by an inspector. This class covered Emergency Operating Procedure Usage and recent industry events. The material was presented in a format in which the instructor presented the class with a "what would you do in this situation" scenario, extracted responses, and then discussed a topic or event. This format was conducive to maintaining class attention.

#### **4.0 TRAINING CONTENT, UPDATES, FEEDBACK**

Training materials and procedures were reviewed to determine if the facility incorporated industry events, facility events, facility modifications, and trainee feedback into the training and evaluation process. The inspector concluded that the facility had taken corrective action for a self-identified deficiency in ensuring that training was accomplished on minor modifications. The facility was overall very good in ensuring appropriate topics were included in training.

The facility Nuclear Training Manual contained various forms for trainee feedback and instructor observation. The examiners reviewed samples of these forms and verified that they had been used. The Licensed Operator Training Supervisor had reviewed these forms and tracked resolution of comments in a PC database. In interviews, both instructors and trainees considered the feedback process to work, and two trainees cited instances in which they had been contacted with followup on a comment or had seen an exam question changed in response to their comments.

The inspectors noted that the written examination included questions concerning industry events; for example a question related to rod control malfunctions at Salem. The trainees also cited instances in which they had been trained on plant events, such as an improperly paralleled diesel generator. The trainees also stated they received training on industry events. One trainee stated that they received too much repetitious training on the Three Mile Island, Chernobyl, and certain other events; as an example of response to trainee feedback, the instructor for the training session described in section 3.0 stated that the format of the presentation had been chosen in response to previous similar comments on student feedback forms.

Discussions were held with those individuals responsible for ensuring that plant modifications are incorporated into training activities as appropriate. Administrative plant procedure TR 5.5.1, "Tracking Plant Changes," provides the guidance, which responsible personnel follow to ensure that appropriate reviews are done of all plant modifications. From this review, a determination is made as to whether or not training is deemed necessary to cover the particular modification in question. Attendance by a training representative on a monthly basis or more frequently, if necessary, of all modification group meetings ensures that training is kept abreast of modification progress and any changes that may occur in the

interim. The inspectors found the control and subsequent documentation of this process to be excellent. Further discussions with several licensed operators indicated that the training department adequately conducted formalized instruction on plant modifications.

## **5.0 ADMINISTRATIVE COMMENTS**

Examination security measures exhibited during the conduct of this inspection to preclude examination compromise were more than adequate. Examination security measures were governed by procedures TR 4.6, "Test Administration and Security," and ATG 9.0, "Examination Security." These training department procedural requirements were strictly adhered to during this examination, as observed by the inspectors.

The inspectors reviewed the documentation sheets completed by the facility evaluators and noted that in some instances, they did not adequately document individual performance during the conduct of the simulator and/or job performance measures portion of the examination. The inspectors informed the Ginna training representatives that adequate documentation is necessary to not only substantiate a pass/fail decision, but also to indicate areas in which additional training may be necessary during subsequent training cycles. Ginna training representatives acknowledged the inspectors' concern and stated that they would address the issue and subsequently make changes as deemed necessary.

## **6.0 MAINTENANCE, HEALTH PHYSICS, CHEMISTRY TRAINING**

### **6.1 Background**

The National Nuclear Accrediting Board is a component of the Institute of Nuclear Power Operations (INPO) National Academy for Nuclear Training. In December 1991, INPO conducted an accreditation review that resulted in training programs for the following personnel being placed on 180 day probation in May 1992.

- I&C Technician
- Electrical Maintenance Personnel
- Mechanical Maintenance Personnel
- Radiological Protection Technician
- Chemistry Technician

Ginna completed corrective action for the problems noted by INPO and the above programs were removed from probation in November 1992.

### **6.2 Inspection Activities**

The NRC performed elements of NUREG-1220, "Training Review Criteria and Procedures," in order to determine if any problems were still apparent in these areas. This inspection process involves review of training records, interviews with technicians, trainees, and

supervisors, and observation of work activities. If these reviews and observations indicated a problem, a further review of Systems Approach to Training (SAT) program elements would be performed.

### 6.3 Findings

The inspector concluded that, after corrective actions, management oversight of training was significantly improved and excellent overall. A Nuclear Training Management Committee was established in mid-1993. It consists of the plant manager, three Vice Presidents, and several others, and meets quarterly to consider training content, feedback, summaries, and other matters. A Training Oversight Committee was also established to provide oversight and ensure communication between line managers and training.

The inspector observed a total of six work activities and training activities. Seven individuals were interviewed using the NUREG-1220 protocols. Students and workers had excellent attitudes and communicated freely with the inspector. All personnel interviewed had enthusiastic opinions of the upgrade of the quality, range, and depth of maintenance training. No performance problems or trends were noted in the observations, and no additional SAT element evaluation appeared necessary.

The inspector attempted to determine if training had been increased or accelerated for the I&C Special Projects, HP, and Chemistry work groups. It was not possible to make such a determination due to the nature of the recordkeeping.

Three licensee event reports were spot checked by the inspector for training corrective action followup. In all instances, a lesson plan or procedure had been developed as required.

Overall, the facility appeared to have taken effective corrective action for the deficiencies that resulted in probationary status for these programs. Thorough management oversight has been put in place.

### 7.0 EXIT MEETING

An exit meeting was conducted on September 24, 1993. The NRC stated that operations management involvement in training was a strength, discussed the inspection observations, and stated that no readily apparent reason for the poor overall performance of the examinees had been uncovered. The facility was asked to provide an analysis of the examination results and the planned remedial action for those individuals who failed. The facility agreed to provide the requested analysis and remedial action. In a telephone discussion subsequent to this exit meeting, the facility agreed to make a presentation in Region I on this topic on October 26, 1993.

## **8.0 MEETING TO DISCUSS WEAK REQUALIFICATION EXAMINATION RESULTS**

On October 26, 1993, Ginna staff met with NRC staff members in King of Prussia, PA, to review the examination results and root causes of performance problems. Attachment 2 identifies the participants. Attachment 3 contains the slides used by Rochester Gas and Electric (RG&E) personnel. Poor time validation and an inappropriate level of questions were root causes for written examination failures. No specific root causes were given for the operating examination failures. The diagnoses of individual weaknesses and remediation plans were presented and found acceptable. Overall lessons learned and resulting improvements to the training program for licensed operator requalification were discussed.

RG&E also discussed their proposals to resolve NRC comments on emergency operating procedures (EOPs) which were made following an initial license examination conducted at Ginna Station the week of September 13, 1993. The proposals had not been through the Ginna validation process. Questioning by NRC staff identified some problems with these proposals. RG&E committed to further review before making the proposed changes to EOPs.

### **Attachments:**

- 1. Persons Contacted**
- 2. Attendance at the October 26, 1993, Meeting**
- 3. Presentation Slides from Meeting**

**ATTACHMENT 1****Persons Contacted****Rochester Gas and Electric**

* Robert C. Mecredy	Vice President, Ginna Nuclear Production
* Terry White	Operations Manager
* Frank Maciuska	Supervisor-License Training
* Steven T. Adams	Superintendent, Support Services
* Gary D. Meier	Dept. Manager, Production Division Training
* Robert A. Carroll	Manager, Operations and Technical Training
* Andrew J. Harhay	Manager, Health Physics and Chemistry
* Jim Knorr	Supervisor, Maintenance, Chem, & HP Training
* Joseph A. Widay	Plant Manager - Ginna
* Dan Hudnut	Supervisor - Simulator Training
Richard A. Marchionda	Superintendent, Ginna Production

**NRC**

* Joseph M. D'Antonio	Operations Engineer
* Paul Bissett	Senior Operations Engineer
* Gordon Bryan	NRC contractor (COMEX)
Glenn Meyer	PWR Section Chief, Operations Branch, DRS
* Tom Moslak	Senior Resident Inspector

\* Denotes those present at exit meeting.

## ATTACHMENT 2

Attendance at October 26, 1993, Meeting.

Rochester Gas and Electric

Robert Carroll	Manager, Operations and Technical Training
Frank Maciuska	Supervisor, Operator Licensing
Richard Marchionda	Superintendent, Ginna Production
Gary Meier	Manager, Production
Terry White	Operations Manager
*Joseph Widay	Plant Manager

NRC

Lee Bettenhausen	Chief, Operations Branch
Paul Bissett	Senior Operations Engineer
Joseph D'Antonio	Operations Engineer
James Linville	Chief, Projects Branch 3
William Maier	Operations Engineer
Glenn Meyer	Chief, PWR Section
*Thomas Moslak	Senior Resident Inspector, Ginna

\*by telephone

**NRC MEETING ON TRAINING  
OCTOBER 26, 1993**

**AGENDA**

- |  |                         |
|--|-------------------------|
| <b>1) INTRODUCTION &amp;<br/>OPENING COMMENT</b> | <b>R. MARCHIONDA 10</b> |
| <b>2) REQUAL EXAM RESULTS</b>                    | <b>F. MACIUSKA 15</b>   |
| <b>3) ROOT CAUSES OF FAILURES</b>                | <b>B. CARROLL 10</b>    |
| <b>4) PROGRAM IMPROVEMENTS</b>                   | <b>B. CARROLL 10</b>    |
| <b>5) EOP COMMENT RESOLUTION</b>                 | <b>T. WHITE 5</b>       |
| <b>6) OPERATIONS PROSPECTIVE</b>                 | <b>T. WHITE 10</b>      |
| <b>7) DISCUSSION</b>                             | <b>ALL</b>              |

## 1993 ANNUAL EXAM SUMMARY

	TOTAL NO. STUDENTS	NO. WRITTEN FAILURES	% PASSING	# JPM FAILURES	% PASSING	INDIVIDUAL SIM FAILURES	% PASSING	# OVERALL FAILURES	% PASSING
SENIOR REACTOR OPERATORS (shift)	15	3	80	0	100	1	93	3	80
SENIOR REACTOR OPERATORS (staff)	10	1	90	1	90	0	100	2	80
REACTOR OPERATORS (shift)	7	2	71	0	100	0	100	2	71
REACTOR OPERATORS (staff)	1	0	100	0	100	0	100	0	100
<b>TOTALS</b>	<b>33</b>	<b>6</b>	<b>82</b>	<b>1</b>	<b>97</b>	<b>1</b>	<b>97</b>	<b>7</b>	<b>78.79</b>
OPERATIONS CREWS	6					0	100	OVERALL SIMULATOR CREW FAILURES	
STAFF CREWS	3					1	67		

## **SHIFT RO REMEDIATION**

**(2)**

- **IMMEDIATELY REMOVED FROM SHIFT**
- **EXAM REVIEW WITH ASSIGNED INSTRUCTOR**
- **LICENSE REVIEW BOARD**
- **PROGRAM INCLUDED:**
  - **Review of EOP Background**
  - **Test Taking Strategies**
- **DIAGNOSTIC EXAM**
- **RETEST COMPLETE (PASS)**

**SHIFT SRO REMEDIATION  
(C)**

- **IMMEDIATELY REMOVED FROM SHIFT**
- **EXAM REVIEW WITH ASSIGNED INSTRUCTOR**
- **LICENSE REVIEW BOARD**
- **PROGRAM SET UP TO INCLUDE**
  - **EOP Overview**
  - **EPIP Background**
  - **Exam Taking Techniques**
  - **Procedure Familiarity**
  - **Elementary Reading**
  - **LER's/Industry Events**
- **DIAGNOSTIC WRITTEN EXAM**
  - **Reviewed Areas Missed**
- **PARTICIPATED IN LEARNING STYLES INVENTORY (LT)**
- **MAKEUP EXAM NOT SCHEDULED**
- **REMEDIAL PROGRAM PROPOSED**

## **STAFF SRO REMEDIATION**

**(A)**

- **REMOVED FROM LICENSED DUTIES**
- **EXAM REVIEW WITH ASSIGNED INSTRUCTOR**
- **LICENSE REVIEW BOARD**
- **PROGRAM SET UP TO COVER KNOWLEDGE WEAKNESSES**
  - **REMOVED FROM STA**
- **RETEST COMPLET (PASS)**

**SHIFT SRO REMEDIATION  
(B)**

- **IMMEDIATELY REMOVED FROM SHIFT  
DISQUALIFIED AS SS**
- **LICENSE REVIEW BOARD.**
  - 1) **WRITTEN FAILURE**
  - 2) **COMPETENCY FAILURE AS SS**
- **PROGRAM SET UP TO REVIEW WEAK AREAS**
  - **EOP Overview**
  - **EOP Background**
  - **EPIP**
  - **Exam Taking Techniques**
  - **Diagnostic Sim Exam as Foreman**
  - **Placed in SS Initial Program (LT)**
- **DIAGNOSTIC WRITTEN EXAM**  
- Reviewed areas missed
- **PARTICIPATED IN LEARNING STYLES INVENTORY  
(LT)**
- **RETEST COMPLETE**
- **RETURNED AS CRF ONLY**

**SHIFT SRO REMEDIATION  
(D)**

- **REMOVED FROM LICENSED DUTIES**
- **EXAM REVIEW WITH ASSIGNED INSTRUCTOR**
- **LICENSE REVIEW BOARD**
- **PROGRAM SET UP TO COVER KNOWLEDGE WEAKNESSES**
  - **ER/INST.3**
  - **Exam Taking Techniques**
  - **LER's**
  - **EOP Background Documents**
  - **P-12 procedure (Electrical System)**
- **DIAGNOSTIC WRITTEN EXAM**
  - **Reviewed Areas Missed**
- **PARTICIPATED IN LEARNING STYLES INVENTORY (LT)**
- **RETEST COMPLETE**

**STAFF SRO REMEDIATION  
(E)**

- **REVIEWED CRITICAL STEPS OF JPMs MISSED**
- **LICENSE REVIEW BOARD**
- **PROGRAM INCLUDES:**
  - **Review of JPM Test Techniques**
  - **OJT on TASKs missed**
  - **Retake JPM's**
- **RETEST ON 5 RANDOMLY SELECTED JPMs**
- **COMPLETION DATE 11/30/93**

## **STAFF CREW FAILURE**

- **REMOVED FROM LICENSED DUTIES**
  
- **LICENSE REVIEW BOARD**
  - **Review of Procedure Critical Task Missed**
  - **Team Work Skills Training**
  - **Practice Scenarios**
  - **Retest by 11/30/93**

## **DIAGNOSTIC EXAM**

- **REQUESTED BY REVIEW BOARD**
- **BROAD SAMPLE OF KNOWLEDGE AT APPROPRIATE LICENSE LEVEL**
- **SHOULD FOLLOW GUIDELINES OF ES401 AND NUREG/BR 0122**
- **USED MOST RECENT NRC EXAMS**

## **LEARNING STYLES INVENTORY**

- **ASSOCIATE OF LEARNING DEVELOPMENT CENTER AT ROCHESTER INSTITUTE OF TECHNOLOGY**
- **BATTERY OF INSTRUMENTS TO DETERMINE PERSONALITY STYLE**
- **INTERVIEWS ABOUT JOB/EXAM PROCESS**
- **RECOMMENDATIONS OF STRATEGIES TO MAXIMIZE BENEFIT OF TRAINING PROGRAM**

## **ROOT CAUSE ANALYSIS**

- **INVESTIGATOR SELECTION**
  - **Familiar with SAT Process**
  - **Experience at other facilities**
  - **Objective**
  - **No Ownership**
  - **Familiar with Plant and Simulator**
  
- **RCA Process**
  - **Test Analysis**
  - **Interviews**
  - **Root Cause Determination**
  - **Recommendations**

**QUESTION 1: IS THERE A ROOT CAUSE FOR THE "SRO" WRITTEN EXAMINATION FAILURES ON THE 1993 LICENSED OPERATOR REQUALIFICATION EXAM?**

**DETERMINATION: YES**

**ROOT CAUSE(S): Static Simulator exam completion time longer than allowed due to probable inaccurate time validation.**

**PROGRAM IMPROVEMENTS**

- **IMPROVE VALIDATION PROCESS**
- **REFERENCE MATERIAL AVAILABILITY**

**QUESTION 2: IS THERE A ROOT CAUSE FOR THE "RO" WRITTEN EXAMINATION FAILURES ON THE 1993 LICENSED OPERATOR REQUALIFICATION EXAM?**

**DETERMINATION: YES**

**ROOT CAUSE(S): RO LICENSE HOLDERS TOOK AN EXAM INTENDED FOR AN SRO LEVEL OF KNOWLEDGE.**

### **PROGRAM IMPROVEMENTS**

- **REACTOR OPERATOR SPECIFIC ANNUAL EXAM**
- **IMPROVE WRITTEN EXAM STRUCTURE**
  - **Arrangement of questions**
  - **Consistent question format**

## **PROGRAM IMPROVEMENTS TO MINIMIZE REPEAT FAILURES**

- **LOWER THRESHOLD FOR INTERVENTION**
- **DEVELOP A DIAGNOSTIC EXAM INSTRUMENT**
  - Identify general areas of Weakness
  - Identify "At Risk" Individuals
- **BENCHMARKING**
- **INCREASE TRAINING TIME (1 CYCLE)**
- **INDIVIDUAL TRAINING PROGRAMS (AS NEEDED)**