

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

REQUALIFICATION PROGRAM EVALUATION

REPORT NO. 92-23 (OL)
FACILITY DOCKET NO. 50-410
FACILITY LICENSE NO. NPF-69
LICENSEE: Niagara Mohawk Power Corporation
301 Plainfield Road
Syracuse, New York 13212
FACILITY: Nine Mile Point Nuclear Station, Unit 2
EXAMINATION DATES: November 16 to 19, 1992
NRC EXAMINERS: J. Williams, Senior Operations Engineer
J. Stewart, Chief Examiner (UI)
M. Mitchell, PNL


CHIEF EXAMINER:



J. Williams, Senior Operations Engineer.

12/23/92
Date

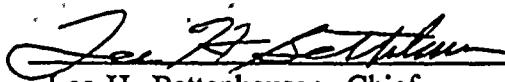
REVIEWED BY:



Richard J. Conte, Chief, BWR Section
Operations Branch, DRS

12/28/92
Date

APPROVED BY:



Lee H. Bettenhausen, Chief
Operations Branch, DRS

1/4/93
Date



EXECUTIVE SUMMARY

Requalification examinations were administered to three crews and ten individual operators using NUREG-1021, Examiner Standards, Revision 7 (Draft). One crew and one SRO failed the simulator portion of the examination. All other individuals and crews passed all portions of the examination. The results of this examination were combined with the results of the 1991 requalification examination to make a program evaluation. In summary, five of six crews (83 percent) passed the simulator portion of the examination and 18 of 20 individuals (90 percent) passed all portions of the examination, thereby making the program satisfactory.

Some weaknesses were identified in the licensee's open reference, written examination bank and the examination team had to revise or rewrite approximately 30 percent of this portion of the examination. As a result of the identified programmatic weakness in this area, the licensee committed to review and upgrade this portion of the examination.

In addition to the requalification examination, a review of the licensee program for ensuring biennial medical evaluations of licensed individuals was conducted. No discrepancies in this program were identified.



DETAILS

1.0 INTRODUCTION

The NRC administered requalification examinations to 10 licensed operators (6 ROs and 4 SROs). The examiners used the process and criteria described in NUREG 1021, "Operator Licensing Examiner Standards," Rev. 7 (draft). The results of this examination are being combined with the results of the requalification examination given December 2 to 5, 1991, as reported in Examination Report 50-410/91-25 (OL), to make a program evaluation.

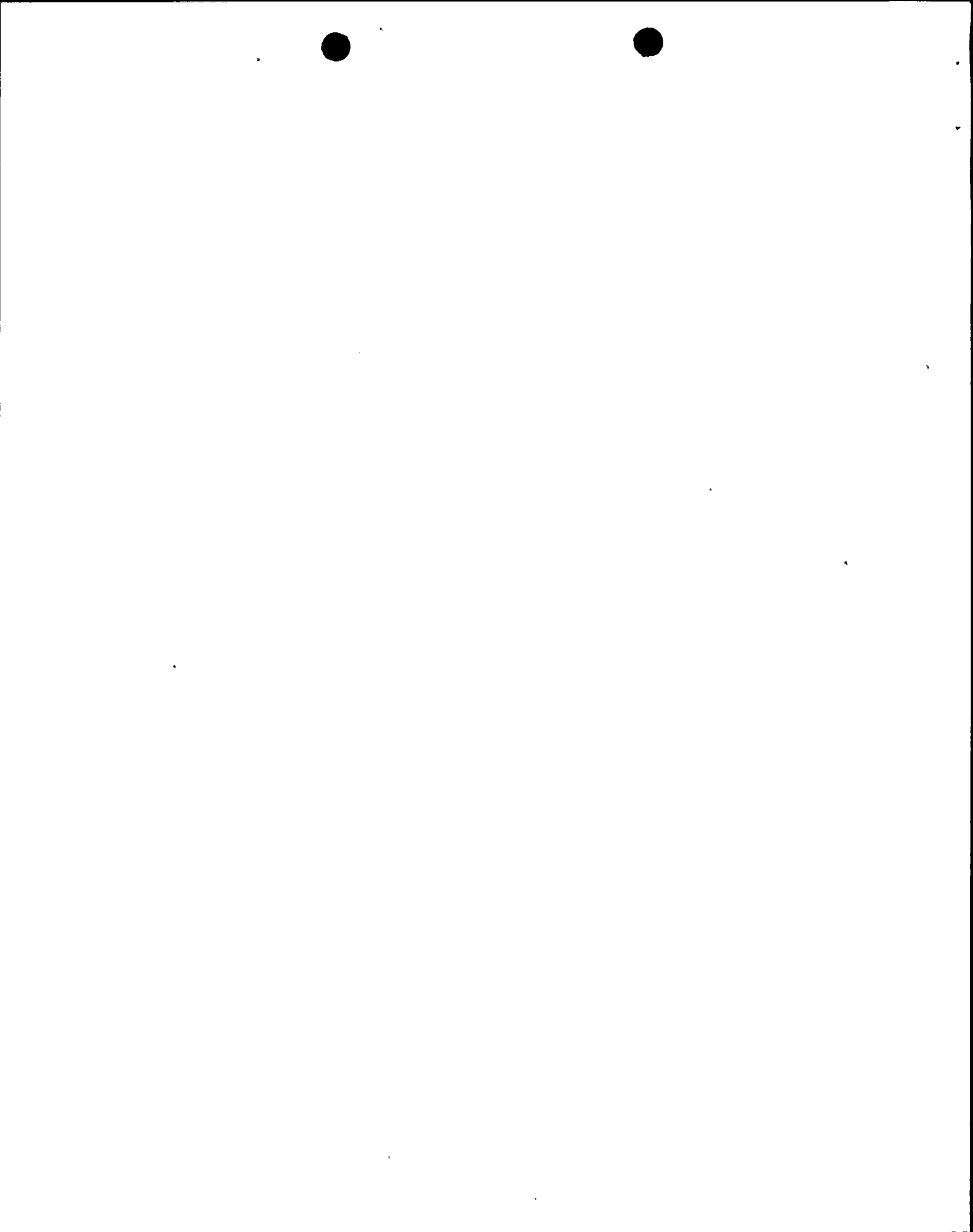
2.0 INTRODUCTION EXAMINATION RESULTS

2.1 Examination Results

The following is a summary of the individual examination results for the 1992 evaluation. The NRC and the facility evaluations were identical.

	RO Pass/Fail	SRO Pass/Fail	Total Pass/Fail
Written	6/0	4/0	10/0
Simulator Crew Individual	6/0	4/1*	2/1 10/1*
Walkthrough	6/0	4/0	10/0

*Individual failure of a stand-in SRO used to makeup a crew



The following summarizes the combined results for the 1992 Program Evaluation:

	RO Pass/Fail	SRO Pass/Fail	TOTAL Pass/Fail
Written	11/0	8/0	19/0
Simulator Crew Individual	11/0	8/1*	5/1 19/1*
Walkthrough	10/1	8/0	18/1
Overall	10/1	8/1*	18/2

*Individual failure of a stand-in SRO used to makeup a crew

2.2 Facility Generic Strengths and Weaknesses Based on Operator Performance

The following is a summary of generic strengths and weaknesses noted from the results of the 1992 requalification examinations. This information is being provided to aid the licensee in upgrading the requalification training program.

2.2.1 Strengths

- Operators were well prepared for the Walk-through portion of the examination as evidenced by the 100 percent JPM pass rate.
- Event/transient briefings by Assistant Station Shift Supervisors in the simulator were consistent, timely, and informative. The briefings covered current plant conditions, degraded systems, and mitigation strategy.

2.2.2 Weaknesses

- On the written examination, six operators failed to identify the correct operator actions regarding operation of the service water system following loss of bus EJS*US1.
- One crew failed the simulator portion of the examination by not properly coordinating a cooldown. Simultaneous pressure reduction and injection resulted in exceeding the allowed cooldown rate (100 degrees F per hour).



Overall, performance of the licensee was strong, with eighteen of twenty individuals and five of six crews passing all portions of the examination.

2.3 Programmatic Strengths and Weaknesses

2.3.1 Strengths

- An observed programmatic strength was the use of the Shift Technical Advisors (STAs) in the simulator portion of the examination. The individuals observed, while not individually evaluated, appeared to be knowledgeable of plant systems, well trained on accident mitigation strategy, and well integrated in the crews during the scenarios.
- The licensee properly identified both the crew and individual failures and developed a remediation program appropriate to the circumstances of the failures.

2.3.2 Weaknesses

- A weakness was identified in the facility preparation of the Section B written examination. (Details are in section 3.3 of the report)

3.0 REQUALIFICATION PROGRAM EVALUATION RESULTS, FINDINGS, AND CONCLUSIONS

3.1 Program Results Summary

Two criteria have been established in ES-601, Revision 7, to determine that a requalification program is satisfactory. The first criterion is that at least 75 percent of all operators must pass all portions of the examination. Eighteen of twenty licensees (90 percent) passed all individual portions of the examination. The second criterion is that two-thirds of the crews must pass the simulator examination. In this evaluation, five of six crews (83 percent) passed. The facility program for licensed operator requalification training is therefore considered satisfactory. Further, the overall requalification program at the facility was evaluated using the criteria of ES-601, Revision 7 (DRAFT), paragraph D.2.b. None of the specified areas were found to be weak.

3.2 Requalification Examination Sample Plan

The sample plan submitted by the facility was evaluated using the criteria specified in ES-601, Revision 7 (DRAFT). One deficiency was identified with that being that all of the items included for examination sampling in 10 CFR 55.41 and 10 CFR 55.43 were not included on the sample plan. Specifically, no items in the area of radiological safety, practices, or hazards were specified on the plan. The examination team modified the examination to include sampling in these areas.



3.3 Written Examination Preparation and Administration

The facility submitted written examinations, with questions selected from the facility "Section A" and "Section B" examination banks, which was reviewed by the NRC using the criteria identified in ES-602. The proposed Section A examination was found to be acceptable, and only a few minor modifications were made by the NRC examination team.

The NRC had difficulty ensuring the Section B examination met the standards set by ES-602. Approximately 30% of the questions in the facility proposed written examination either lacked operational orientation, were not at least at the comprehension level, were direct look up questions, had distractors which did not adequately discriminate on level of knowledge, or had more than one correct answer. As a result of these deficiencies, the NRC/facility examination team had to perform extensive rewrite of the Section B written examination questions.

Because of the rewrite of the proposed written examination to meet the examiner standard criteria, the NRC examination team questioned the adequacy of the facility's written examination construction methodology and Section B examination question bank. Specifically, simple memory and direct look-up questions are not to be included in open reference examinations and some questions at the analytical or problem solving level need to be developed and included in the examination bank.

At the October 7, 1992, exit meeting, the facility committed to complete a review and upgrade as necessary to the examination bank to ensure compliance with the written examination standards detailed in ES-602. Facility actions in this matter will be reviewed in a future NRC inspection. (50-410/92-23-01)

3.4 Walk-Through Examination Preparation and Administration

No deficiencies were identified in this area of the examination.

3.5 Dynamic Simulator Examination Preparation and Administration

One crew failed the simulator portion of the examination by not properly completing a Crew Critical Task (CCT). The scenario involved a reactor scram with a number of control rods failing to insert, coupled with a primary leak in the drywell. Proper crew action to mitigate the event was to initiate a cooldown and pressure reduction allowing level control using condensate booster pumps. In completing the task, the SRO failed to properly coordinate the simultaneous pressure reduction and injection, resulting in exceeding the allowed cooldown rate (100 degrees F per hour). The CCT required cooldown and level control without exceeding cooldown limits. As a result, both the crew and the individual SRO failed this portion of the examination.

The licensee evaluators properly identified both the crew and individual failures and took actions, as appropriate to remove the individuals from further licensed duties until remediation was completed.



Each crew of licensed operators was required to successfully complete two simulator scenarios to pass this portion of the examination. In completing the examination for one of the crews, simulator problems occurred which when reviewed, invalidated the scenario. The licensee and the NRC examination team determined that a third scenario would be required to complete the examination for this particular crew and the crew was required to return to the examination facility a second day to complete the third scenario. This subsequent examination day could have been prevented if an extra scenario had been validated during the preparation week.

4.0 MEDICAL CERTIFICATION PROGRAM FOR OPERATIONS PERSONNEL

An inspection was conducted of the licensee program for medical certification and monitoring of licensed operators. A review of the licensee's program was conducted through discussions with the station medical director, a review of the appropriate implementing procedures, and a verification of program implementation by checking the medical records of approximately ten percent of the facility licensed operators.

The following observations were made:

1. The licensee has established controls to ensure that licensed operators are determined to be medically fit as required by 10CFR55.21.
2. The medical examinations performed by the licensee are in accordance with the criteria of ANSI/ANS-3.4-1983. Medical information discussed in the standard is obtained through a combination of questionnaires, interviews, reports by supervisors, and direct physical examination. The licensee conducts annual physical examinations to ensure compliance with the biennial requirement.
3. The licensee completes an annual respiratory evaluation in conjunction with the medical examination.

No discrepancies were identified in the review of 17 individual medical examination files.

6.0 EXIT MEETING

A list of attendees at the November 19, 1992, meeting is provided in Attachment 1.

Attachments:

1. Exit Meeting Attendees
2. Requalification Test Items
3. Simulation Facility Report



ATTACHMENT 1

EXIT MEETING ATTENDEES

Niagara Mohawk Power Corporation - Nine Mile Point Unit 2

M. McCormack, Plant Manager
R. Smith, Manager - Training
J. Mueller, Operations Manager
R. Slade, General Supervisor - Operations Training
J. Reid, Supervisor - Requalification Training
J. Toothacre, Requalification Training
G. Pitts, Requalification Training
G. Brownell, Site Licensing

Nuclear Regulatory Commission

H. Williams, Senior Operations Engineer
J. Stewart, Operations Engineer
C. Sisco, Operations Engineer



ATTACHMENT 2**REQUALIFICATION TEST ITEMS****Simulator Scenarios**

O2-REQ-009-1DY-2-02, Revision 3, MSIV Isolation with a Failure to Scram
O2-REQ-009-1DY-2-04, Revision 5, Loss of High Pressure Injection with Stuck Control Rods

O2-REQ-009-1DY-2-10, Revision 5, Main Steamline Break Inside Containment
O2-REQ-009-1DY-2-12, Revision 3, Loss of Offsite Power with a Leak in the Drywell

Job Performance Measures

PJE-264-2-65, Local Startup of Diesel Generator EG3
PJE-200-2-69, Manually Insert Control Rod by Venting
SEE-206-2-16, Defeating HPCS Level 8 Interlocks
SJE-201-2-96, Manual Reactor Scram (Faulted)
SJE-200-2-42, Restore Division One Power
PJE-239-2-90, Backfill MSL Between MSIVs
PJE-296-2-86, Control Room Evacuation as E Operator
PJE-201-2-12, Bypass a Rod in RSCS
SJE-259-2-17, Start a Second Feedwater Pump
SJE-217-2-94, Isolate RCIC



ATTACHMENT 3SIMULATION FACILITY REPORT

Facility Licensee: Nine Mile Point Unit 2

Facility Docket No.: 50-410

Requalification Examination Administered: November 16 - 19, 1992

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed:

ITEM.

DESCRIPTION

Scenario 02-REQ-009-1DY-2-04

During the conduct of the scenario for a second crew, a simulator failure was observed that caused some scenario critical parameters to freeze while the machine continued to operate. The operating crew and the evaluators were unaware of the event except that reactor level stopped dropping and an unplanned reactor trip was observed. The fault was explained as a discrepancy between multiple operating computers. Because of the fault, the results of this scenario were inconclusive and the scenario was deleted from the examination and a third scenario was run on the specific crew.

