

Indian Point 3  
Nuclear Power Plant  
P.O. Box 215  
Buchanan, New York 10511  
914 736.8001



Joseph E. Russell  
Resident Manager

October 13, 1989  
IP3-89-074  
SJB-89-078

Docket No. 50-286  
License No. DPR-64

Mr. Robert Gallo  
Operations Branch Chief  
U.S. Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, Pennsylvania 19406

Dear Mr. Gallo:

Attached is the Indian Point 3 report regarding the NRC administered  
Requalification Exam conducted September 11, 1989.

Should you or your staff have any questions regarding this report,  
please contact Mr. Richard Tansky of my staff at (914) 736-8901.

Very truly yours,

A handwritten signature in cursive script, appearing to read 'J. E. Russell', written over a circular stamp or mark.

Joseph E. Russell  
Resident Manager  
Indian Point 3

JER:SJB:jem  
Attachment

**Indian Point 3**  
**Nuclear Power Plant**  
P.O. Box 215  
Buchanan, New York 10511  
914 739.8200



**New York Power  
Authority**

INDIAN POINT 3

September 11, 1989 REQUAL EXAM

REPORT TO NRC

## INDIAN POINT 3 EXAM RESULTS

During the week of September 11, 1989, thirteen licensed operators were examined. Eight were Senior Reactor Operators and five were Reactor Operators. The thirteen operators made up two operating crews and one staff crew which were examined.

The following is a breakdown of the examination results:

## 1. EXAMINATION RESULTS

	RO Pass/Fail	SRO Pass/Fail	TOTAL Pass/Fail
WRITTEN	4/1	8/0	12/1
SIMULATOR			
Individual	5/0	8/0	13/0
Crew	N/A	N/A	2/1
JPM's	5/0	8/0	13/0
OVERALL	4/1	8/0	12/1

With 1 crew failure

## 2. PROGRAM EVALUATION RESULTS

Overall, the Indian Point 3 Regualification Program was evaluated as satisfactory in accordance with our interpretation of ES-601.

Based on IP-3 results, 92% (12/13) of the operators passed the regualification exam. Only one operator failed the written exam with no other failures, which indicates an individual weakness rather than a program weakness. This satisfies ES-601 C.3.b.(1).b requirements.

During the simulator exam, all but 1 of the crews were evaluated as satisfactory. This one crew was unsatisfactory due to poor teamwork and lack of leadership rather than a technical (ISCT) issue. Individually, all operators passed the simulator portion of the exam as evaluated by the IP-3 staff. The NRC agreed with our evaluations. This satisfies ES-601 D.1.c.(2)(c)1.1, 1.2, and 1.4.

All of the operators were evaluated as satisfactory by the IP-3 evaluators on the JPM walkthrough exam. The NRC evaluation agreed with our staff's evaluation. This satisfies ES-601 D.2.c(2)(b)(2)(1) and D.2.c(2)(b)(2) requirements.

We concluded that 12 out of 13 operators passed the written exam. The NRC written examination results were that all the operators passed the written exam. This satisfies ES-601 D.3.c.(2)(b) requirements.

The JPM results were that there were no JPM questions missed by 50% of the operators. This satisfies ES-601 requirement C.3.b.(2)(b).

84% of the operators correctly answered at least 80% of the common JPM questions. This satisfies ES-601 requirement C.3.b.(2)(e).

No facility evaluators were judged unsat. This satisfies ES-601 requirement C.3.b.(2)(f).

The requalification program trains on "in-plant" JPM's. This satisfies ES-601 requirement C.3.b.(2)(d).

The requalification program does train and evaluate SRO's in the RO position as well as directing operators. This satisfies ES-601 requirement C.3.c.(2)(c).

Overall, the Indian Point 3 facility staff determined that the requirements of ES-601 for a satisfactory Requalification Program have been met.

### 3. PROGRAM STRENGTHS

- A. The Operations Department and Operations Training Group work closely together.
- B. Resources were allocated to complete the IP-3 Exam Bank prior to the exam.
- C. The Requalification Program incorporated the new ES-601 process in the last half of 1988 which provided the operators time to become familiar with the new exam process.
- D. The Requalification Program is run in accordance with ES-601.

#### 4. PROGRAM WEAKNESSES

The Programmatic Weaknesses noted by the IP-3 staff include:

- A. IP-3 evaluators need to be more objective and critical of operator performance during simulator exams.
- B. IP-3 evaluators and operators need more practice doing JPM's.
- C. Crew communications (although improving) needs continued improvement. The communications between crew members did not consistently adhere with the closed loop method.
- D. Insufficient resources were allocated to the exam. Specifically, the lack of an exam coordinator led to time delays in conducting the JPM's and problems with exam coordination.
- E. Some Exam Bank JPM's did not have the knowledge and abilities referenced.
- F. Exam material (JPM's) were not time validated.
- G. The static exam setups do not include operator action.
- H. JPM questions need to be reviewed to ensure correct level of difficulty and ensure that there are no "look-up" questions.
- I. Lack of board familiarity was displayed by personnel who are not Control Room watchstanders.

#### 5. ACTION TO BE TAKEN TO ADDRESS PROGRAM WEAKNESSES

- A. At least three licensed instructors will attend the INPO Advanced Simulator Instructor Training course the week of November 26th at Sharron Harris.
- B. JPM's are being incorporated into the requalification program.
- C. The closed loop method of communication will continue to be emphasized during simulator training. In addition the Operations Department will issue formal guidance on communications in the form of an Operations Directive.

- D. Resource requirements needed to support the exam will be evaluated to provide better coordination of exam activities.
- E. The exam bank JPM's will be reviewed to ensure that the knowledge and abilities are referenced.
- F. JPM's will be time validated prior to the July 1990 exam.
- G. The static exam development process will be reviewed to evaluate if operator actions can be effectively incorporated while maintaining reproducibility.
- H. JPM question will be reviewed to ensure that the questions are not "look-up".
- I. Non-control room watchstanders will receive more "board" time during their requalification training.

## 6. REMEDIAL ACTION TAKEN

### A. Crew Failure

- 1. The crew failure remediation was performed the week following the examination (09/18/89)
- 2. The remediation consisted of:
  - a) Having the operators involved in the failure analyze the exam film to determine the root cause of their poor performance.
  - b) After determining that the major discrepancy was crew communications, have them work on improving their communications and teamwork.
  - c) After each simulator session, the crew reviewed the film of that session and then critiqued their performance.
  - d) The crew was then given a simulator exam. The crew was evaluated as satisfactory.

### B. Individual Simulator Discrepancy (Non-failure Remediation)

- 1. C. Gorges' problem in the scenario was identified to be a communication problem more than a lack of knowledge or misunderstanding of the E-3/ECA-3 series procedures.

2. His remediation consisted of:

- a) Reviewing the E-3 and the ECA-3 series of the Emergency Operating Procedures and stressing the major transition points and the steps that are more difficult to interpret.
- b) Stressing the importance of good communications and how the poor communications contributed to his need for remediation.
- c) A review of the tape from his exam and the tapes of what was considered to be good communication.
- d) He was given a simulator evaluation and was evaluated as satisfactory.

C. Individual Written Failure

1. After the grading of the written exam, the individual was removed from licensed functions and remediated in accordance with IP-3 Training Procedures.
2. Remediation consisted of:
  - a) Reviewing the written examination to determine the subjects that need to be reviewed and studied prior to his retake of the exam.
  - b) The subjects and procedures for remediation were self studied using Requalification training material and the exam bank.
  - c) Administering a retake of the Part B exam. This exam consisted of the material he was remediated on plus other subjects not covered under the remediation. (He received satisfactory grades).
  - d) The items missed on his retake exam were reviewed with him.

7. **JPM RESULTS**

- A. The operators completed the JPM's well within the allotted time. It appears that the majority of operators finished in about a 15 minute range per JPM.

B. Overall, the JPM's showed that:

1. The operators need additional instruction in communicating their thoughts to the evaluator; specifically which instrument are being monitored and when a Nuclear Plant Operator would be dispatched.
2. Those operators whose watch functions were outside the control room showed some lack of familiarity with control boards.
3. The evaluators and the licensees need more practice with JPM's.

C. For individual grades, see attachment 2.

## 8. SIMULATOR CREW EVALUATIONS

- A. Every SRO was evaluated at the SRO and Shift Supervisor level. The RO's were evaluated at the RO and ROVER levels. Only on the staff crew were there SRO's working down to the RO level. This was due to the make-up of the crew (as requested by the NRC).

Although the communications were adequate, there is room for improvement. The problems that arose from the scenarios can be attributed mainly to missed or poor communications.

Two scenarios took turns that were not anticipated which make the evaluations past these points rather difficult. The cause of one was due to the scenario, but the second one was due to an operator hesitating causing a cooldown greater than expected.

Board familiarity seemed to be a problem to the operators who do not generally work in the control room, but there were instances where the RO's were slow in locating switches.

### CREW 1

All crew members were evaluated as satisfactory. No ISCT's were missed during any of their scenarios. Their communications and teamwork were generally good.



**CREW 2**

All crew members were evaluated as satisfactory. No ISCT's were missed during any of their scenarios. Their communications were generally good, but in one instance a missed communication led to a step in ECA-3.1 that was not completed. (This step was being analyzed by the crew but not communicated).

**CREW 3**

All crew members were individually evaluated as satisfactory. However, this crew was evaluated as unsatisfactory on the second scenario (Loss of Instrument Air with an RCS Leak exceeding Technical Specifications). The primary cause of the crew failure was lack of communication and poor teamwork, which led to the RCS temperature being maintained by the steam generator safety valves with no action being taken to take local control of the steam generator atmospherics.

For a list of crew members and scenarios, see ATTACHMENT 1.

B. Overall, the Simulator Scenarios showed that:

1. Communications still needs improvement. The problems with two scenarios originated as a communication breakdown.
2. Those operators whose functions were outside the control room lack board familiarity.
3. Evaluators need to be more objective and critical of operator performance.

**9. WRITTEN EXAM**

The written exam results are as follows:

RO's: 4 passed and 1 failed. SRO's: 8 passed and none failed. A total of 12 of 13 operators passed, one failed. The NRC results were that everyone passed.

The following are the weak areas that were noted on the written exam:

- 1.) Static Exam A-4
  - Q#4 (LIC-NSS-1.1.6.1)
  - Q#7 (LIC-EOP-2.1.7.51)
- 2.) Part B RO
  - Q#2 (LIC-EOP-2.1.3.4)
  - Q#10 (LIC-EOP-3.1.7.23)
  - Q#13 (LIC-IXC-13.1.6.21)
- 3.) Part B SRO
  - Q#1 (LIC-PWR-4.1.5.1)
  - Q#2 (LIC-EOP-2.1.3.4)
  - Q#11 (LIC-EOP-3.1.7.23)

These topics will be analyzed and included in our Requal Program beginning first quarter 1990.

For individual grades, see ATTACHMENT 2.

#### 10. ANALYSIS

For analysis of the JPM's and written exam, see ATTACHMENT 3.

ATTACHMENT 1 (PAGE 1 OF 2)

SIMULATOR SCENARIOS

TITLE

LIC-SES-57 (NRC)	ATWS/FAULTED STEAM GENERATOR
LIC-SES-51 (NRC)	SMALL BREAK LOSS OF COOLENT ACCIDENT
LIC-SES-70 (NRC)	FAULTED/RUPTURED STEAM GENERATOR
LIC-SES-50 (NRC)	STEAM GENERATOR TUBE RUPTURE
LIC-SES-59 (NRC)	LOSS OF INSTRUMENT AIR/RCS LEAK EXCEEDING TECHNICAL SPECIFICATIONS
LIC-SES-53 (NRC)	LOSS OF HEAT SINK

CREW 1

LIC-SES-57 Crew #1 (1st)	LIC-SES-51 Crew #1 (2nd)
SS - E. O'Donnell	SS - B. Sullivan
STA - R. Robenstein	STA - R. Robenstein
SRO - B. Sullivan	SRO - E. O'Donnell
RO - S. Mignotte	RO - M. Caskey
Rover - M. Caskey	Rover - S. Mignotte

CREW 2

LIC-SES-70 Crew #2 (1st)	LIC-SES-51 Crew #2 (2nd)
SS - R. Sporbert	SS - C. Gorges
ASS - M. Bengis	ASS - R. Sporbert
SRO - C. Gorges	SRO - M. Bengis
RO - E. Caraher	RO - C. Jessen
Rover - C. Jessen	Rover - E. Caraher

ATTACHMENT 1 (PAGE 2 OF 2)

CREW 2

LIC-SES-57 Crew #2 (3rd)

SS - M. Bengis

ASS - C. Gorges

SRO - R. Sporbert

RO - E. Caraher

Rover - C. Jessen

CREW 3

LIC-SES-50 Crew #3 (1st)

SS - E. Diamond

STA - R. Robenstein

SRO - C. Mackay

RO - W. Robinson

Rover - F. Smutny

LIC-SES-59 Crew #3 (2nd)

SS - C. Mackay

STA - R. Robenstein

SRO - E. Diamond

RO - F. Smutny

Rover - W. Robinson

LIC-SES-52 (3rd)

SS - C. Mackay

STA - R. Robenstein

SRO - W. Robinson

RO - E. Diamond

Rover - F. Smutny

## PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY

## POWER PLANT REQUALIFICATION RESULTS SUMMARY SHEET

Facility: NYPA INDIAN POINT 3	Overall Results	Total	Passed	Failed
Exam Date: September 10, 1989		#	# / %	# / %
Examiners: S. Bridges	Reactor Operator	5	4 / 80%	1 / 20%
W. Sorrell	Senior Operator	8	8 / 100%	0 / 0%
C. Embry	Total	13	12 / 92%	1 / 8%

Name	Docket 55-	Grader	Written Score	JPMs %	Quest. %	Simul. P/F	Results / Initials	
							Written	Operating
Mark Bengis	60595	NRC					/	/
		FAC	99	100	100	P	P /	P /
Ed Caraher	61148	NRC					/	/
		FAC	90.2	100	95	P	P /	P /
Mark Caskey	60589	NRC					/	/
		FAC	90.0	80	75	P	P /	P /
Edward Diamond	4690	NRC					/	/
		FAC	97.8	100	95	P	P /	P /
Charles Gorges	7108	NRC					/	/
		FAC	92.4	100	95	P	P /	P /
Carl Jessen	60592	NRC					/	/
		FAC	91.7	90	90	P	P /	P /
Charles Mackay	4696	NRC					/	/
		FAC	81.0	90	95	P	P /	P /
Stephen Mignotte	60117	NRC					/	/
		FAC	83.2	90	90	P	P /	P /

PRIVACY ACT INFORMATION - FOR OFFICIAL USE ONLY

POWER PLANT REQUALIFICATION RESULTS CONTINUATION SHEET

<b>Facility:</b> NYPA Indian Point 3	<b>Exam Date:</b> September 10, 1989
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Name	Docket 55-	Grader	Written Score	JPMs %	Quest. %	Simul. P/F	Results / Initials	
							Written	Operating
Eugene O'Donnell	7110	NRC					/	/
		FAC	96.3	100	95	P	P /	P /
Wayne Robinson	6748	NRC					/	/
		FAC	97.3	100	100	P	P /	P /
Frederick Smutny	4685	NRC					/	/
		FAC	78.5	90	75	P	P /	P /
Richard Sporbert	4689	NRC					/	/
		FAC	84.0	100	95	P	P /	P /
Brian Sullivan	60928	NRC					/	/
		FAC	87.5	100	100	P	P /	P /
		NRC					/	/
		FAC					/	/
		NRC					/	/
		FAC					/	/
		NRC					/	/
		FAC					/	/

