

U.S. NUCLEAR REGULATORY COMMISSION REGION I
OPERATOR LICENSING EXAMINATION REPORT

EXAMINATION REPORT NO.: 50-247/85-16 (OL)

FACILITY DOCKET NO.: 50-247

FACILITY LICENSE NO.: DPR-26

LICENSEE: Consolidated Edison Company of New York, Inc.
Buchanan, New York 10511

FACILITY: Indian Point 2

EXAMINATION DATES: July 9-11, 1985

CHIEF EXAMINER:

D F Johnson
D. F. Johnson, Lead Reactor Engineer
(Examiner)

8/19/85
Date

REVIEWED BY:

R M Keller
R. M. Keller, Chief, Projects Section 1C

8/19/85
Date

APPROVED BY:

H B Kister
H. B. Kister, Chief, Projects Branch No. 1

8/22/85
Date

SUMMARY: Written and oral simulator examinations were administered for 12 SRO candidates, 10 SRO Upgrades and two SRO Instantants. One SRO Upgrade candidate failed the written examination.

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REPORT DETAILS

TYPE OF EXAMS: Replacement

EXAM RESULTS:

	SRO Pass/Fail
Written Exam	11/1
Oral Exam	12/0
Simulator Exam	12/0
Overall	11/1

1. Chief Examiner at Site: D. Johnson, NRC
2. Other Examiners:
 - D. Ruscitto, NRC
 - D. Coe, NRC
 - B. Picker, EG&G Idaho, Inc.
 - B. Hemming, EG&G Idaho, Inc.
 - O. Burke, NRC Consultant

1. Summary of Generic Deficiencies From Oral and Simulator Exams:

Licensee responses to the following items were made by letter from Mr. Murray Selman to Mr. Richard Starostecki dated July 26, 1985.

Minor deficiencies with no safety significance were noted in the following areas:

Simulator

- a. RCP vibration monitors not installed.

RCP vibration simulation is scheduled to be completed by December 1985. NRC concurs with this action. (Item 85-16-01).

- b. Plant computer "Proteus" not modeled.

Proteus implementation is planned after completion of Combustion Engineering (CE) model upgrading. NRC concurs with this action. (Item 85-16-02)

- c. RMS is not modeled where it is needed to confirm LOCAs.

The RMS model has been written and is scheduled to be integrated into the simulator by December 1985. NRC concurs with this action. (Item 85-16-03)

- d. Natural circulation modeling deteriorates after a short time.

CE has been contracted to upgrade this model prior to third quarter 1986. NRC concurs with this action. (Item 85-16-04)

- e. Two phase interaction in S/Gs and Pressurizer not modeled.

CE has been contracted to upgrade this model prior to third quarter 1986. NRC concurs with this action. (Item 85-16-05)

- f. Initial Condition #1 (cold shutdown) is for solid conditions only. No other cold I.C. exists for training or exams.

The formation of a bubble in the pressurizer will be included in IC-1 by October 1985. NRC concurs with this action. (Item 85-16-06)

- g. Simulator malfunction list does not include alarm responses and plant behavior for each malfunction.

Malfunction list will be revised by November 1985 to include indications and operating responses. NRC concurs with this action. (Item 85-16-07)

Plant

- a. Pressurizer pressure indication at the shutdown panel in the Primary Auxiliary Building (PAB) is narrow range only. No full range indication is available at this panel to provide for achieving and maintaining cold shutdown capability.

Licensee referred to NRC Safety Evaluation Report dated August 22, 1983 and supplement dated March 30, 1984 which concluded that the IP-2 Alternate Safe Shutdown System (ASSS) meets 10 CFR 50, Appendix R criteria. The NRC Operator Licensing Section in Region I disagrees that this report resolves the question of remote cold shutdown capability at IP-2 and has turned this item over to the Division of Reactor Safety for review during their next IP-2 Appendix R review scheduled for September 1985. (Item 85-16-08)

- b. No remote shutdown or remote operations procedures are permanently located at remote shutdown stations. Presently, they must be carried from the Central Control Room during Control Room evacuation.

Licensee will complete a review and place procedures as necessary by September 1985. NRC Operator Licensing Section Region I desires to be informed of the results of this review and procedure placement prior to the licensees next operator license examination in December 1985. (Item 85-16-09)

- c. Remote S/G and Pressurizer level indications were not labeled at the remote shutdown panel. All indications read in inches of water differential pressure with no posted or locally available conversion table.

Licensee will place an operator aid to assist in determination of water levels at the alternate safe shutdown panel by August 8, 1985. NRC will evaluate the effectiveness of this aid during the next operator licensing exam in December 1985. (Item 85-16-10)

- d. No dedicated phone system is available for the operators of the several remote shutdown stations. Presently, walkie-talkies are the only instantaneous direct communication method available, and these must be brought from the guard house when needed.

An in-plant wireless communication system is being acquired and is scheduled to be installed in areas outside the containment by December 1985. NRC concurs with this action. (Item 85-16-11)

2. Summary of Generic Deficiencies Noted From Written Exam:

RO Exam - Not given

SRO Exam - (12 candidates)

The following were areas of minor weakness:

- Power coefficient changes over range of core power and lifetime.
- DNBR changes during selected transients.
- GT-25 interlock.
- Steam Dump Interlocks
- Technical Specification bases for sources of borated water.
- Circumstances warranting departure from the intent of approved procedures.

3. Interface with Plant Staff During Exam Period:

The simulator instructors continue to perform their liaison duties in an outstanding manner, greatly enhancing the examination process. This allows last minute scenario modifications to examine new areas with little pause in the flow of the scenario.

4. Personnel Present at Exit Interview:

NRC Personnel

D. Johnson, Chief Examiner
D. Ruscitto, Reactor Engineer (Examiner)
D. Coe, Reactor Engineer (Examiner)
L. Rossbach, Senior Resident Inspector
P. Kelley, Resident Inspector

Facility Personnel

H. Morrison, Con Edison Operations Manager
M. Anderson, Senior Operator Training Instructor
D. Huntington, Senior Operator Training Instructor

L. Kawula, Nuclear Training Director
A. Budnick, General Manager-Administrative Service
J. Basile, General Manager-Nuclear Power Generation
J. Rowland, Instructor-Training
M. Blatt, Director, Regulatory Affairs, Nuclear Power
P. Zarakas, Vice President-Special Projects

5. Summary of NRC Comments Made At Exit Interview:

The deficiencies noted above were discussed. Training improvements and interface with plant staff were summarized as well. No specific preliminary results were presented, although general simulator performance was characterized as outstanding, particularly with respect to the use of ERGs, teamwork, and diagnostic ability.

6. Examination Review:

At the conclusion of the written examinations, the examiners met with the following licensee personnel to review the exam and answer keys to identify any inappropriate questions relative to plant specific design and to ensure that the questions will elicit the answers in the key and that they reflect the most current plant conditions.

M. Anderson, Senior Instructor
D. Huntington, Senior Instructor
J. Rowland, Senior Instructor

Attachments:

1. Written Examination(s) and Answer Key(s) (SRO/RO)
2. Facility Comments on Written Examinations Made After Exam Review

Transaction Type

M-3

NRC:1 Form 6 Rev. Oct 80 (Side 1)

☒ New Item☐ Modify☐ DeleteOUTSTANDING ITEMS FILE
SINGLE DOCKET ENTRY FORM

Docket #

50-247

Coe, D.H.

Originator

Keller, Bob

Reviewing Supervisor Name

Item Number	Type	Module #	Area	Resp	Action Due Date	Updt/Clsout Rpt #	Date O/M/Clsd
85-16-01	IFI		OLS	<input checked="" type="checkbox"/>			
Originator		Modifier/Closer					

Descriptive Title

SIMULATOR DEFICIENCY-NO RCP VIBRATION MODELING

Item Number	Type	Module #	Area	Resp	Action Due Date	Updt/Clsout Rpt #	Date O/M/Clsd
85-16-02	IFI		OLS	<input checked="" type="checkbox"/>			
Originator		Modifier/Closer					

Descriptive Title

SIMULATOR DEFICIENCY-NO PROTEUS

Item Number	Type	Module #	Area	Resp	Action Due Date	Updt/Clsout Rpt #	Date O/M/Clsd
85-16-03	IFI		OLS	<input checked="" type="checkbox"/>			
Originator		Modifier/Closer					

Descriptive Title

SIMULATOR DEFICIENCY-NO RMS MODEL

Item Number	Type	Module #	Area	Resp	Action Due Date	Updt/Clsout Rpt #	Date O/M/Clsd
85-16-04	IFI		OLS	<input checked="" type="checkbox"/>			
Originator		Modifier/Closer					

Descriptive Title

SIMULATOR DEFICIENCY-NO NATURAL CIRC MODEL

Transaction Type

M-3

NRC:1 Form 6 Rev. Oct 80 (Side 1)

☐ New Item☐ Modify☐ DeleteOUTSTANDING ITEMS FILE
SINGLE DOCKET ENTRY FORM

Docket #

50-247

Originator

Reviewing Supervisor Name

Item Number

85-16-05

Type

IFI

Module #

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Area

OLS

Resp

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Action Due Date

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MM DD YY

Updt/Clsout Rpt #

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Date O/M/Clsd

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MM DD YY

Originator

[][][][][][][]

Modifier/Closer

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Descriptive Title

SIMULATOR DEFICIENCY-NO STEAM BUBBLE MODEL
MODEL

Item Number

85-16-06

Type

IFI

Module #

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Area

OLS

Resp

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Action Due Date

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MM DD YY

Updt/Clsout Rpt #

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Date O/M/Clsd

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MM DD YY

Originator

[][][][][][][]

Modifier/Closer

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Descriptive Title

SIMULATOR DEFICIENCY-NO NON-SOLID COLD IC

Item Number

85-16-07

Type

IFI

Module #

[][][][]

Area

OLS

Resp

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Action Due Date

[][]-[][]-[][]

MM DD YY

Updt/Clsout Rpt #

[][]-[][]-[][]

Date O/M/Clsd

[][]-[][]-[][]

MM DD YY

Originator

[][][][][][][]

Modifier/Closer

[][][][][][][]

Descriptive Title

SIMULATOR DEFICIENCY-INCOMPLETE MALFUNCTION LIST

Item Number

85-16-08

Type

UNR

Module #

[][][][]

Area

EPP

Resp

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Action Due Date

[][]-[][]-[][]

MM DD YY

Updt/Clsout Rpt #

[][]-[][]-[][]

Date O/M/Clsd

[][]-[][]-[][]

MM DD YY

Originator

JOHNSON

Modifier/Closer

ANDERSON

Descriptive Title

NO WIDE RANGE PRESSURIZER PRESSURE INSTRUMENT INSTALLED ON
ALTERNATE SAFE SHUTDOWN SYSTEM PANELS

Transaction Type

M-3

NRC:1 Form 6 Rev. Oct 80 (Side 1)

☐ New Item☐ Modify☐ DeleteOUTSTANDING ITEMS FILE
SINGLE DOCKET ENTRY FORM

Docket #

50-247

Originator

Reviewing Supervisor Name

Item Number

Type

Module #

Area

Resp

Action Due Date

Updt/Clsout Rpt #

Date O/M/Clsd

85-16-09

IFI

OLS

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MM DD YY

MM DD YY

Originator

Modifier/Closer

Descriptive Title

NO PROCEDURES IN PLACE AT ~~AL~~ ALTERNATE SAFE SHUTDOWN SYSTEM STATIONS

Item Number

Type

Module #

Area

Resp

Action Due Date

Updt/Clsout Rpt #

Date O/M/Clsd

85-16-10

IFI

OLS

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MM DD YY

MM DD YY

Originator

Modifier/Closer

Descriptive Title

NO METHOD OF CONVERTING S/G OR PRESSURIZER WATER LEVEL READINGS ON ALT SAFE SHUTDOWN PANEL

Item Number

Type

Module #

Area

Resp

Action Due Date

Updt/Clsout Rpt #

Date O/M/Clsd

85-16-11

IFI

OLS

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MM DD YY

MM DD YY

Originator

Modifier/Closer

Descriptive Title

NO IMMEDIATE COMMUNICATIONS SYSTEM AVAILABLE FOR ALT SAFE SHUTDOWN SYSTEM USE

Item Number

Type

Module #

Area

Resp

Action Due Date

Updt/Clsout Rpt #

Date O/M/Clsd

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MM DD YY

MM DD YY

Originator

Modifier/Closer

Descriptive Title