

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No: 50-461/OL-92-02

Docket No. 50-461

License No. NPF-62

Licensee: Illinois Power Company
P. O. Box 678
Clinton, IL 61727

Facility Name: Clinton Power Station

Examination Administered At: Clinton Power Station
Clinton, IL

Examination Conducted: June 22-26, 1992

Examiners: K. M. Shembarger, NRC, Region III
D. A. Prawdzik, INEL

Chief Examiner:

M. N. Leach
M. N. Leach

7/8/92
Date

Approved By:

M. J. Jordan
M. J. Jordan, Chief
Operator Licensing Section 1

7/8/92
Date

Examination Summary

Examination administered on June 22-25, 1992 (Report No. 50-461/OL-92-02)

Written and operating requalification examinations were administered to nine Senior Reactor Operators (SROs) and two Reactor Operators (ROs). Two operating shift crews and one staff crew were evaluated on the simulator portion of the examination. Four additional operators were brought to complete crew complements and were evaluated only on the simulator portion of the examination.

In addition, retake initial written examinations were administered to two ROs who had previously failed this portion of the initial examination in January 1992.

Results: All individuals passed the requalification examination and all crews passed the dynamic simulator portion of the examination. Based on the evaluation of fifteen operators in the

dynamic simulator portion of the examination, Region III, in consultation with NRC Operator Licensing Branch, has assigned the Clinton Power Station Regualification Training Program an overall satisfactory rating.

The two RO candidates successfully passed the retake written initial examination.

Observations from Regualification Examination

Strengths

- Crew communications were consistent and complete. Crews demonstrated good teamwork. (For details see Section 3)
- Recently developed dynamic simulator scenarios were discriminating and evaluated EOP's in significant depth. (For details see Section 3)

Weaknesses

- Older dynamic simulator scenarios required significant modification to meet examination requirements. (For details see Section 3).
- Medical qualifications of licensed operators and timeliness of medical examinations. (For details see Section 5)

Observations from Initial Examination

Strengths

- The material supplied for the initial written examination was complete and well organized. (For details see Section 5)
- The licensee's review of the examination was thorough and constructive. (For details see Section 5)

Observations from Medical Program Review

Two occasions were identified where the medical qualifications of a licensed operator did not meet NRC requirements and no action was taken to evaluate and report to the NRC as appropriate. Corrective actions implemented during the examination week should be sufficient to preclude repetition.

This is a violation of 10 CFR 55.25 but is not being cited because the criteria specified in Section V.A of the Enforcement Policy were satisfied.

The duration between licensed operator medical examinations is also a concern. Four cases were identified where examinations were overdue. These cases occurred during 1987 to 1989 and the situation has significantly improved since the installation of a computer tracking system. This is a violation of 10 CFR 55.21 but is not being cited because the criteria specified in Section V.A of the Enforcement Policy were satisfied.

REPORT DETAILS

1. Examiners

- *+ M. N. Leach, Chief Examiner, NPC, Region III
- *+ K. M. Shembarger, NRC, Region III
- *+ D. A. Prawdzik, INEL

2. Facility Representatives Contacted

- + J. Cook, Plant Manager (Vice President)
- *+ D. Antonelli, Director - Operations Training
- + R. Derbort, Supervisor - Medical Programs
- * R. Frantz, Senior Licensing Engineer
- + G. Halverson, Project Engineer
- T. Landin, EOP Coordinator
- + R. Langley, Director - Design & Analysis Engineering
- + J. Lewis, Principal Assistant to Senior Vice President
- + M. Lyon, Director - Emergency Response
- + R. Moore, Director - Plant Technical
- + R. Morgenstern, Manager - Nuclear Training
- + J. Neuschwanger, Assistant Director - Plant Operations
- *+ J. Owens, Supervisor - Requalification Operations Training
- + J. Palchak, Manager - Nuclear Planning & Support
- *+ R. Price, Senior Operations Instructor
- + D. Pruitt, Nuclear Program Assessor
- + F. Spangenberg, Manager - Licensing & Safety
- + J. Taylor, Director - Administration
- *+ P. Telthorst, Supervisor - License Training
- + R. Wyatt, Manager - Quality Assurance
- * P. Yocum, Director - Plant Operations

NRC Representatives

- + P. Brochman, Senior Resident Inspector
- *+ C. Zelig, Reactor Engineer, RIII

- * Denotes those attending the training exit on June 26, 1992.
- + Denotes those attending the management exit on June 26, 1992.

3. Training Program Observations

The training program was observed to be adequately and competently staffed. With some exceptions, the licensee's proposed requalification examination was satisfactory.

The following information is provided for evaluation by the licensee via their SAT based training program. No response is required.

a. Written Examination - Requalification

Strengths

- The sample plan for the requalification examination was comprehensive and complete, however this should specifically include material not taught during the most recent training cycle.

Weaknesses

- The format of some questions in Section B (Limits & Controls) caused the questions to be confusing. Some questions had lengthy paragraphs describing plant conditions rather than a simple list of plant parameters. Some questions had the question stem embodied in the middle of a paragraph describing plant conditions. Questions for the examination were modified to a standard question format.
- The distractors for some questions in Section B were not plausible in the given situation. These questions were modified for the examination.
- Questions in Section A (Static Simulator) were modified by the examination team to raise the comprehension level of the questions and to test the operators' diagnostic skills. The intent of this examination is to determine the operators' diagnostic capabilities rather than test procedural actions which is the intent of Section B.

b. Job Performance Measures (JPMs) - Requalification

Strength

- Communications between evaluators and operators was clear and consistent.

Weakness

- The proposed examination did not contain any SRO specific JPM's. The examination team added two SRO JPM's to the examination. One of these was already under development and the other was developed by the examination team.
- Six out of six operators missed a question related to the Technical Specification requirements for the Safety Relief Valves.

c. Scenarios - Requalification

Strengths

- The proposed examination consisted of dynamic scenarios which had recently been written as well as older scenarios. The five most recent scenarios (SDS 21 through 25) were comprehensive and discriminating and met the guidance in the Examiners' Standards. Three of these scenarios were run without modification (except for Individual Simulator Critical Task identification) for the examination.
- The documentation for the dynamic scenarios showed all expected actions which facilitated the observation process.
- Crew communications were consistent and concise. The repeat back and acknowledgement scheme allowed accurate communication without unnecessary delay. Teamwork was excellent. Individuals provided support to other crew members as appropriate.
- With one exception, Senior Reactor Operator command and control was good. Crews consistently pursued all possible success paths during the dynamic scenarios. Operators performing Reactor Operator duties demonstrated good board manipulation skills.

Weaknesses

- Individual Scenario Critical Task (ISCT) designation had improved but some proposed ISCT's were not safety significant. For example, EOP entry in itself has no safety significance. Also placing the mode switch to shutdown to avoid a Group 1 isolation loses its safety significance if an isolation malfunction is included in the scenario.
- Three scenarios in the proposed examination had been developed prior to the current requalification year. The older scenarios did not sufficiently exercise the EOP's in scope and depth. One scenario required significant modification to bring it to the required level. Another scenario was replaced.

d. Written Examination - Initial

Strengths

- The reference material provided was complete, well organized, and well labeled. This assisted in the development of the examination. This is a significant improvement over the material supplied for the previous examination.
- The licensee's review of the initial examination was thorough and provided constructive criticism of the questions. There were no post examination comment from the licensee.

Weaknesses

None observed.

4. General

The licensee was responsible for examination administration while NRC observed the process. Co-evaluation of the operators was performed by the NRC and the licensee. During examination administration the NRC assessed each licensee evaluator's ability to conduct consistent and objective examinations and their ability to provide unbiased evaluations of the operators.

During administration of the examination the NRC examiners evaluated other licensee activities as appropriate.

a. Training Staff

- The facility evaluators used in the requalification examination were good. During the dynamic simulator phase of the examination, facility evaluators were more stringent in grading than the NRC examiners. This resulted in a more conservative evaluation of crew competencies.
- The training staff were courteous and professional throughout the examination. Training staff exhibited a non-defensive attitude to comments from the NRC examiners.
- Assignment of individuals within the training organization to handle specific portions of the examination contributed to a well coordinated examination prep week and smooth examination administration.

b. Operations, Security, Rad Protection, Other

- Operations, radiation protection and security personnel were courteous and professional throughout the examination
- Operations department involvement in the training and evaluation of operators was evident to the NRC examiners.
- The NRC examiners identified that Protective Action Recommendations are verbally transferred to the individual performing the communicator function without an approval signature by the individual having command authority. This item has been transferred to the Regional Emergency Preparedness and Non-power Reactor Section.
- One operator misread a Diesel Generator frequency meter on two occasions. This may be a human factors issue. The licensee is considering this issue.

5. Licensed Operator Medical Reviews

During preparation for the NRC requalification examination, the examiners reviewed the medical records for fifteen licensed operators and the licensee's program that controls the medical review process to ensure the requirements of 10 CFR 55.21, 55.23, 55.25, 55.27, and 55.33(a)(1) were being satisfied.

a. Two year Medical Examinations

From 1987 to 1989 four of the fifteen licensed operators failed to receive a medical examination within the maximum two year interval. For the four individuals, the time was exceeded by 4, 37, 56, and 96 days. The licensee initiated a computerized system in 1991 to track medical examinations. The examiners identified one occurrence of an overdue medical after the computer system was placed in service. A licensed operator was due for a medical examination by June 21, 1992, and, at the time of the exit on June 26, 1992, had not been examined. The license for this operator is in the process of being terminated and no further action on this individual was considered necessary. The licensee's computer system appears to have resolved the overdue medical examinations. The one 1992 case is considered abnormal.

At the exit meeting on June 26, 1992, the licensee stated a review of the medical program would be performed.

10 CFR 55.21 states "a licensee shall have a medical examination by a physician every two years".

Contrary to the above from 1987 to 1989, and in 1992, five licensed operators exceeded two years between medical examinations. This is a violation of 10 CFR 55.21.

This violation is not being cited because the criteria specified in Section V.A of the Enforcement Policy were satisfied.

b. NRC Notification

The examiners identified the NRC had not been notified when two licensed operators had been evaluated as having conditions which did not meet the minimum health requirements:

• Operator #1

Guidance provided in ANSI/ANS 3.4-1983 requires that the minimum acceptable vision requirement is 20/40 distance and near in the best eye.

11/21/90 licensed operator receives eye examination as part of a respirator physical, which identified his best eye was 20/30 distance and 20/50 near. The operator did not wear corrective lenses.

6/14/91 operator receives an eye examination as part of his licensed operator exam, which concluded that his vision in his best eye was 20/40 distance and near.

late 1991 operator begins wearing eyeglasses on shift.

6/9/92 operator receives an eye examination which identified distance vision as 20/70 uncorrected and 20/40 corrected in his best eye.

The examiners determined the results of the 11/21/90 examination indicated the operator's vision did not meet the requirements for a licensed operator. The results were not reviewed

by the licensee to ensure the minimum medical requirements for a licensed operator were met. This condition was not reported to the NRC.

The Chief Examiner informed the individual on 6/25/92 that his license was considered conditional on wearing corrective lenses until the facility licensee notified the NRC of this condition and a modified license was issued. This information was also provided to the Director - Plant Operations.

• Operator #2

Guidance provided in ANSI/ANS 3.4-1983 requires that if the medical examination reveals a heart murmur, a report of an evaluation by a physician proficient in cardiovascular evaluations shall accompany the medical examination report, and shall include an interpretation of an ECG and chest X-ray.

9/22/89 during a respirator physical, a previously unidentified heart murmur was detected.

6/21/90 during a licensed operator medical examination, the murmur was not identified.

7/9/91 during a respirator physical, a heart murmur was detected which was also classified as previously unidentified.

The examination team determined that on two occasions, the facility licensee failed to perform an evaluation of the operator's respirator exam results to determine if the operator's medical condition satisfied his license requirements. This condition was not reported to the NRC.

This operator is the same individual who was overdue for a medical examination on 6/21/92 and is in the process of terminating his license. No further action on this individual was considered necessary.

When notified by the examination team, the facility licensee initiated a 100% review of licensed operator physicals to ensure the results of all physicals were evaluated against the licensed operator medical standards. In addition, procedure SOP MP-02, "NRC

Licensed Operator Physical Examinations", was initiated which requires medical staff to review respirator physical information against the medical standards for licensed operators.

At the exit meeting on June 26, 1992 the licensee stated a review of the medical program would be performed.

10 CFR 55.25 states "if, during the term of the license, the licensee develops a physical condition that causes the licensee to fail to meet the requirements of 10 CFR 55.21 of this part, the facility licensee shall notify the Commission within 30 days of learning of the diagnosis". NRC Form 396, "Certification Of Medical Examination By Facility Licensee", requires that either the guidance in ANSI/ANS 3.4-1983, ANSI/ANS 15.4-1977, or an acceptable alternative method, approved by the NRC, be followed, when performing the medical examination.

Contrary to the above on 9/22/89, 11/21/90, and 7/9/91 the facility licensee failed to notify the NRC of individuals having a physical condition causing the individual to fail to meet the requirements of 10 CFR 55.21. This is a violation of 10 CFR 55.25.

This violation is not being cited because the criteria specified in Section V.A of the Enforcement Policy were satisfied.

6. Simulator Observations

Simulator discrepancies were identified. These discrepancies are noted in Enclosure 3.

7. Exit Meeting

A preliminary exit meeting with the facility training department was held on June 26, 1992, and a final exit meeting with Clinton Power Station plant management was held later the same day. Those attending the meetings are listed in Section 2 of this report. The following items were discussed during the exit meeting:

- Strengths and weaknesses noted in this report.
- The general observations relating to the plant noted in Section 4.
- Items of concern noted in Section 5.

The preliminary rating of the Clinton requalification training program was presented at the exit meeting. The licensee was informed that the results would be documented in an examination report.

ENCLOSURE 2

SIMULATION FACILITY REPORT

Facility Licensee: Illinois Power Company, Clinton Power Station

Facility Licensee Docket No. 50-461

Operating Tests Administered On: 06/23/92 - 06/24/92

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 (Note SPR refers to Simulator Problem Report number):

<u>ITEM</u>	<u>DESCRIPTION</u>
1. SRV leaking annunciator	When Initial Condition 22 is activated, this annunciator alarms without cause.
2. Condenser vacuum	Condenser vacuum does not diminish when circulating water flow is interrupted (SPR 92-27).
3. APRM spikes	Average Power Range Monitors spike without reason (SPR 91-194).
4. SLC pressure	Standby liquid control system discharge pressure remains at 1200 prig even if the reactor vessel is depressurized (SPR 92-22).
5. SRV Indications	Display Control system indication for SRV position is from valve position rather than acoustic monitor (SPR 92-99). Also lamp indications from Division I power do not extinguish when power is lost (SPR 92-97).
6. ADS actuation	Automatic Depressurization System reset when it was supposedly sealed in (SPR 92-98).

ENCLOSURE 3

REQUALIFICATION PROGRAM EVALUATION REPORT

Facility: Clinton Power Station

Examiners: M. Leach, Chief Examiner, Region III
K. Shembarger, Region III
D. Prawdzik, INEL

Dates of Evaluation: June 22 - 26, 1992

Areas Evaluated: X Written X Oral X Simulator

Examination Results:

	RO Pass/Fail	SRO Pass/Fail	Total Pass/Fail	Evaluation (S or U)
Written Examination	<u>2/0</u>	<u>9/0</u>	<u>11/0</u>	<u>S</u>
Operating Examination Oral	<u>2/0</u>	<u>9/0</u>	<u>11/0</u>	<u>S</u>
Simulator	<u>4/0</u>	<u>11/0</u>	<u>15/0</u>	<u>S</u>
Evaluation of facility written examination grading				<u>S</u>

Crew Examination Results:

	Crew 1 Pass/Fail	Evaluation (S or U)	Crew 2 Pass/Fail	Evaluation (S or U)
Operating Examination	<u>Pass</u>	<u>S</u>	<u>Pass</u>	<u>S</u>
	Crew 3 Pass/Fail	Evaluation (S or U)		
	<u>Pass</u>	<u>S</u>		

Overall Program Evaluation

Satisfactory S Unsatisfactory _____

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7/9/92