

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 50-333/91-026
Report No. 91-026
License No. DPR-59
Licensee: Power Authority of New York
James A FitzPatrick Nuclear Power Plant
Post Office Box 41
Lycoming, New York 13093
Facility Name: James A FitzPatrick Nuclear Power Plant
Dates: December 2 - 6, 1991
Inspectors: S. L. Hansell, Operations Engineer
J. G. Caruso, Operations Engineer

Inspector:

Samuel L. Hansell
Samuel L. Hansell, Operations Engineer

1/15/92
Date

Approved By:

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

1/15/92
Date

Inspection Summary: Inspection from December 2 to 6, 1991 (Report No. 50-333/91-026)

Areas Inspected: A routine, announced safety inspection was conducted to review the licensed and nonlicensed operator training programs. The inspection also focused on the licensed operator requalification short term corrective actions and a follow-up on the findings of the NRC Diagnostic Evaluation Team (DET) inspection.

Results: In general, the training administered to the licensed operators is conducive to safe operation of the plant. The operations and training personnel have a good working relationship. Both departments have personnel with high levels of plant operating experience. The licensee satisfactorily completed the licensed operator requalification (LOR) program short term corrective actions. The licensee's corrective actions to make up previously missed LOR training for 1991 is adequate.

One apparent violation was identified relating to ineffective management control of active and inactive licensed operators (paragraph 5.1, No. 333/91-26-01). There were two unresolved items: (1) two licensed training instructors do not participate in all segments of the LOR program (paragraph 5.2, No. 333/91-26-02), and (2) no significant progress was noted for a DET inspection finding to have training instructors observe nonlicensed operators on plant rounds (paragraph 5.3, No. 333/91-26-03).

DETAILS

1.0 Persons Contacted

1.1 New York Power Authority

- * R. Converse, Resident Manager JAF
- * R. Liseno, General Manager Operations
- * R. Locy, Superintendent Operations
- * D. Simpson, Training Manager
- * F. Catella, Operations Training Supervisor
- * D. Lindsay, General Manager Maintenance
- * W. Flynn, Manager Nuclear Training and Support
- J. Kerfien, NYPA Quality Assurance
- B. Lawton, NYPA Quality Assurance
- M. McMahon, NYPA Radiological Environmental Services
- J. Solini, NYPA Radiological Environmental Services

1.2 NRC Personnel

- * L. Bettenhausen, Chief, Operations Branch
- W. Cook, Senior Resident Inspector
- * S. Hansell, Operations Engineer
- * J. Caruso, Operations Engineer

The inspectors also contacted various senior reactor operators, reactor operators, and members of the training staff during the course of this inspection.

*Denotes those present at the exit interview on December 6, 1991.

2.0 Purpose of Inspection

The purpose of the safety inspection was to determine the effectiveness of the training administered to licensed and nonlicensed operators. This inspection had two objectives. The first objective was to verify the effectiveness of the Emergency Operating Procedure (EOP-3), "Failure to Scram" procedure training given to licensed operators. The EOP-3 training was commitment No. 6 in the Confirmatory Action Letter (CAL) dated May 15, 1991. The second objective was to review the administrative and record keeping requirements for the licensed and nonlicensed training programs. Specifically, the NRC Diagnostic Evaluation Team (DET)

inspection noted that licensed operators did not attend or make up segments of the requalification training program.

3.0 Background

During the week of April 29, 1991, the NRC conducted a requalification program evaluation at the James A. FitzPatrick Nuclear Power Station. The evaluation resulted in an unsatisfactory licensed operator requalification program.

A Confirmatory Action Letter (CAL), No. 1-91-010, was issued on May 15, 1991. The CAL contained six short term and three long term corrective actions agreed upon by the facility to correct the licensed operator requalification (LOR) program deficiencies.

The NRC conducted an evaluation to assess the adequacy of the facility's LOR written exam process the week of June 10, 1991. The NRC staff concluded that the unsatisfactory operator performance on the written examination conducted the week of April 29, 1991, was due to weaknesses in the examination development process and not due to a knowledge or ability weaknesses of plant operating personnel. The Operator Evaluation Report No. 50-333/91-09 (OL) concluded that the NRC staff verified that five of the six CAL short term corrective actions were completed satisfactorily. The NRC determined that the corrective action for CAL commitment No. 6 was incomplete due to the unsatisfactory crew performance during the dynamic simulator evaluation on June 13, 1991. CAL commitment No. 6 was to provide additional training to all licensed operators in the use of EOP-3, "Failure to Scram," emergency operating procedure. The crew's unsatisfactory simulator performance indicated that training in the use of EOP-3 was not entirely effective.

An NRC Diagnostic Evaluation Team (DET) conducted an inspection the weeks of September 16 - 27, and October 14 - 22, 1991. The DET inspection noted deficiencies in the administration of operations training. First, licensed operators missed segments of the LOR program and did not make-up the training within the time stated by the facility's training procedures. Operations management was aware of the missed LOR training, but did not act to correct the situation. The facility committed to have the licensed operators make up the missed training by December 31, 1991, or restrict the individuals from performing licensed duties. Second, the training instructors are required by the facility training procedure to observe nonlicensed operators performing their plant rounds. The facility agreed to have the training instructors make up the observation of nonlicensed operators.

4.0 EOP-3 Training Review

Scope

The inspector reviewed the records for EOP-3 training administered to licensed operators since the April 29, 1991, requalification exam. The verification of adequate EOP-3 training is the last short term corrective action required to close the CAL for the LOR program. The inspector observed an operating crew perform an unannounced anticipated transient without a scram (ATWS) simulator scenario as a part of their regularly scheduled training to determine the adequacy of the EOP-3 training. The inspector reviewed the procedures for EOP-3 and Abnormal Operating Procedure (AOP-34), "Backup Control Rod Insertion," to determine if the format provides clear, concise, and easy to use information to combat a failure to scram event.

Findings

The inspector verified that the licensee provided EOP-3 training after the NRC LOR exam team noted a weakness in the use of procedure EOP-3. The NRC operating evaluation team noted additional weaknesses in the use of EOP-3 and AOP-34 (AOP-34 is an abnormal operating procedure performed concurrently with EOP-3) procedures. The inspector verified that the licensee administered additional EOP-3 and AOP-34 procedure training after the operator evaluations. The procedure training was conducted in the simulator during LOR cycle R91-6.1 and consisted of various failure to scram scenarios.

The inspector observed an unannounced ATWS dynamic simulator scenario. The scenario was a failure of the reactor protection system (RPS) to fully insert all control rods, main turbine trip with bypass valve failure and one stuck open safety relief valve. The success path was to initiate standby liquid control (SBLC) boron injection system and insert control rods manually using the normal control rod drive (CRD) system. The operator trying to insert control rods manually had difficulties using AOP-34 to determine and execute the most probable method to insert control rods based on the plant indications. Procedure AOP-34 does not prioritize the five methods available to insert control rods for different plant conditions and indications. It took approximately ten minutes from the time the operator picked up procedure AOP-34, until he started to insert control rods into the reactor core. The shift supervisor (SS) directed the initiation of SBLC pumps before the required torus water temperature of 110°F. The boron injection and control rod insertion reduced reactor

power below the average power range monitor (APRM) downscale indications. The crew was successful in dealing with the scenario. The facility evaluators gave a detailed and objective critique of the operating crew's performance for the dynamic simulator scenario.

The inspector interviewed two full operating crews to determine their opinion on the amount and quality of EOP-3 procedure training administered to them since the NPC requal exam. The operators stated that the EOP-3 and AOP-34 procedure training was comprehensive and thorough for performing the required actions to combat a postulated failure to scram event. The operators noted that the EOP-3 and AOP-34 procedures could be revised to provide better direction in the areas of control rod insertion and criteria for lowering reactor water level to reduce reactor power during an ATWS.

Conclusions

The inspector concluded that the licensee provided adequate training for the EOP-3 and AOP-34 procedures to close the CAL commitment No. 6. The inspector verified that all of the LOR training short term correction actions are complete. There is one CAL long term corrective action that is not complete for the LOR program. The licensee acknowledged to the inspector that EOP-3 and AOP-34 procedures need additional clarification to afford the operators clear and concise guidance to combat a postulated failure to scram event.

5.0 Operator Training Administrative and Record Review

Scope

The inspector reviewed the training department procedures and records of licensed and nonlicensed operators to determine if the facility administered and documented the training programs in accordance with regulatory requirements. The inspector reviewed the status of the licensee's corrective actions for the training weaknesses noted in the DET inspection. Sections 5.1 to 5.4 are the findings for this review.

5.1 Control of active and inactive licenses

The inspector reviewed the licensee's control of active and inactive senior reactor operator (SRO) staff licenses for the period of January 1, 1990, to September 30, 1991. An active licensed operator must participate in the

requalification training program and be in compliance with all conditions of the license as stated in 10 CFR 55.53(e), including watchstanding. The regulation states that an active SRO shall perform the functions of a senior operator by standing a minimum of seven 8-hour or five 12-hour shifts per calendar quarter. The inspector found that four SRO licensed staff personnel did not stand the minimum required seven 8-hour watches for the first, second, and fourth calendar quarters of 1990, first calendar quarter of 1991, and in a subsequent calendar quarter, performed the duties of a licensed SRO.

The inspector also noted that the licensee's program to control active licenses permitted a 25% grace period from one calendar quarter to the next calendar quarter to complete the minimum watchstanding time of seven 8-hour watches per calendar quarter. The requirements of 10 CFR 55.53.(e) do not permit a 25% grace period for missed watchstanding.

The inspector noted that on three occasions licensed SRO personnel were allowed to take credit for watchstanding time when they were actually performing duties other than the functions of a senior shift operator. For example, a licensed operator was allowed to use 16 hours of time spent in the technical support center (TSC) as a phone talker to complete his seven 8-hour shifts for a calendar quarter.

The inspector also reviewed the licensee's administrative control of inactive SRO staff licenses. An inactive licensed operator is not in compliance with the watchstanding requirements of seven 8-hour shifts per calendar quarter, but must participate in the requalification training program. In accordance with 10 CFR 55.53, an inactive licensed operator is authorized to resume licensed duties when an authorized representative of the facility certifies the following are complete: (1) stand 40 hours of watch under the instruction of an active licensed operator; (2) perform one plant tour including the review of plant turnover procedures, and (3) the qualification status of the licensee is current and valid.

Contrary to the above, four inactive SRO licensed personnel were allowed to resume licensed duties without documenting that all the above requirements contained in 10 CFR 55.53 (f) were complete between the period of June 25, 1990, to September 30, 1991.

The facility training procedure ITP-5, "Licensed Operator Requalification," contains additional conditions for an inactive licensed operator to complete prior to resuming shift duties. Procedure ITP-5, section 6.8.1, states that "the Operations Superintendent or designee shall certify through an oral interview that the licensee has completed the requisite shift functions under instruction and is qualified for resumption of licensed duties. The oral interview documentation shall be forwarded to the training department for retention in the Requalification Program File."

The inspector interviewed the operations and training management personnel to determine if the above criteria, in procedure ITP-5, was documented for inactive licensed operators returning to shift positions. The training personnel did not recall if any oral interview documentation was sent to the training center. The operations management noted that they did not document any oral interviews with inactive licensed operators prior to their return to shift. The inspector could not locate a mechanism to document completion of the requirements for an inactive licensed operator to return to shift duties.

The licensee's program to control active and inactive licenses was not effective. The failure to ensure only active licensed personnel perform the functions of a licensed senior operator is an apparent violation of 10 CFR 55.53(e) (333/91-26-01).

5.2 Missed LOR training

The DET inspection, conducted the weeks of September 16 - 27, and October 14 - 22, 1991, noted that licensed operators missed segments of the LOR program for 1991 and did not make up the training within the time requirements of the training procedures. Training procedure ITP-5, section 6.8.3, states that "operators and senior operators shall participate in the requalification training program to the extent required by their license. If LOR elements are missed due to illness, plant needs, etc., the missed requirements should be made up as soon as practical. Missed lectures or quizzes will be made up within two training cycles (12 weeks). If missed requirements are not made up within this time frame, the delinquent individuals will be removed from licensed duties until the requirements are completed."

The inspector reviewed the Training Department Curriculum Status Report for December 2, 1991, to determine the licensee's progress in making up missed LOR training since the DET finding. The inspector noted that approximately 95% of the missed LOR training was completed as of December 2, 1991. A process is in place to ensure the licensed operators complete the remaining missed training or restrict them from licensed duties. The inspector determined that the licensee's progress in this area is appropriate and the licensee's LOR curriculum status report should control missed LOR training in the future. The number of licensed personnel who need to complete missed training should not impact the safe operation of the plant.

The inspector reviewed the training records for the two licensed training instructors. The training instructors maintain inactive licenses and are only required to participate in the continuing requalification training as stated in 10 CFR 55.59 and procedure ITP-5 section 6.8.3.1. The inspector reviewed the 1991 LOR cycle six simulator training and noted that the two licensed training instructors did not perform and were not evaluated in the positions of a licensed SRO. The two training instructors are not listed as delinquent on the December 2, 1991, training curriculum report. The licensee interpretation would allow the two training instructors to receive credit for participation in the simulator scenarios if the instructors were evaluators or operated the simulator during the scenario. The inspector noted that all licensed personnel must comply with the requalification training requirements of 10 CFR 55.59. This item is unresolved and will be reviewed by NRC personnel on a future inspection (333/91-26-02).

5.3 Missed Nonlicensed Training

The DET inspection also noted that the training instructors are to observe nonlicensed operators performing their plant rounds. The inspector reviewed the nonlicensed operator training procedure ITP-10, "Training for Nonlicensed Operators." Procedure ITP-10 section 5.6.5 states that "once each shift cycle a nonlicensed operator instructor shall complete a rounds walk-through with a nonlicensed operator. The purpose of this walk-through is to standardize the way rounds are performed." The inspector reviewed the status of this DET

inspection finding and noted no significant progress in this area. The training supervisor stated that a nonlicensed instructor performed two partial rounds observations of nonlicensed operators, but did not document the observation. This item is unresolved and will be reviewed by NRC personnel on a future inspection (333/91-26-03).

5.4 Review of Initial Licensed Operator Training

The inspector reviewed the records for the last initial license (replacement) class completed in October 1990. The inspector reviewed the reactor operator and senior reactor operator qualification cards for the five licensed operator candidates. The review included documentation of the required time spent on shift under instruction with a licensed operator, performance of the required reactivity manipulations, and completion of the qualification cards. The inspector determined that the licensee's control of replacement license candidates was adequate and complied with the applicable regulations.

5.5 Conclusions

The training administered to the licensed operators is conducive to safe operation of the plant. The operations and training personnel have a good working relationship. Both departments have personnel with high levels of plant operating experience. The licensee satisfactorily completed the licensed operator requalification (LOR) program short term corrective actions. The licensee's corrective actions to make up previously missed LOR training for 1991 is adequate. One apparent violation was identified relating to ineffective management control of active and inactive licensed operators. There were two unresolved items: (1) two licensed training instructors do not participate in all segments of the LOR program, and (2) no significant progress was noted for a DET inspection finding to have training instructors observe nonlicensed operators on plant rounds.

6.0 Licensee Actions on Previous Findings

(OPEN) Unresolved Item (UNR 50-333/91-07-01) Unsatisfactory Requalification Program.

An update on this item is provided in section 4.0 of this report. This item will be closed when all requalification program long term corrective actions are completed and another requalification program evaluation is administered by the NRC staff.

7.0 Unresolved Items

Unresolved items are matters about which more information is required in order to determine whether they are acceptable, an item of noncompliance or a deviation. Unresolved items disclosed during the inspection are discussed in Sections 5.2 and 5.3.

8.0 Exit Meeting

The inspector met with licensee representatives (denoted in section 1.0) at the conclusion of the inspection on December 6, 1991. The inspector summarized the scope and findings of the inspection.

Attachment: Documents Reviewed

ATTACHMENT 1

Documents Reviewed

<u>Procedure Number</u>	<u>Title</u>	<u>Revision</u>
EOP-3	"Failure to Scram"	rev. 0
AOP-34	"Backup Control Rod Insertion"	rev. 9
ITP-1	"Management of Training Group Records"	rev. 13
ITP-4	"Licensed Operator/Senior Licensed Operator Replacement"	rev. 5
ITP-5	"Licensed Operator Requalification"	rev. 10
ITP-11	"Training for Technical Staff and Managers (TSM)"	rev. 7
PSO-50	"Training Attendance"	rev. 3
ITP-10	"Training for Nonlicensed Operators"	rev. 4
ODSO-24	"On Shift Training"	rev. 3

JAF Technical Specifications