

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

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Report No. 84-21
Docket No. 50-333
License No. DPR-59 Priority -- Category C
Licensee: Power Authority of the State of New York
Post Office Box 41
Lycoming, New York 13093
Facility Name: J. A. FitzPatrick Nuclear Power Plant
Inspection At: Scriba, New York
Inspection Conducted: October 1 - November 4, 1984
Inspector: *L. F. Doerflin* 11/14/84
L. F. Doerflin, Senior Resident Inspector date
Approved by: *Samuel Collins* 11/14/84
S. J. Collins, Chief, Reactor Projects date
Section 2C

Inspection Summary: Inspection on October 1 - November 4, 1984 (Report No. 50-333/84-21)

Areas Inspected: Routine and reactive inspection during day and backshift hours by one resident inspector (78 hours) of licensee action on previous inspection findings, licensee event report review, operational safety verification, surveillance observations, maintenance observations, near term followup to Generic Letter 83-28 in the areas of post trip review and surveillance testing of the diverse reactor trip functions, licensee management change, and review of periodic and special reports.

Results: No violations were identified in the areas inspected.

DETAILS

1. Persons Contacted

- R. Baker, Technical Services Superintendent
- R. Burns, Vice President, Nuclear Support-BWR
- T. Butler, Outage Coordinator
- V. Childs, Senior Licensing Engineer
- * R. Converse, Superintendent of Power
- M. Curling, Training Superintendent
- W. Fernandez, Operations Superintendent
- * H. Glovier, Resident Manager
- H. Keith, Instrument and Control Superintendent
- D. Lindsey, Assistant Operations Superintendent
- R. Liseno, Maintenance Superintendent
- C. McNeill, Senior Vice President-Nuclear Generation
- E. Mulcahey, Radiological & Environmental Services Superintendent
- R. Patch, Quality Assurance Superintendent
- T. Teifke, Security & Safety Superintendent

The inspector also interviewed other licensee personnel during this inspection including shift supervisors, administrative, operations, health physics, security, instrument and control, maintenance and contractor personnel.

*Denotes those present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) INSPECTOR FOLLOWUP ITEM (333/83-04-06): The inspector reviewed Maintenance Procedure No. 55.1, "600 Volt Air Circuit Breaker," Revision 1, dated September 19, 1984, and verified that the licensee revised the procedure to include specific guidance on the selection of time-current test points when testing the overcurrent trip devices. The inspector had no further questions regarding this item.

(Closed) INSPECTOR FOLLOWUP ITEM (333/84-08-01): The inspector reviewed Plant Standing Order No. 44, "Restricted Area Visitor Policy," Revision 1, dated October 10, 1984, and verified that the licensee has established a procedure which specifies the authorization, escort, training and dosimetry requirements for visitors entering the restricted areas of the plant. The inspector determined that this administrative control was adequate and had no further questions regarding this item.

3. Licensee Event Report (LER) Review

The inspector reviewed LER's to verify that the details of the events were clearly reported. The inspector determined that reporting requirements had been met, the report was adequate to assess the event, the cause appeared accurate and was supported by details, corrective actions appeared appropriate to correct the cause, the form was complete, and generic applicability to other plants was not in question.

LER's 84-018, 84-019, and 84-020 were reviewed.

No violations were identified.

4. Operational Safety Verification

a. Control Room Observations

Daily, the inspector verified selected plant parameters and equipment availability to ensure compliance with limiting conditions for operation of the plant Technical Specifications. Selected lit annunciators were discussed with control room operators to verify that the reasons for them were understood and corrective action, if required, was being taken. The inspector observed shift turnovers biweekly to ensure proper control room and shift manning. The inspector directly observed the operations listed below to ensure adherence to approved procedures:

-- Plant startup.

-- Issuance of RWP's and Work Request/Event/Deficiency forms.

The inspector witnessed portions of the plant startup conducted October 29-November 4, 1984 to verify that: the startup was performed in accordance with approved procedures; surveillance tests required to be performed prior to the startup were satisfactorily completed; systems were properly aligned prior to startup; the control rod withdrawal sequence was available; and startup activities were conducted in accordance with Technical Specification requirements.

No violations were identified.

b. Shift Logs and Operating Records

Selected shift logs and operating records were reviewed to obtain information on plant problems and operations, detect changes and trends in performance, detect possible conflicts with Technical Specifications or regulatory requirements, determine that records are being maintained and reviewed as required, and assess the effectiveness of the communications provided by the logs.

No violations were identified.

c. Plant Tours

During the inspection period, the inspector made observations and conducted tours of the plant. During the plant tours, the inspector conducted a visual inspection of selected piping between containment and the isolation valves for leakage or leakage paths. This included

verification that manual valves were shut, capped and locked when required and that motor operated valves were not mechanically blocked. The inspector also checked fire protection, housekeeping/cleanliness, radiation protection, and physical security conditions to ensure compliance with plant procedures and regulatory requirements.

No violations were identified.

d. Tagout Verification

The inspector verified that the following safety-related protective tagout records (PTR's) were proper by observing the positions of breakers, switches and/or valves.

- PTR 841199 on "A" and "C" Emergency Diesel Generators.
- PTR's 841303 and 841334 on the "A" Residual Heat Removal System.
- PTR 841324 on the "A" Core Spray System.
- PTR 841374 on the "A" Residual Heat Removal Service Water System.
- PTR 841378 on the "A" Low Pressure Coolant Injection System Motor Operated Valve Independent Power Supply.
- PTR's 841379 and 841419 on the High Pressure Coolant Injection System.

No violations were identified.

e. Emergency System Operability

The inspector verified operability of the following systems by ensuring that each accessible valve in the primary flow path was in the correct position, by confirming that power supplies and breakers were properly aligned for components that must activate upon an initiation signal, and by visual inspection of the major components for leakage and other conditions which might prevent fulfillment of their functional requirements.

- Emergency Service Water System
- Core Spray System

- Low Pressure Coolant Injection System
- 125 Volt DC Power System

No violations were identified.

5. Surveillance Observations

The inspector observed portions of the surveillance procedures listed below to verify that the test instrumentation was properly calibrated, approved procedures were used, the work was performed by qualified personnel, limiting conditions for operation were met, and the system was correctly restored following the testing:

- F-ST-2F, LPCI and LPCI MOV Power Supply Simulated Automatic Actuation Test and LPCI Battery Service Test, Revision 12, dated August 29, 1984, performed October 24, 1984.
- F-ST-39H, Reactor Vessel Operational Pressure Test, Revision 6, dated October 24, 1984, performed October 25, 1984.
- F-ST-2H, LPCI Subsystem Logic System Functional Test, Revision 11, dated March 16, 1983, performed October 26, 1984.
- F-ST-5-0, SRM Functional Test, Revision 5, dated May 19, 1982, performed October 29, 1984.
- F-ST-9B, EDG Full Load Test and ESW Pump Operability Test, Revision 19, dated June 20, 1984, performed November 2, 1984.
- F-ST-4K, HPCI Turbine Overspeed Test, Revision 3, dated February 15, 1984, performed November 3, 1984.

No violations were identified.

6. Maintenance Observations

- a. The inspector observed portions of various safety-related maintenance activities to determine that redundant components were operable, these activities did not violate the limiting conditions for operation, required administrative approvals and tagouts were obtained prior to initiating the work, approved procedures appropriate to the task were used where required, appropriate radiological controls were properly implemented, ignition/fire prevention controls were properly implemented, and equipment was properly tested prior to returning it to service.

- b. During this inspection period, the following activities were observed:
- WR 02-2/25488 on the weld overlay repair of recirculation system pipe to elbow weld No. 12-02-2-70.
 - WR 05/23015 on the replacement of the "A" Reactor Protection System type HFA relays.
 - WR 23/34212 on the repair of the High Pressure Coolant Injection System turbine overspeed trip device.
 - WR's 93/25359 and 93/25360 on the replacement of the "A" and "C" Emergency Diesel Generator stator winding space heaters and air baffles.
- c. During the September 15-October 29, 1984 maintenance outage, the licensee continued the Induction Heating Stress Improvement (IHSI) program on recirculation system welds. A total of 84 welds were treated during this outage. In general, each weld received a base-line ultrasonic (UT) examination, the IHSI, and a post treatment UT examination. As a result of this program, the licensee identified indications believed to be Intergranular Stress Corrosion Cracking (IGSCC) in eleven recirculation system welds. Three of these eleven welds also had thru wall cracks. The following table is a summary of the IGSCC inspection results on these eleven welds. The crack length and depth are given in percent of circumference and percent thru wall respectively.

<u>Weld No.</u>	<u>Type</u>	<u>Length</u>	<u>Depth</u>
12-02-2-4	Riser pipe to sweepolet	1.0%	7.5%
12-02-2-12	Riser pipe to safe end	100%	100% Maximum 50% Average
12-02-2-17	Riser pipe to safe end	4.0% & 3.0% (2 indications)	10%
12-02-2-23	Riser pipe to safe end	100% (intermittent)	75% Maximum 40% Average
12-02-2-64	Riser pipe to safe end	100% (intermittent)	100% Maximum 30% Average
12-02-2-69	Riser pipe to safe end	100%	100% Maximum 30% Average

<u>Weld No.</u>	<u>Type</u>	<u>Length</u>	<u>Depth</u>
12-02-2-70	Riser elbow to pipe	12.6%	45%
28-02-2-48	Pump suction pipe to safe end	1.1%	15%
28-02-2-53	Pump suction elbow to valve	.3%	5%
28-02-2-112	Pump suction elbow to valve	.6%	17%
28-02-2-113	Pump suction valve to pipe	.5%	10%

Five of these welds (Nos 12-02-2-12, 12-02-2-23, 12-02-2-69, and 12-02-2-70) were repaired by full structural weld overlay repairs. Fracture mechanics evaluations were performed on the remaining six welds which concluded that continued operation with those welds would not result in reduced plant safety margins. These evaluations and the design analysis of the weld overlay repairs were sent to NRR in a letter dated October 21, 1984 and subsequently discussed in a meeting between NRR and the licensee on October 23, 1984. In a letter dated October 24, 1984, NRR authorized facility restart concluding that all weld overlay designs were acceptable and that the remaining six cracks, without repair, met the staff acceptance criteria (delineated in Generic Letter No. 84-11) for continued operation.

Further details of the licensee's IHSI program as well as the UT examination sizing techniques and data evaluation are discussed in Inspection Report No. 50-333/84-20.

7. Near Term Followup to Generic Letter 83-28

a. Post Trip Review

The inspector reviewed Operations Department Standing Order (ODSO) No.23, "Post Trip Evaluation," Revision 0, dated February 7, 1984, and verified that the licensee has implemented a post trip review program. The inspector noted that the procedure was approved by the Plant Operations Review Committee (PORC) and that it requires at least biennial reviews. The procedure defines the responsibilities of those personnel involved with the review and analysis of the event. Specifically: the Shift Technical Advisor, with the aid of

the on shift operators, collects pertinent plant data and completes the data sheets contained in the procedure; the Operations Superintendent, with the aid of the shift supervisor, analyzes the data to ensure that the plant responded as designed, that deficient items are noted and corrective actions initiated, and any appropriate training is initiated to prevent recurrence; the PORC reviews (and recommends a course of action) all reactor trips prior to restart where the cause of the trip is unknown, safety related equipment functioned in an abnormal manner and the cause is undetermined or deficiencies remain unresolved, or abnormal radiation readings or chemistry results occurred; and the Resident Manager makes the final decision on reactor restart.

Information used to analyze the trip is obtained from: the process computer, which provides Post Trip Log and Sequence of Events print-outs; strip chart recorders which record various plant parameters; and personnel observations of such items as valve/breaker position indication, annunciators, and various system parameters. Using the data collected, procedure ODSO No. 23 requires that bargraphs be constructed of reactor water level, pressure, neutron flux and dry-well pressure changes during the event. These bargraphs are compared to various system initiation/trip setpoints which are specified in the procedure to verify that all safety systems functioned as designed. The procedure also requires that following all trips a critique be held with those personnel involved, including maintenance and testing personnel if applicable, to review the sequence of events and note any system abnormalities, procedure inadequacies, or equipment malfunctions. The results of the critique are documented and attached to the trip report. The inspector noted that the licensee's record management program requires that the trip reports be maintained for the life of the plant.

Based on a review of procedure ODSO No. 23 and on observations of its implementation during previous plant trips, the inspector determined that the licensee's post trip review program was adequate and had no further questions regarding this item.

b. Surveillance Testing of the Diverse Reactor Trip Functions

As indicated in the licensee's response dated June 29, 1984, to Generic Letter 83-28, the inspector noted that the reliability of the Reactor Protection System (RPS), including the scram pilot valves, is demonstrated by the periodic tests and calibrations of RPS instrumentation and the scram time testing required by the Technical Specifications. No testing is performed on the scram backup valves nor is it required. The inspector had no further questions regarding this item.

8. Licensee Management Change

On October 26, 1984, Mr. Harold A. Glovier assumed the responsibilities of the Resident Manager of the facility, replacing Mr. Corbin A. McNeill, Jr. The inspector reviewed Mr. Glovier's resume to determine that Mr. Glovier meets the educational/experience qualification guidelines of ANSI N 18.1-1971.

No inadequacies were identified.

9. Review of Periodic and Special Reports

Upon receipt, the inspector reviewed periodic and special reports. The review included the following: Inclusion of information required by the NRC; test results and/or supporting information consistent with design predictions and performance specifications; planned corrective action for resolution of problems, and reportability and validity of report information. The following report was reviewed:

-- September 1984 Operating Status Report, dated October 9, 1984.

10. Exit Interview

At periodic intervals during the course of this inspection, meetings were held with senior facility management to discuss inspection scope and findings. On November 2, 1984, the inspector met with licensee representatives (denoted in paragraph 1) and summarized the scope and findings of the inspection as they are described in this report.