

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Report No. 86-01

Docket No. 50-333

License No. DPR-59 Priority -- Category C

Licensee: Power Authority of the State of New York
P.O. Box 41
Lycoming, New York 13093

Facility Name: J.A. FitzPatrick Nuclear Power Plant

Inspection At: Scriba, New York

Inspection Conducted: January 18 - March 10, 1986

Inspectors: A.J. Luptak, Resident Inspector
L.T. Doerflein, Project Engineer, DRP 2C

Reviewed by: L.T. Doerflein 4/8/86
L.T. Doerflein, Project Engineer
DRP 2C Date

Approved by: J.C. Linville 4/9/86
J.C. Linville, Chief, Reactor
Projects Section 2C, DRP Date

Inspection Summary: Inspection on January 18 - March 10, 1986 (Report No.
50-333/86-01)

Areas Inspected: Routine and reactive inspection during day and backshift hours by one resident inspector and one region based inspector (109 hours) of licensee action on previous inspection findings, licensee event report review, operational safety verification, surveillance observations, maintenance observations, TMI Task Action Plan Item followup, and review of periodic and special reports.

Results: One violation was identified in the areas inspected; failure to perform surveillance testing required by Technical Specifications within the specified time interval (details in paragraph 6). In addition, shift personnel apparently did not fully recognize the significance of a missed surveillance test and take prompt actions as discussed in paragraph 6. A followup to the Containment Atmosphere Analyzer operability issue is discussed in paragraph 4.

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DETAILS

1. Persons Contacted

*R. Baker, Acting Maintenance Superintendent
*R. Converse, Resident Manager
*W. Fernandez, Superintendent of Power
*J. Flaherty, Acting Instrument and Control
 Superintendent
*D. Lindsey, Operations Superintendent
*E. Mulcahey, Radiological & Environmental Services
 Superintendent
R. Patch, Quality Assurance Superintendent
V. Walz, Acting Technical Services 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. Summary of Plant Activities

The plant was operated at near full power throughout this inspection period.

3. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (333/82-08-02): The inspector noted that modification no. F1-82-52, installed during the 1983 refueling outage, relocated each Residual Heat Removal (RHR) pump discharge line orifice plate in order to eliminate the turbulent flow at the respective RHR pump discharge check valve. The turbulent flow was the cause of the vibration induced failures of these check valves. The inspector also noted that, since the orifice plates were relocated, there have not been any additional failures of the RHR pump discharge check valves. The inspector had no further questions and considers this item closed.

(Closed) Inspector Followup Item (333/82-12-03): The inspector noted that, although no further setpoint drift problems were identified with the Barksdale pressure switches used for the reactor low pressure permissive interlocks, the licensee replaced these pressure switches with Rosemount transmitters during the 1985 refueling outage as part of the Analog Transmitter Trip System modification. The inspector had no further questions and considers this item closed.

(Closed) Inspector Followup Item (333/83-04-10): The inspector reviewed procedure no. PSO 28, "Operating Experience Feedback," Revision 3, and noted that it requires that all IE Information Notices be evaluated and the results be documented. The inspector reviewed several evaluations of IE Information Notices and determined that the licensee was adequately implementing the procedure. The inspector also noted that the licensee established a computer tracking system to identify the status of all IE Information Notices. The inspector had no further questions and considers this item closed.

(Closed) Unresolved Item (333/83-29-02): The inspector reviewed surveillance test procedure no. F-ST-76W, "Mechanical Fire Barrier Penetration Seals Visual Inspection," Revision 2, and verified that the licensee established an acceptable procedure for performing inspections of piping fire barrier penetration seals. The inspector also reviewed the completed data sheets for the surveillance tests performed on January 10, 1984 and November 10, 1985 and determined that the licensee was adequately implementing procedure F-ST-76W. The inspector had no further questions and considers this item closed.

(Closed) Inspector Followup Item (333/84-04-01): The inspector reviewed the vendor's evaluation of the Barton differential pressure (dp) switch and noted that although several mechanical problems were found, none appeared to explain the setpoint instability. The inspector noted that licensee has replaced this dp switch (used to initiate the High Pressure Coolant Injection turbine trip on high reactor water level) with another Barton dp switch and has not experienced any further setpoint drift problems. The inspector also noted that the licensee plans on replacing these dp switches with Rosemount Transmitters, as part of the Analog Transmitter Trip System, during the next refueling outage. The inspector had no further questions and considers this item closed.

(Closed) Violation (333/84-04-03): As noted in Inspection Report No. 50-333/84-04, the inspector had previously verified that the licensee performed the required control rod scram time testing and that the results were satisfactory. The inspector also noted that, as indicated in the response to the violation, the licensee revised the startup and shutdown operating procedure to include a checkoff for scram time testing after outages during which control rod drives were replaced. The inspector also reviewed procedure WACP 10.1.1 "Procedure for Control of Maintenance", Revision 9, and verified that the licensee revised the procedure to include formal guidelines for post maintenance testing. The inspector had no further questions and considers this item closed.

(Closed) Unresolved Item (333/85-02-02): The inspector noted that on September 18, 1985, the NRC granted the licensee an exemption from paragraph III.D.2(b)(ii) of Appendix I to 10 CFR 50. The exemption allows the licensee to conduct a seal test of 1/3 of the entire airlock test following a period during which component integrity is not required and no maintenance has been performed on the airlock that could affect sealing capability. Amendment No. 97 to the facility operating license,

issued November 21, 1985, revised the Technical Specifications to make the airlock testing requirements consistent with the exemption. The inspector had no further questions and considers this item closed.

(Closed) Violation (333/85-28-01): The inspector noted that specific instructions have been added to Work Activity Control Procedure 10.1.2, "Equipment and Personnel Protective Tagging", regarding handling of voided protective tagouts. In addition, based on discussions with licensee personnel, the inspector determined that training has been given concerning this event and personnel have been instructed on proper tagging requirements. The inspector also verified that Quality Assurance (QA) Department personnel have been instructed in the verification of QA classification of Work Requests. The inspector had no further questions and will continue to monitor these activities during routine inspections.

4. Licensee Event Report (LER) Review

The inspector reviewed LERs 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 85-24-01 was reviewed and selected for onsite followup.

LER 85-24-01 is a supplemental report to LER 85-24 which reported inoperative Containment Atmospheric Analyzers. Details of this event are discussed in paragraph 7 of Inspection No. 50-333/85-31. Additionally, this LER discussed the results of the licensee's visit to the Exo-Sensors manufacturing site. The licensee's team reviewed the vendor's corrective actions based on an NRC inspection at the vendor's facility in May 1985 (Inspection No. 99901015/85-01) and actions based on defective equipment installed at FitzPatrick. The licensee team determined that the vendor is making good progress in resolving these issues and that their Quality Assurance program provides adequate confidence that they can supply satisfactory equipment and services to the licensee. A followup visit to ensure continued improvements is planned in about six months. Based on the results of the visit the hold the QA department had placed on parts on-site has been released.

Since this issue was discussed in paragraph 7 of Inspection No. 50-333/-85-31, the licensee has again experienced problems with calibration of the B oxygen analyzer and replaced the sensor for the B oxygen analyzer on March 7, 1986. A vendor representative will be on site during a two week outage beginning March 14, 1986 to assist the licensee in further troubleshooting efforts associated with the analyzers. The inspector will continue to follow the licensee's actions concerning this matter.

5. 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 bi-weekly to ensure proper control room and shift manning. The inspector directly observed the operations listed below to ensure adherence to approved procedures:

- Routine power operations.
- Issuance of RWP's and Work Requests/Event/Deficiency forms.

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 860106 on "A" Standby Liquid Control System.
- PTR 860183 on "B" Low Pressure Coolant Injection Independent Power Supply System.
- PTR 860198 on "A" Residual Heat Removal/Containment Spray System.
- PTR 860223 on Containment Vent and Purge 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:

- "A" Low Pressure Coolant Injection Independent Power Supply.
- Low Pressure Coolant Injection System.

No violations were identified.

6. 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-5B, Average Power Range Monitor Instrument Functional Test, Revision 10, dated December 14, 1983, performed January 21, 1986.
- F-ISP-64-1, Main Steam Radiation Monitor Instrument Calibration, Revision 14, dated August 1, 1984, performed February 19, 1986.

- F-ST-2G, Residual Heat Removal Isolation Valve Control Logic System Functional Test, Revision 14, dated May 23, 1985 performed February 20, 1986.
- F-ISP-86, Crescent Area Ventilation Temperature Instrument Calibration, Revision 3, dated February 5, 1986, performed February 28, 1986.

The inspector also witnessed all aspects of the following surveillance test to verify that the surveillance procedure conformed to technical specification requirements and had been properly approved, limiting conditions for operation for removing equipment from service were met, testing was performed by qualified personnel, test results met technical specification requirements, the surveillance test documentation was reviewed, and equipment was properly restored to service following the test.

- F-ST-22C, Automatic Depressurization System Logic System Functional Test, Revision 15, dated August 15, 1985, performed March 6, 1986.

At about 12:30 A.M. on March 2, 1986, the licensee discovered that they had failed to perform a Technical Specification (TS) required surveillance test (ST), F-ST-5Q, Average Power Range Monitor (APRM) Flow Bias Functional Test, Revision 8, dated April 6, 1983, since June 9, 1985. T.S. 4.1.A requires a functional test of the APRM Flow Bias scram circuitry be performed once per month. The ST was completed satisfactorily during the shift it was discovered as having been missed.

The discovery was prompted by a non-licensed operator's inquiry as to when the ST would be performed so he could fulfill a qualification requirement. The Shift Supervisor (SS) discovered the ST was not scheduled and had last been performed on June 9, 1985. The SS phoned the Assistant Operations Supervisor (AOS) for further guidance and was instructed to verify the ST had not been superseded by checking the superseded ST file. The AOS also thought there was a possibility that the requirement for the surveillance was being satisfied by an Instrument and Control surveillance procedure. The AOS directed the SS to perform the ST if there was no indication it had been superseded and further investigation would be performed on March 3, 1986.

After determining that there was no indication F-ST-5Q had been superseded, the SS instructed shift personnel to perform the ST. However, no priority was given to this ST, and it was begun about 4:00 a.m. on March 2, 1986, after completing other scheduled STs. The SS indicated he never considered the APRM flow bias scram circuit inoperable due to the uncertainty about whether the ST was in fact missed. The action statement in Technical Specifications requires that power be reduced within range of the Intermediate Range Monitor and that the Mode Switch placed in the Startup position within 8 hours when less than the required number of APRM Flow Bias Scram channels are operable.

The inspector conveyed the NRC position that a missed surveillance test requires declaring the affected equipment inoperable and entering the appropriate action statement. The inspector also expressed concern that, based on the information available to the SS, more timely action to complete the ST should have been instituted. The licensee acknowledged the inspector concerns and has instructed all licensed operators on the proper method of handling a missed surveillance.

On March 3, 1986, the licensee determined that the ST was inadvertently dropped from the computerized schedule when the transition was made from performing shutdown surveillance testing to operating surveillance testing in June 1985. The licensee has been performing other required STs on the APRM during this period. These were F-ST-5B, APRM Instrument Functional Test, which includes a check of the APRM upscale trip (120%) and F-ISP-20, APRM Rod Block Upscale and Downscale Instrument Calibration, which does check the upscale alarm for various flow conditions. However, neither of these surveillances checks the upscale thermal trip settings of the APRMs.

On March 3, 1986, after being informed that F-ST-5Q was missed, the inspector reviewed the operations department surveillance schedule. The inspector found that F-ST-76F, Diesel Fire Pump Battery Specific Gravity Test, Revision 1, dated May 19, 1982, had not been performed, although it was required to be done by February 8, 1986. It was noted, however, that the maintenance department had taken over the responsibility for performing this surveillance, using maintenance procedure MP-76.10, Diesel Fire Pump Battery Specific Gravity Surveillance Test, Revision 0, dated February 20, 1985. A check with the maintenance department revealed the test was last completed October 22, 1985, and therefore should have been performed by February 10, 1986, but in fact had not been completed. Technical Specification 4.12.A.1.1 requires the specific gravity of the Diesel Fire Pump starting 24v battery be verified once per quarter. MP 76.10 was completed satisfactorily following the discovery that it had been missed.

The maintenance department maintains a surveillance schedule which listed MP 76.10 as being overdue. However, no action was taken to ensure it was completed per the schedule.

Technical Specification 4.0.B requires that surveillance tests be performed within the specified time interval with an allowable variation of +/- 25% of the surveillance interval. The two examples discussed above are instances where the licensee failed to perform TS required testing within the allowable period. This is a violation of TS 4.0.B (50-333/86-01-01)

7. Maintenance Observations

- a. The inspector observed portions of various safety-related maintenance activities to determine that redundant components were operable, that these activities did not violate the limiting conditions for operation, that required administrative approvals and tagouts were

obtained prior to initiating the work, that approved procedures were used or the activity was within the "skills of the trade," that appropriate radiological controls were properly implemented, that ignition/fire prevention controls were properly implemented, and that equipment was properly tested prior to returning it to service.

- b. During this inspection period, the following activities were observed:
- PMWR 11/02886, change oil in the "A" Standby Liquid Control Pump Gear Drive Unit.
 - PMWR 10/02082, preventive maintenance on the limitorque valve operator for the Residual Heat Removal Service Water to Residual Heat Removal Cross Tie Valve.
 - WR 27/30621, installation of the oxygen sensor for the "B" Containment Atmosphere Analyzer.

No violations were identified.

8. Engineered Safety Feature (ESF) System Walkdown

The inspector verified the operability of the selected ESF system by performing a complete walkdown of accessible portions of the system to confirm that system lineup procedures match plant drawings and the as-built configuration, to identify equipment conditions that might degrade performance, to determine that instrumentation is calibrated and functioning, and to verify that valves are properly positioned and locked as appropriate.

- Standby Liquid Control System.

No violations were identified.

9. TMI Task Action Plan Item Followup

The inspector reviewed licensee action on the TMI Task Action Plan (TAP) items listed below. Based on this review, the inspector considers these TMI TAP items closed.

II.k.3.13 Reactor Core Isolation Cooling (RCIC) Automatic Restart

The inspector reviewed modification package no. F1-82-03 to verify that the licensee implemented the modification for automatic restart of the RCIC system on low reactor water level requested by NRR in a generic safety evaluation issued March 16, 1983. The inspector noted that the modification moved the reactor vessel high water level signal from the RCIC turbine trip valve to the steam supply valve, replaced the oil dash pot trip mechanism on the trip valve with an electrical trip solenoid, and

added a "RCIC High Vessel Level" alarm at panel 9-4. In a letter dated June 17, 1983, NRR found this modification acceptable. The inspector also noted the generic safety evaluation discussed above concluded that no significant benefit was gained by the separation of the High Pressure Coolant Injection and RCIC initiation levels, and therefore no action was required with respect to this item. The inspector had no further questions regarding this TMI TAP item.

II.k.3.16. Reduction of Challenges and Failures of
Relief Valves - Feasibility Study and System
Modification

In a letter dated June 19, 1984, the licensee responded to the NRC generic safety evaluation issued April 3, 1984 and described the actions taken to reduce challenges and failures of safety relief valves (SRVs). Based on previous observations and a review of Technical Specifications (TS) and procedures, the inspector verified these actions have been implemented. These include use of two stage Target Rock SRVs, installation of the Analog Transmitter Trip System, increased simmer margin on seven of eleven SRVs, TS requirements to bench test/replace 50% of all SRVs each operating cycle, and description of SRV manual operation in the Emergency Operating Procedures. In a letter dated November 13, 1984, NRR found that, in total, these actions were acceptable and considered this item resolved. The inspector had no further questions regarding this TMI TAP item.

10. 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 periodic report was reviewed:

-- January 1986 Operating Status Report, dated February 7, 1986.

11. 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 March 11, 1986, 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.

Based on the NRC Region I review of this report and discussions held with licensee representatives during the exit meeting, it was determined that this report does not contain information subject to 10 CFR 2.790 restrictions.