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REGION I

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Report No. 84-16

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: August 1 - 31, 1984

Inspector: *L.T. Dierflein* 10/19/84  
L.T. Dierflein, Senior Resident Inspector date

Approved By: *S.J. Collins* 10/19/84  
S.J. Collins, Chief, Reactor Projects date  
Section 2C

Inspection Summary:

Inspection on August 1-31, 1984 (Report No. 50-333/84-16)

Areas Inspected: Routine and reactive inspection during day and backshift hours by one resident inspector (60 hours) of licensee action on previous inspection findings, licensee event report review, operational safety verification, surveillance observations, maintenance observations, engineered safety feature system walkdown, followup on licensee event, and review of periodic and special reports.

Results: No violations were identified in the areas inspected.

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## 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
- \* J. Erkan, Senior Plant Engineer
- \* W. Fernandez, Acting Operations Superintendent
- \* J. Fitzgerald, Maintenance General Supervisor
- \* H. Keith, Instrument and Control Superintendent
- D. Lindsey, Assistant Operations Superintendent
- R. Lisen, Acting Maintenance Superintendent
- \* C. McNeill, Senior Vice President-Nuclear Generation
- \* E. Mulcahey, Radiological & Environmental Services Superintendent
- R. Patch, Quality Assurance Superintendent
- \* D. Simpson, Training Coordinator
- T. Telford, 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

- a. (Open) INSPECTOR FOLLOWUP ITEM (333/82-15-08): The inspector reviewed the valve lineup checklist in Operating Procedure (OP) No. 17, "Standby Liquid Control System," Revision 9, and drawings FM-21A-13 and OP-17-1, Revision 7, and noted the following discrepancies between the Standby Liquid Control System as-built condition and the system drawings: drawing FM-21A-13 shows temporary strainers on the pump suction which are no longer in place or shown on drawing OP-17-1; the pump suction gages are labelled PI 102B and PI 103B however, drawing OP-17-1 shows the as PI 102A and PI 102B; valves 750A and B, 751A and B, and 752B are locked closed according to the OP valve lineup but are not shown as such either FM-21A-13 or F-OP-17-1; and valve 723 is not shown as locked closed on drawing FM-21A-13. This item remains open pending licensee action to correct these discrepancies.

- b. (Closed) INSPECTOR FOLLOWUP ITEM (333/83-09-04): The inspector reviewed Quality Assurance Instructions (QAI's) No. 6.0, Qualification of Vendors, Revision 1, dated August 27, 1984, and No. 6.1, Procurement Document Review, Revision 0, dated May 8, 1984, and verified that the licensee has developed and implemented QAI's to provide specifics on methods of vendor qualification, control of the qualified vendor list, and QA review requirements of purchase requisitions.
- c. (Closed) UNRESOLVED ITEM (333/83-17-02): In accordance with IE Bulletin 80-10, the licensee prepared safety evaluation no. JAF-SE-83-049 to justify continued operation of the contaminated Service Air System. The inspector reviewed this safety evaluation, which had been approved by the Plant Operations Review Committee, and noted that it concluded that continued operation of the Service Air System during decontamination did not present an unreviewed safety question with respect to unmonitored or uncontrolled releases or for the continued use of the Breathing Air System. The inspector agreed with the basis for these conclusions and had no further questions regarding this item.
- d. (Closed) INSPECTION FOLLOWUP ITEM (333/83-27/01): Amendment No. 81 to the facility operating licensee revised Technical Specification 7.A.9.a to allow isolation of the containment Hydrogen and Oxygen monitoring systems for up to three hours in a twenty four hour period when the post-accident sampling system is being tested for operability or used for personnel training.
- e. (Closed) VIOLATION (333/83-27/02): The licensee failed to submit a Licensee Event Report (LER) for inoperable safety-related snubber number H 10-475 because of a personnel error committed by the individual assigned to research the event. The licensee stated that the individual involved was counselled on the need for care in researching and reporting information on which the Plant Operations Review Committee bases decisions on potential LER's. The inspector noted that the licensee subsequently issued LER 83-53 on November 18, 1983 to report the inoperable snubber. This violation appears to have been an isolated case as no additional examples of failure to submit an LER have been identified.
- f. (Closed) INSPECTOR FOLLOWUP ITEM (333/83-28-01): The inspector reviewed surveillance test procedure No.F-ST-1C, Primary Containment Isolation Valve Exercise, Revision 13, and verified that the procedure has been revised to include a quarterly cycling of the Traversing Incore Probe ball isolation valves.

### 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 84-15, 84-16\* and 84-17 were reviewed. \*LER selected for onsite followup.

LER 84-16 reported that during surveillance testing, both undervoltage (UV) relays on the number 10500 4KV Emergency Bus were found set below the Technical Specification required setpoint (85 + 4.25 volts). The "as found" values of the UV relay setpoints were 76 and 77 volts. The undervoltage relays on the redundant number 10600 4KV Emergency Bus were found to be within the Technical Specification tolerance. For a sustained undervoltage condition, these relays are used to isolate the emergency bus, shed loads, start the Emergency Diesel Generators (EDG's), place the EDG's on the bus, and initiate the sequential starting of the Core Spray and Residual Heat Removal Pumps. For a loss of voltage to the emergency bus, the out of specification setpoints would not have had any significant effect on the timing of the sequence described above as noted in the LER. However, the inspector pointed out to the licensee that Section 8.6.6.e of the Final Safety Analysis Report states that the 4KV emergency bus undervoltage relays are set at approximately 70% of secondary voltage (85 volts) to prevent damage to the 4KV safety related motors from a low voltage condition. The licensee acknowledged the inspector's concerns and initiated an evaluation to determine the effects of an undervoltage condition of the 4KV safety related loads. Based on daily tours, operating log reviews and discussions with licensee personnel the inspector determined that, since both emergency buses are normally supplied from the same power source and no undervoltage condition caused the 10600 emergency bus UV relays (which were in specification) to trip, the licensee had not operated with an undervoltage condition on the 10500 emergency bus.

The undervoltage relays on the number 10500 4KV Emergency Bus were immediately adjusted to the required setpoint during the testing however, management did not recognize that the relays were found outside the Technical Specification tolerance for over thirty days after the event. The licensee attributes this oversight to the fact that the UV relay surveillance procedure data sheets were mixed with other non-safety related data sheets during the review cycle and that the data sheets format did not key the reviewer to Technical Specification requirements. For corrective action, the licensee has placed the UV relays on an increased surveillance frequency for trending. The licensee also plans on routing safety-related surveillance procedures to one individual for review and all surveillance procedures will be revised, during the biennial review, to highlight the Technical Specification requirements. The inspector will observe the effectiveness of these corrective actions during subsequent inspections.

#### 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:

- Routine Power Operation
- Reactor Shutdown on August 6, 1984
- Reactor Startup on August 10, 1984
- Issuance of RWP's and Work Request/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/leanliness, 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 840885 on the "B" Containment Oxygen Sampling System.
- PTR 840973 on the "A" Low Pressure Coolant Injection System Inverter Battery.

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.

- Standby Gas Treatment System
- Emergency Service Water System
- Containment Atmosphere Dilution System

No violations were identified.

5. Surveillance Observations

- a. 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-ISP-23-1, Emergency Service Water System Instrument Functional Test/Calibration, Revision 5, dated May 11, 1983, performed August 24, 1984.
- F-ISP-3, Reactor High/Low Water Level Instrument Functional Test/Calibration, Revision 10, dated August 3, 1983, performed August 28, 1984.
- F-ISP-5-4, Reactor Pressure Instrument Calibration, Revision 10, dated October 4, 1983, performed August 30, 1984.

- b. Based on a contractor review of the analog transmitter trip system modification, the licensee discovered on July 31, 1984, that the recirculation pump reactor high pressure trip setpoint had been set above the required limit since the facility was licensed. Technical Specification (TS) Table 3.2-7 contains a typographical error such that it requires the recirculation pump high pressure trip be set greater than or equal to 1120 psig. This should have read less than or equal to 1120 psig. The licensee failed to recognize the error and has historically used 1135 psig as a guide for setting the trip set point on the four associated reactor pressure switches. The inspector reviewed three previous calibrations and noted that the pressure switch trip setpoints were actually set between 1122 and 1136 psig. In the Final Safety Analysis Report, Appendix E, Section E.32, the licensee, with reference to General Electric topical report NEDO-10349, "Analysis of Anticipated Transients Without Scram," committed to making design changes which would provide for tripping the recirculation pumps on a high reactor pressure event. The inspector reviewed NEDO-10349 and noted that it concluded, in part, that tripping the recirculation pumps when reactor pressure was greater than or equal to 1150 psia was effective in keeping reactor power, pressures and temperatures below safety limits and for allowing time for appropriate operator action. Based on the data reviewed, the inspector determined that the trip setpoints for the recirculation pump high pressure trip function did not exceed the reactor pressure stated in the analysis of NEDO-10349.

On August 1, 1984, the licensee informed NRR of the problem and was directed by the Licensing Project Manager to immediately set the recirculation pump high pressure trip setpoint to less than or equal to 1120 psig. The licensee was also asked by NRR to submit a Technical Specification change request to correct Table 3.2-7. The inspector reviewed surveillance procedure F-ISP-43, "Reactor High Pressure (Recirculation Pump) Instrument Functional Test/Calibration," Revision 5, dated August 1, 1984, and verified that the licensee has revised the procedure to set the recirculation pump high pressure trip less than or equal to 1120 psig. The inspector also reviewed the data from the calibration performed on August 1, 1984, and verified that the trip was now set at 1111 psig. The inspector will verify that Technical Specification Table 3.2-7 is corrected during a subsequent inspection (333/84-16-01).

## 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 were used or the activity was within the "skills of the trade," 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 71/22829 on the jumpering out of cell no. 118 in the "A" Low Pressure Coolant Injection System Inverter Battery.
- WR 6/33410 on the troubleshooting of "C" Reactor Pressure Instrument Channel.

7. 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

The discrepancies noted during the system walkdown are discussed in paragraph 2.a of this inspection report.

No violations were identified.

8. Followup on Licensee Event

On August 5, 1984, the licensee initiated a reactor shutdown when drywell unidentified leakage rose to approximately 4.5 gpm. The Technical Specification limit on unidentified leakage is 5.0 gpm. A containment entry was made during the shutdown and the source of the leakage was identified as a broken rotameter tube on flow indicating switch (02-2-FIS-21A) on the "A" Recirculation Pump No. 2 seal (outer seal) leakage line. The "A" Recirculation pump outer seal failed on July 24, 1984, as indicated by a decrease of the outer seal cavity pressure to zero psig accompanied by the "A" Recirculation Pump seal staging flow high/low alarm. The outer seal leak flow detector did not alarm when the seal failed indicating that flow indicating switch 02-2FIS-21A was probably damaged before the seal failure. As a result of the seal failure, the drywell unidentified leakage rose to 3.5 gpm and remained constant until August 5, 1984 when it again increased.

During the shutdown, the licensee replaced the seal on "A" Recirculation Pump but was unable to obtain a replacement flow indicating switch prior to the scheduled startup on August 10, 1984. The licensee removed flow indicating switch 02-2-FIS-21A and replaced it with a short section of 3/4 inch carbon steel pipe. The licensee prepared a safety evaluation (No.

JAF-SE-84-088) to justify this temporary modification. The inspector reviewed this safety evaluation and noted that the licensee concluded that the outer seal leakage flow detection instrumentation was not classified as safety related and that the remaining instrumentation was sufficient for determining failure of the inner and outer seals. The inspector also verified that this safety evaluation was approved by the Plant Operations Review Committee and that installation of the modification was performed in accordance with Work Activity Control Procedure No. 10.1.3, "Jumper Control." The inspector had no further questions regarding the temporary removal of flow indicating switch 02-2-FIS-21A.

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 period report was reviewed:

-- July 1984 Operating Status Report, dated August 6, 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 August 30, 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.