

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-333/80-02

Docket No. 50-333

License No. DPR-59 Priority -- Category C

Licensee: Power Authority of the State of New York

10 Columbus Circle

New York, New York 10019

Facility Name: James A. FitzPatrick Nuclear Power Plant

Inspection at: Scriba, New York

Inspection conducted: March 3-14, 1980

Inspectors: *T. F. Stetka*
T. F. Stetka, Reactor Inspector

4/10/80
date signed

date signed

date signed

Approved by: *H. B. Kister*
H. B. Kister, Chief, Reactor Projects
Section No. 4, RO&NS Branch

4/16/80
date signed

Inspection Summary:

Inspection on March 3-14, 1980 (Report No. 50-333/80-02)

Areas Inspected: Routine, unannounced inspection of plant operations, licensee action on SBLOCA procedure and training implementation, Licensee Event Reports (LERs), licensee action on IE Circulars, and licensee action on previous inspection findings. This report also documents inspector attendance at the TMI Lessons Learned meeting held on March 13, inspector attendance at the March 5 meeting to discuss details related to establishment of an on-site office for a full-time NRC inspector at the facility, and the in-office review of LERs, monthly operating reports, and the 10 CFR 50.59 report for 1979. The inspection began at 5:00 p.m. on Sunday, March 2, and involved 87.5 hours onsite by one region based NRC inspector.

Results: One item of noncompliance was identified (Infraction - failure to properly search a non-regular licensee employee).

DETAILS

1. Persons Contacted

The following technical and supervisor level personnel were contacted:

Licensee Representatives

- *R. Baker, Maintenance Superintendent
- R. Burns, Radiation and Environmental Services Superintendent
- *V. Childs, Assistant to the Resident Manager
- *R. Converse, Operations Superintendent
- M. Cosgrove, QA Site Engineer
- W. Fernandez, Assistant to the Maintenance Superintendent
- *S. Hudson, Station Shift Supervisor
- *H. Keith, I&C Superintendent
- *J. Leonard, Resident Manager
- L. Milesi, Security/Safety Supervisor
- E. Mulcahey, Radiation Protection and Radio-Chemistry Supervisor
- C. Orogvany, Reactor Analyst Supervisor
- R. Pasternak, Superintendent of Power
- R. Ram, Power Operations - PASNY Corporate Office
- P. Reichert, Licensing - PASNY Corporate Office
- D. Tall, Training Coordinator

NRC Representatives

- W. Baunack, Reactor Inspector - IE:Region I
- H. Kister, Chief, Reactor Projects No. 3, - IE:Region I
- J. McOscar, Chief, Administrative Branch - IE:Region I
- P. Polk, Licensing Project Manager - NRR
- L. Riani, Auxiliary Systems Branch - NRR
- F. Skopec, Occupational Health Standards Branch - NRR
- D. Verrelli, Licensing Project Manager - NRR

Other personnel contacted included office, operations, engineering and health physics personnel.

* Present at the March 14, 1980 exit interview.

2. Licensee Action on Previous Inspection Items

(Closed) Noncompliance (333/77-33-02): The Technical Specifications have been revised by Amendment No. 48 to delete the Reactor Water Cleanup System high temperature isolation. All corrective action on this item has been completed.

(Closed) Unresolved item (333/79-17-07): Review of the licensee's actions with respect to the Small Break Loss of Coolant Accident (SBLOCA) as discussed in paragraph 4.b of this report indicates that all general training has been completed.

(Closed) Unresolved item (333/78-13-04): The Technical Specifications have been revised by Amendment 48 to resolve the trip level setting for the bus power monitors.

(Closed) Unresolved item (333/79-02-04): Amendment 48 to the Technical Specifications has deleted the differential pressure switch calibration requirement (these switches do not exist in the system).

(Closed) Noncompliance (333/78-04-05): Review of LERs, maintenance activities and logs since the occurrence of this event indicates that the licensee's reporting program is accurate and effective.

(Closed) Noncompliance (333/78-04-06): The licensee has instituted use of a "Conditional Release" form which provides the necessary information and signatures to document this type of activity. The use of this form is referred to in procedure 10.1.5, Control and Identification of Purchased Material and Service.

(Closed) Unresolved item (333/77-33-04): The licensee has issued a "Purchase Requisition Checklist" which identifies defective components. This list will be updated on a quarterly basis and will address Bulletin, Circular and manufacturer items.

(Open) Unresolved item (333/78-13-05): The licensee plans to check the calibration and accuracy on select RTD's (RTD's for Recirculation Loops, main steam, reactor water cleanup system, and suppression pool water) during the upcoming refueling outage.

(Closed) Unresolved item (333/78-17-05): The instrumentation for the discharge temperature monitoring system are now calibrated in accordance with procedure F-IMP-36.5, Circulating Water System Water Temperature RTD's on a once every two years basis.

(Open) Unresolved item (333/79-17-06): Review of the SBLOCA procedures during this inspection (see paragraph 4.a) identified some additional items that could improve these procedures. The licensee has initiated procedure revisions to simplify the immediate action sections of these procedures.

(Closed) Unresolved item (333/79-17-05): The licensee has completed repair of the ion exchanger and the resin intrusion problem has been corrected.

(Closed) Noncompliance (333/79-07-01): The licensee has revised surveillance test F-ISP-4-5, installed a new scale on indicator 27-PI-102B and completed all other actions required by this item.

(Closed) Unresolved item (333/77-23-01): A review of the Scott air paks in the Emergency Equipment Cabinet and the Control Room indicate that the licensee is completing the tags for the monthly checks. These actions comply with the licensee's present Radiation Protection Procedure.

3. Review of Plant Operations

The inspector arrived onsite at 1700 hours on Sunday, March 2 to observe the licensee's security measures, radiological controls, and facility operations during a back shift.

The inspector reviewed selected facility operations logs and records and toured areas of the facility at periodic intervals during the course of this inspection to assure that operations were in accordance with the Technical Specifications (TS). At the beginning of this inspection the facility was operating at near full power.

On March 11, the licensee reduced reactor power to approximately 60 percent of full power due to an increase in reactor water conductivity. The licensee investigated this increase and determined that a tube in the main turbine condenser water box had developed a leak. The leaking tube was identified and plugged and a power increase to full power was commenced on March 13. The maximum reactor water conductivity during this event was 4.65 micro-mhos per cm. The TS limiting condition for operation value is 5.0 micro-mhos per cm.

a. Shift Logs and Operating Records

The inspector reviewed the following records:

- (1) Operations Department Night Orders for the period February 16, 1980 through March 14, 1980.
- (2) Station Shift Supervisor's Log for the period February 16, 1980 through March 14, 1980.
- (3) Radiation Work Permit Log for all outstanding entries.
- (4) Chemistry Logs for the period March 10 and 11, 1980.
- (5) Daily Surveillance Sheets (F-ST-40D).

- (6) Periodic Core Performance Log (P-1).
- (7) Jumper/Block Log for all outstanding entries and selected completed entries.
- (8) Protective Tagging Logs for all outstanding entries and selected completed entries.

The review consisted of verifying adequate management review, correct identification of problem areas, completeness, and determination that conditions contrary to the Technical Specifications did not exist. The inspector independently verified selected Jumper/Block log entries.

No inadequacies were identified.

b. Tour of Accessible Areas

Facility tours were conducted of the following areas:

- All levels of the reactor building;
- Turbine building;
- Control room;
- Diesel generator rooms;
- Switchgear/Relay room;
- Pump house screenwell; and,
- Radwaste building.

During these tours the following observations were made:

- (1) Monitoring Instrumentation. The following instrumentation was observed to verify that indicated parameters were in accordance with Technical Specifications (TS) Limiting Conditions for Operation (LCO):
 - Reactor Vessel Level and Pressure;
 - Reactor Power Level;
 - Control Rod Position;
 - Equipment Operating Status;

- Area Radiation and Stack Gas Monitors;
 - Suppression Chamber (Torus) Water Temperature and Level;
 - Process Computer Core Operating Parameters;
 - Suppression Chamber (Torus) to Drywell Differential Pressure;
 - Diesel Generator Storage Tank Oil Capacities;
 - Emergency Core Cooling System (ECCS) Lineups;
 - Reactor Water Conductivity;
 - Standby Liquid Control System Tank Temperature;
 - Jet Pump Flows; and
 - Recirculation Pump Flows.
- (2) Annunciator Alarms. The inspector observed various alarm conditions received and acknowledged by the Control Room Operator on duty. These conditions were discussed with the operator who was knowledgeable of the alarms and the actions required by these alarms. Some continuous alarms were identified and the reasons for these were known to operating personnel.
- (3) Shift Staffing. The inspector verified by spot checks that the operating shift met Section 6 of the Technical Specification with regard to numbers and licenses.
- (4) Radiation Areas. Radiation control zones were observed to verify proper identification and implementation. These observations included review of step-off pad conditions, disposal of anti-contamination clothing and area posting. The inspector also observed personnel activity at the radiation check point during a shift change to verify the effectiveness of the licensee's controls.
- (5) Plant Housekeeping and Conditions. Storage of material and components was observed with respect to safety and fire hazards. The licensee is repairing or replacing pipe hangers as required by their Architect-Engineer (A-E) analysis. Additionally, anchor bolts are being inspected and replaced in connection with IE Bulletin 79-02. Because of the aforementioned work, many areas require cleaning.

A tour of the Radwaste Building during the week of March 3 revealed very poor housekeeping activities. There was considerable debris scattered throughout the building and excessive amounts of paper around the radwaste trash compactor. These conditions were discussed with a licensee representative.

During the week of March 10, additional tours of the Radwaste Building were conducted and there was considerable improvement in housekeeping conditions. The debris and paper noted the previous week had been compacted and removed from the building. The inspector identified additional areas that needed cleanup including the resin tank room, lower level of the building and concentrator areas. Some areas contained additional debris and had resin spilled on the floors. The licensee representative acknowledged the inspector's comments and stated that a cleanup crew would be brought in to improve conditions. These areas will be examined during subsequent inspections.

- (6) Fluid and Steam Leaks. The licensee still has steam leaks on the steam reheat system for the main turbine and a water leak on the "B" condensate booster pump suction line. These items were previously reported in NRC:RI report 50-333/80-01. These leaks cannot be repaired during plant operation and plant shutdown for refueling is scheduled for April 1980. The inspector reviewed the leak status and determined whether the leaks are causing radiological problems. A slight increase in the condensate booster pump water leak has occurred, however, no radiological problems exist for either this leak or the steam leaks. These items will continue to be monitored during subsequent inspections.
- (7) Piping Vibration. No excessive piping vibration was noted.
- (8) Pipe Hangers/Seismic Restraints. Several pipe hangers and seismic restraints (snubbers) on safety related systems were observed. The licensee is presently re-analyzing remaining pipe supports in areas accessible during normal plant operation and making repairs as necessary to those supports that are found to be inoperable as required by the order lifting the suspension of facility operation issued on August 14, 1979.
- (9) Fire Protection. Fire extinguishers and fire fighting equipment were observed to be unobstructed and recently inspected for operability. No evidence of smoking was observed in designated "No Smoking" areas. Tank capacities in both the 3 ton and 10 ton CARDOX tanks were observed to be within TS required limits.

This paragraph, containing 10 CFR 2.790 Information, not for public disclosure, is intentionally left blank.

The inspector had no further questions on the above items.

4. Implementation of Small Break Loss of Coolant Accident (SBLOCA) Procedures

The licensee's actions with regard to the implementation of SBLOCA procedures were reviewed to verify the completion of all NRC requirements. The items reviewed included SBLOCA procedures, operator training, and availability of systems to mitigate the SBLOCA.

a. SBLOCA Procedures

The licensee has written and implemented procedure F-EOP-33, Small Break Accident, Revision 0. This single procedure encompasses the guidelines developed by the GE Owners Group.

Review of this procedure and feedback from operator discussions indicate that some minor revisions to the procedure are necessary. The following items were identified:

- The start of the HPCI system was listed as part of the Group II isolation in the Automatic Actions section of SBA-1 instead of an additional automatic action;
- The cautions listed in the Immediate Operator Actions sections of SBA-1 and SBA-2 should be moved to the Subsequent Operator Actions section to simplify the Immediate Operator Actions Sections; and,
- Contingency No. 2 should be revised to be consistent with the guidelines to require scrambling the reactor if isolation by automatic or manual signals cannot be accomplished before attempting to manually close other valves.

The item concerning moving the cautions from the Immediate Operator Actions section to the Subsequent Operator Actions section was already identified as an unresolved item (Ref: IE Report 50-333/79-17 and paragraph 2 of this report). The licensee acknowledged the inspector's comments and is revising F-EOP-33 accordingly. This item, relating to correction of the HPCI start and change to Contingency No. 2 is unresolved (333/80-02-02).

b. Operator Training

The inspector interviewed nine licensed operators (five Senior Reactor Operators (SRO) and four Reactor Operators (RO)) to determine their knowledge of the SBLOCA procedures. Included in this sample were two off shift staff SROs.

The initial interview of an off-shift staff SRO on March 5 indicated a lack of knowledge in the SBLOCA procedure. This finding was discussed with a licensee representative and all off-shift staff SROs were subjected to additional training. The inspector interviewed an additional off-shift staff SRO on March 14 to verify the effectiveness of this additional training and the finding was acceptable.

The interviews of the shift-standing SROs and ROs identified an SRO and an RO on one shift that appeared weak in their knowledge of the SBLOCA procedures. This finding was discussed with a licensee representative and it was decided that the shift would be given additional training. The additional training will be completed by March 17. This item is unresolved pending verification of training completion (333/80-02-03).

c. System Considerations

The inspector queried a licensee representative to determine if instrumentation required to mitigate a SBLOCA was adequate. The following instrumentation was specifically addressed:

- Reactor Vessel Level;
- Condensate Storage Tank Level;
- Suppression Pool (Torus) Temperature;
- Suppression Pool Level;
- Reactor Vessel Pressure;
- Drywell Temperature; and,
- Drywell Pressure.

The adequacy of the reactor vessel level was addressed in the licensee's response to IE Bulletin 79-08. The remaining instrumentation was reviewed by the licensee and it was determined some of this instrumentation may not have been considered with respect to environmental qualification in accordance with IE Bulletin 79-01B. The licensee has submitted a list of this instrumentation to their architect-engineer (Stone and Webster) and requested Stone and Webster to review the applicability of this instrumentation to the environmental qualification being performed in accordance with Bulletin 79-01B. This issue is unresolved pending completion of this review (333/80-02-04).

Additional aspects of instrument adequacy are being addressed in licensee responses to IE Bulletin 79-27 and in the BWR Owner's Group review of proposed Regulatory Guide 1.97.

5. Participation in Three Mile Island (TMI) Lessons Learned Meeting

On March 13, the inspector attended a meeting at the site with the Short Term Lessons Learned Review Group from Nuclear Reactor Regulation (NRR) and licensee representatives. The purpose of this meeting was to verify that the licensee has implemented the short-term recommendations of NUREG-0578 as committed to in their letter to NRR of January 2, 1980. A detailed report of this meeting is being written by the review group.

The inspector reviewed the licensee's response and reviewed the licensee's actions in the areas of procedure implementation and development of the On-Site Technical Support Center and the On-Site Operational Support Center. The following procedures were reviewed:

- Procedure No. 1, Operating Staff Responsibilities and Authorities, Rev.3;
- Procedure No. 2, Operating Principles and Philosophy, Rev. 1;
- Procedure No. 3, Shift Relief and Log Keeping, Rev. 6;
- RTP-30, Noble Gas Activity Estimation Post Accident, Rev. 0; and,
- RTP-31, Reactor Water Sampling Post Accident, Rev. 0.

The review confirmed that the licensee's response to NUREG-0578 in the selected areas were implemented as stated. In addition, discussions with licensee personnel and observations of operator log keeping and shift turnovers indicate effective implementation in the selected areas.

The inspector had no further questions in this area.

6. On-Site Office for Full Time NRC Inspector

On March 5, a meeting was held on-site between licensee management personnel, NRC Region I personnel, and a telephone company representative to discuss details related to establishment of an on-site office for a full-time NRC inspector at the facility. The following items were discussed:

- Facilities to be provided for the resident inspectors;
- Provisions for telephone service including a plant telephone extension and the NRC dedicated line from the site to NRC Emergency Operations Center in Bethesda, Maryland;

- Interface responsibilities for communications equipment installation;
- Resident inspection program; and,
- Office space requirements.

All parties concurred on administrative and operational considerations needed to establish an on-site NRC resident inspection office.

7. Review of Licensee Event Reports

a. The inspector reviewed Licensee Event Reports (LERs) to verify that:

- The reports accurately described the events;
- The safety significance is as reported;
- The report is accurate as to cause;
- The report satisfies requirements with respect to information provided and timing of submittal;
- Corrective action is appropriate;
- Action has been taken; and,
- The event was reviewed and evaluated by the Plant Operations Review Committee (PORC).

LERs 79-118, 80-04, 80-06, 80-07, 80-08, 80-09, 80-10, 80-11, 80-12, 80-13, 80-15, 80-17 and 80-19 were reviewed. This review identified the following items.

b. LER 80-06 reported that core spray injection valve 14-MOV-12A did not open properly during a surveillance test. The event was not identified as the result of an operator's Occurrence Report (OR) but was identified during subsequent reviews of work requests. The inspector discussed this issue with the operator involved and licensee management representatives and determined that reporting requirements have been re-emphasized. Further review of this report indicated the report to be in error in the explanation of valve adjustments performed. No valve adjustment was performed since the valve started operating normally and passed subsequent tests conducted on an increased test frequency.

The licensee will submit a revised LER and the valve is scheduled to have preventative maintenance performed during the upcoming refuel outage. These items are unresolved as (333/80-02-05) and (333/80-02-06) respectively.

- c. LER 80-17 reported that the drywell to torus differential pressure exceeded the Technical Specification (TS) limits. Review of this event indicates that whenever fairly rapid cooling occurs in the reactor building closed loop cooling (RBCLC) or turbine building closed loop cooling (TBCLC) systems, the effect causes a decrease in drywell to torus differential pressure. The operators have indicated that temperature changes to these systems are occurring in the form of annunciators, however, the setpoints of these annunciators are too high resulting in the annunciators being in a continually alarmed state. If these annunciators would alarm on decreasing temperature, the operators would have sufficient warning to monitor drywell to torus differential pressure and be able to take the necessary actions to prevent exceeding the TS limits. The licensee will reset the RBCLC and TBCLC annunciators such that they will provide warning of decreasing system temperatures. This item is unresolved (333/80-02-07).

8. Closeout of IE Circulars

The inspector reviewed the licensee's action with respect to the following Circulars to determine if the licensee had received them and had taken appropriate action.

- a. IEC 78-16, Limitorque Valve Actuators.
 b. IEC 78-09, Arcing of General Electric Company NEMA Size 2 Contactors.

The licensee has not yet acted on the recommendations of this circular. In October 1979 General Electric issued SIL 308 entitled "Inspection of CR105D and CR205D Contactors, CR106D and CR206D Starters, and CR109D and CR209D Reversing Starters" that addresses the same issue identified in this circular. The licensee has scheduled to perform the recommendations of Circular 78-09 and SIL 308 during the upcoming outage which is planned to begin in April 1980. This circular will remain open pending completion of the licensee's action.

9. Operator Licensing

The inspector attended the exit interview conducted by the NRC Operator Licensing Branch (OLB). The OLB was at the facility site to examine operators for the purpose of obtaining operating licenses. During this exit, it was identified that the licensee is not conducting periodic quizzes as part of

their licensed operator requalification program. A licensee representative stated that they will implement the use of periodic quizzes in their re-qualification program. This item is unresolved pending review of the licensee's implementation of quizzes (333/80-02-08).

10. Environmental Qualification of Stem Mounted Limit Switches (SMLS) Inside Containment

(Reference - IE Inspection Report 78-24)

The licensee's review and actions on this issue will be audited in conjunction with their response to IE Bulletin 79-01, Environmental Qualification of Class IE Equipment. Bulletin 79-01 provides the overall encompassing review of the environmental qualification of electrical equipment issue.

11. NRC In-Office Review

- a. NRC:RI in-office review of the following LERs has been completed with no unacceptable conditions identified:

80-01	80-16	80-22
80-03	80-18	80-23
80-05	80-20	80-24
80-14	80-21	

- b. NRC:RI in-office review of the 1979 10 CFR 50.59 report concerning plant modifications and of Monthly Operating Reports for the months of September, October, November and December 1979 and January and February 1980 have been completed with no unacceptable conditions identified.

12. Unresolved Items

Unresolved items are those items for which further information is required to determine whether they are acceptable or items of noncompliance. Unresolved items are contained in paragraphs 4, 6.c, 7.b, and 9 of this report.

13. Exit Interview

The inspector met with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on March 14, 1980 and summarized the scope and findings of the inspection as they are detailed in this report. During these meetings, the unresolved items and item of noncompliance were identified.