

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

DCS Numbers - See
Attached Sheet

Region I

Report No. 81-06
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: James A. FitzPatrick Nuclear Power Station

Inspection at: Scriba, New York

Inspection conducted: February 1, 1981 - February 28, 1981

Inspectors: J. C. Linville, Resident Inspector

3/16/81
date signed

R. A. McBrearty, Reactor Inspector

3/31/81
date signed

L. T. Doerflein, Resident Inspector

3/23/81
date signed

Approved by: H. B. Kister, Chief, Reactor Projects
Section No. 1C

3/23/81
date signed

Inspection Summary:

Inspection on February 1, 1981 - February 28, 1981 (Report No. 50-333/81-06)

Areas Inspected: Routine inspection by the resident inspectors and one region based inspector of: Licensee action on previous inspection findings; In Office Review of Licensee Event Reports (LER's); Licensee Event Followup; Licensee Action on IE Bulletin 80-17, Supplement 4; Review of Plant Operations; Surveillance Observation; Followup on Licensee Event; Fire Protection Modifications; Low Scram Air Header Pressure Scram Modification. The inspection involved 134 inspection hours by the resident inspectors and 12 inspection hours by the region based inspector.

Results: Of the eleven areas inspected no items of noncompliance were noted in ten areas. Two items of noncompliance were identified in one area. (Failure to properly post high radiation area and radioactive materials area).

DCS NUMBERS

50333-801003	50333-801216
50333-801005	50333-801217
50333-801008	50333-801229
50333-801011	50333-810106
50333-801023	50333-810110
50333-801102	50333-810112
50333-801103	50333-810113
50333-801110	50333-810114
50333-801117	50333-810115
50333-801118	50333-810117
50333-801124	50333-810120
50333-801126	50333-810121
50333-801130	50333-810124
50333-801208	50333-810129
50333-801210	50333-810203
50333-801211	50333-810207
50333-801212	

DETAILS

1. Persons Contacted

- R. Baker, Superintendent of Power
- N. Broose, Maintenance Superintendent
- *R. A. Burns, Assistant to Superintendent of Power
- *V. Childs, Assistant to Resident Manager
- *R. Converse, Operations Superintendent
- *M. Cosgrove, Site Quality Assurance Engineer
- *W. Fernandez, Technical Services Superintendent
- H. Kieth, Instrument and Control Superintendent
- E. Mulcahey, Radiological and Environmental Services Superintendent
- *A. McKeen, Assistant to Radiological and Environmental Services Supt.
- *C. Orogvany, Reactor Analyst Supervisor
- *R. Pasternak, Resident Manager
- *G. J. Sechler, Quality Control Inspector
- *D. E. Tall, Training Coordinator

The inspectors also interviewed other licensee personnel during this inspection including Shift Supervisors, Administrative, Operators, Health Physics, Security, Instrument and Control, Maintenance, and Contractor Personnel.

*Denotes those present at an exit interview.

2. Licensee Action On Previous Inspection Findings

(Closed) INFRACTION (80-05-01): The inspector verified that F-IMP-13.3, Revision 1, dated June 1980, F-IMP-2-3.1, Revision 1, dated June 1980, and F-IMP-5.2, Revision 2, dated June 1980 had been revised as indicated in the licensee response. The inspector verified that F-IMP-27.5, Revision 0, dated May 1980, and F-IMP-11.2, Revision 0, dated September 1980 had been issued as indicated in the licensee response. The inspector verified by record review that the licensee had conducted training on AP 1.4 and 4.4 as indicated in the licensee response.

(Closed) DEFICIENCY (80-01-06): The inspector verified that Operating Procedure No. 7, Makeup Water Treatment System, Revision 2, dated February 22, 1980 had been modified by adding caution 2.b as indicated in the licensee response.

(Closed) INFRACTION (80-01-03): The inspector verified that the response to this item of noncompliance had been placed on the licensed operator required reading list as committed. He noted, however, that two licensed operators had not yet completed the reading. The letter was dated April 2, 1980.

(Closed) UNRESOLVED ITEM (80-02-08): The inspector verified that periodic quizzes have been scheduled on the 1981 Licensed Operator Annual Requalification Schedule and that these quizzes are in fact being administered.

(Closed) UNRESOLVED ITEM (80-02-07): The licensee stated that the trip setpoint for the RBCLC and TBCLC systems had been reset to provide early warning of rapid cooling conditions which have resulted in drywell to torus pressure differential reading outside Technical Specification limits in the past. The inspector noted that this condition had occurred one time subsequent to identification of this unresolved item. The inspector has observed that this annunciator has not been in an alarm condition since the January 1981 outage for snubber testing. Prior to that time it had been in an alarm condition continuously.

(Open) INFRACTION (80-09-01): This item remains open pending revision to Maintenance Procedure 4.1 regarding reactor vessel disassembly and reassembly prior to the October 1981 refueling outage.

(Closed) DEFICIENCY (80-15-01): The inspector reviewed the corrected LER's 80-036 and 80-046 and Operations Department Standing Order No. 11, Bypassing Inoperable LPRMS and agreed that the action taken corrects the problem and should prevent recurrence.

(Open) INFRACTION (80-15-09): The inspector has observed during recent plant tours that friskers have been operable, that some new plastic step-off pads have been properly maintained, and that protective clothing hampers have been maintained more effectively. The requirements imposed by Radiological and Environmental Services Department Standing Order No. 8, Routine Plant Patrols appear to have been effective in correcting and preventing further recurrence of the problem. However, many of the paper step-off pads remain throughout the plant. The licensee stated that he would complete the transition to plastic step-off pads by June 1, 1981.

(Closed) DEFICIENCY (80-15-10): The inspector has noted during recent plant tours that the fire door identified in the item on noncompliance has been closed as required. The reminders in the Operations Department Night Orders appear to have been effective in preventing recurrence of the problem.

(Closed) UNRESOLVED ITEM (80-15-02): The licensee submitted the followup report for LER 80-38 describing the cause of the valve failure.

(Closed) UNRESOLVED ITEM (80-15-08): The licensee submitted the followup report for LER 80-66 indicating that new core spray pipe break detection switches on which the setpoint is near mid range were installed in December 1980. The inspector observed that they were installed.

(Open) UNRESOLVED ITEM (80-15-04): The licensee submitted the followup report for LER 80-41. In this report the licensee stated that procedure changes should prevent recurrence. This item will remain open pending review of the changes in Maintenance Procedure 4.1 for the vessel disassembly prior to the October 1981 refueling outage.

(Closed) UNRESOLVED ITEM (80-15-06): After a subsequent event LER 81-04, the licensee received and installed the new diesel generator droop switches. The licensee feels that this will correct the problem.

(Closed) INFRACTION (80-17-01): The inspector verified that a stop work order was issued by Maintenance Department Management, that the contractor organization documented by memo additional training for personnel involved in the work, and that the number of electrical penetrations on which work was authorized was limited to the number which could be completed in approximately one day by Work Tracking Form.

(Closed) UNRESOLVED ITEM (80-17-02): Work on the secondary containment penetrations has been controlled by a single work tracking form which permits opening only one side of a penetration at a time to prevent actually breaching secondary containment. In addition, the inspector has observed that the Standing Gas Treatment system has been in operation periodically when secondary containment penetration work has been in progress as a precaution to prevent breaching secondary containment.

(Closed) INFRACTION (80-17-03): The inspector reviewed the licensee's documentation to ensure that 100% of the penetrations sealed during the period in question were reinspected. Through discussions with licensee personnel and a review of selected documentation for penetrations sealed since the item of noncompliance was identified, the inspector determined that all penetrations greater than 4 inches are currently being inspected in process.

3. In Office Review of Licensee Event Reports (LER's)

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 80-77*, 80-78, 80-79, 80-80, 80-81, 80-82, 80-83*, 80-84*, 80-85*, 80-86, 80-87*, 80-88, 80-89, 80-90*, 80-91*, 80-92, 80-93, 80-94, 80-95*, 80-96*, 81-01*, 81-02, 81-03, 81-04*, 81-05, 81-06, 81-07, 81-08*, 81-09, 81-10*, 81-11, 81-12, 81-13, 81-14, 81-15, 81-16, 81-17
*Reports selected for onsite followup.

No items of noncompliance were identified.

4. Licensee Event Followup

- a. For those LER's selected for onsite followup (denoted by asterisks in paragraph 3), the inspector determined that adequate corrective action has been or is being taken, that the report accurately describes the event, that the report satisfies the reporting requirements and that the report cause was accurate.

- b. LER 80-77 reported the failure of the drywell equipment drain sump pump. The licensee questioned the applicability of the action statement in paragraph 3.6.D.2.b of Technical Specifications requiring shutdown after 30 days if the pump had remained inoperable. After discussions with the NRR and IE Management, the inspector stated that it appears to apply since the drywell equipment drain pump is a redundant component of the equipment drain pump subsystem. The inspector stated that relief from this requirement might be granted if the licensee submitted a request for a change in the Technical Specification which would make the Licensee's Technical Specification more like Standard Technical Specifications in this area.

LER 80-83 reported that an APRM was operated with less than the minimum allowed LPRM level inputs because LPRM's 44-37B and 44-37C had been inadvertently cross wired during replacement. The inspector determined through discussions with licensee personnel and observation of the LPRM status lights and status sheets on the APRM panel that the cross wiring error had been corrected.

LER 80-85 reported that the HPCI system was inoperable because of a failure of the outside containment steam line isolation valve and the requirement to, therefore, close the inside containment isolation valve. The licensee reported this as a prompt report because of the requirement of paragraph 6.a of IE Bulletin 80-17. The NRC IE Region I Management considers this event reportable as a prompt report regardless of the IE Bulletin 80-17 requirements. This item is unresolved pending NRC determination of the requirement to promptly report this event (50-333/81-06-01).

LER 80-87 reported that Station Battery B was made inoperable to permit jumpering one cell. The inspector reviewed the licensee safety evaluation to ensure the battery had adequate capacity to perform its intended design function with one cell jumpered. The inspector will follow up on the replacement of the cell during the October 1981 outage (50-333/81-06-02).

LER 80-90 reported a failure of a MSIV 90 percent open limit switch. Although this switch was repaired during the January 1981 outage for snubber testing the licensee has not submitted a followup report identifying the cause of the event. This item is unresolved pending submittal of the followup report (50-333/81-06-03).

LER 81-01 reported the failure of a safety relief valve to operate on demand following a plant trip. Details of the inspector followup on this event are in Inspection Report 81-02.

LER 81-03 reported the failure of containment isolation valve 16-1-A0V-102A to close. The inspector determined by observation and a review of daily surveillance checks that the other valve in the line is closed and has observed that the alternate computer indication for the drywell to torus differential pressure is available. The inspector will evaluate the effectiveness of licensee efforts to replace the defective valve during a subsequent inspection (50-333/81-06-04).

LER 81-08 reported a failure to compute the daily reactor coolant leakage rate as required by Technical Specifications. The inspectors identified this oversight and through their daily control room checks have observed that it is an isolated event.

LER 81-10 reported a failure of the HPCI system to perform properly after receipt of an automatic actuation signal, due to a failed control. Details of the inspector followup on this event are contained in inspection report 81-02.

LER 81-12 reported the failure of the off gas vent pipe (stack) sample pump to restart after restoration of a loss of power to its power supply bus due to a design deficiency. The inspector did not agree that the cause was a design deficiency because the pump was not designed to restart after power was restored. The licensee stated that he would change the cause code to indicate a procedural inadequacy. However, he still intends to modify the design such that the pump will restart automatically after power is restored. The inspector will review this design change at a later date.

LER 81-16 reported that the reactor core isolation cooling system was made inoperable to repair a broken thermocouple wire. The inspector will evaluate further the effectiveness of the future modification which will prevent recurrence of this problem during a subsequent inspection (50-333/81-06-05).

5. Licensee Action On IE Bulletins and Circulars

- a. The inspector verified that for the IE Bulletins listed below the licensee's written response was provided within the time period stated in the Bulletin, included the information required to be reported, included adequate corrective action commitments based on information presented in the Bulletin and was accurate. The inspector further verified that any corrective action taken by the licensee was as described in the response.
 - IEB 79-04, Incorrect Weights For Swing Check Valves Manufactured by Valcor Engineering Corporation
 - IEB 80-01, Operability of ADS Valve Pneumatic Supply
 - IEB 80-06, Engineered Safety Feature Reset Controls
 - IEB 80-19, Failure of Mercury - Wetted Matrix Relays in Reactor Protective Systems of Operating Nuclear Power Plants Designed By Combustion Engineering
 - IEB 80-20, Failure of Westinghouse Type W-2 Spring Return to Neutral Control Switches
 - IEB 80-21, Valve Yokes Supplied By Malcolm Foundry Company, Inc.

- IEB 80-23, Failures of Solenoid Valves Manufactured By Valcor Engineering Corporation

The following IE Bulletin was not closed out for the reason indicated below.

- IEB 80-07, BWR Jet Pump Assembly Failure

Although the licensee completed the inspection of the jet pump assemblies during the 1980 refueling outage, he did not report the results as required by paragraph B.1 of the Bulletin. The licensee stated that the report will be submitted by April 1, 1981.

- b. For the IE Circulars listed below, the inspector verified that the Circulars were received by licensee management, that a review for applicability was performed and that appropriate corrective actions were taken.

- IEC 79-12, Potential Diesel Generator Turbocharger Problem
- IEC 79-17, Contact Problem in SB-12 Switches on General Electric Metalclad Circuit Breakers
- IEC 79-21, Nuclear Power Plant Staff Work Hours
- IEC 79-23, Motor Starter and Contactors Failed to Operate
- IEC 79-24, Proper Installation and Calibration of Core Spray Pipe Break Detection Equipment on BWR's
- IEC 79-25, Shock Arrestor Strut Assembly Interference
- IEC 80-02, Prevention of Unplanned Releases of Radioactivity
- IEC 80-04, Securing of Threaded Locking Devices on Safety-Related Equipment
- IEC 80-05, Emergency Diesel Generator Lubricating Oil Addition and Onsite Supply
- IEC 80-07, Problems With HPCI Turbine Oil
- IEC 80-08, BWR Technical Specification Inconsistency - RPS Response Time
- IEC 80-09, Plant Internal Communications
- IEC 80-11, Emergency Diesel Generator Lube Oil Cooler Failures
- IEC 80-12, Valve - Shaft - To - Actuator Key May Fall Out of Place When Mounted Below Horizontal Axis
- IEC 80-15, Loss of Reactor Coolant Pump Cooling and Natural Circulation Cooldown

- IEC 80-21, Regulation of Refueling Crews
- IEC 80-22, Confirmation of Employee Qualifications
- IEC 80-23, Potential Defects In Beloit Power Systems Emergency Generators

The following IE Circulars were not closed out for the reasons indicated below.

- IEC 79-02, Failure of 120 Volt Vital AC Power Supplies

The licensee's review of this Circular identified a need for additional information to complete the recommended action for the LPCI MOV inverters and a need to reset the time delays in other inverters to be within the vendors recommendations. This information was documented in a June 21, 1979 memo. No further followup has been completed because of I&C department staffing problems. The licensee stated that necessary corrective action will be completed during the October 1981 refueling outage.

- IEC 80-01, Service Advice For General Electric Induction Disc Relays

The licensee has completed the recommended action on approximately 40% of the relays installed in the plant. It will be completed for the remaining relays by June 1983 in accordance with the routine maintenance schedule.

- IEC 80-03, Protection From Toxic Gas Hazards

The licensee identified the large volume of Chlorine gas stored at the Alcan plant nearby as a problem in that the degree of protection against this toxic gas hazard is significantly less than that specified in SRP 6.4. Design changes required to achieve an equivalent level of protection will be made in accordance with TMI TAP requirements.

- IEC 80-10, Failure to Maintain Environmental Qualification of Equipment

The licensee stated that action recommended by this Circular will be completed as a result of phase two of the IE Bulletin 79-01B task assigned to the licensee's architect engineer by June 1982.

- IEC 80-18, 10 CFR 50.59 Safety Evaluations for Changes to Radioactive Waste Treatment Systems

The licensee stated that provisions for the action recommended by this Circular will be made in the next revision to the procedure for control of modifications which will be completed by April, 1981.

No items of noncompliance were identified.

6. Licensee Actions on IE Bulletin 80-17, Supplement 4

The inspector reviewed licensee records, interviewed licensee representatives and examined the monitoring equipment associated with the licensee's actions relative to the bulletin. This was done to ascertain compliance with Bulletin requirements and licensee commitments to the NRC.

The following was included in the inspector's review:

- QA NDE Procedure No. NDEP 9.4-3, "Ultrasonic Examination Procedure For Detection of Water in Horizontal or Vertical Piping Runs"
- Procedure No. F-IMP-3.10, "Weekly Operability Verification of Scram Discharge Volume Header Water Level Monitoring During Reactor Operation"
- Procedure No. F-IMP-3.8, "Initial System Calibration"
- Procedure No. F-IMP-3.9, "Full Testing of Scram Discharge Volume (SDV) Continuous Monitoring System (CMS)"
- Operability Verification test data sheets for 2/2/81 and 2/9/81
- Master data sheet, includes initial calibration data and weekly test data for comparison purposes
- Strip charts for system tests done at three flow rates - indicate water level and point when alarm was energized
- Data sheets for manual surveillance from 8/4/80 to 1/17/81

The licensee performed manual surveillance of the SDV, two "U" shaped 8" diameter headers in the reactor building in accordance with IE Bulletin 80-17 until the CMS was deemed operable. This was done using a Krautkramer-Branson model USL 32 ultrasonic instrument and a 5.0 MHz, 1/2" diameter transducer. The system was calibrated on 2" diameter and 8" diameter pipe sections to represent the conditions in the plant. The 2" pipe section was used to permit monitoring the 2" diameter piping connected to the 8" diameter headers.

The CMS equipment originally supplied by the General Electric Company (G.E.) has been modified to incorporate four Krautkramer-Branson model USL 38 ultrasonic instruments in place of the model 280 Water Sleuth units. The original transducers, NDT model WST-1, 2.25 MHz, continue to be used.

The system is designed for battery operation in the event line voltage to the system is interrupted. The batteries are maintained at full charge by the line voltage. Battery operation is rated for up to 12 hours of continuous use.

The system monitors the reflected signal from the SDV header inner wall. Weekly surveillance data includes the amplitude and time base position of the signal which permits the licensee to note any gradual degradation of the signal. This will indicate the condition of coupon material or changes in transducer characteristics and will assure that calibration changes do not go undetected.

The licensee stated that he intends to use the present equipment until such time as the original equipment is modified to permit monitoring of the pipe inner wall reflection. The licensee indicated that G.E. is considering such a modification.

The inspector's review, observations and discussions with licensee personnel indicate that the bulletin requirements and the licensee's commitments to the NRC are being met.

No items of noncompliance were identified.

7. Operational Safety Verification

a. Control Room Observations

- (1) Using a plant specific checklist, the inspector verified plant parameters and equipment availability to ensure compliance with the limiting conditions for operations of the plant Technical Specifications. Items checked included:
 - Switch and valve positions
 - Alarm conditions
 - Meter indications and recorder values
 - Status lights and power available lights
 - Computer printouts
 - Comparison of redundant readings
- (2) The inspector directly observed the following plant operations to ensure adherence to approved procedures:
 - Routine power operations
 - Issuance of RWP's and Work Request/Event/Deficiency Forms
 - Surveillance Tests
- (3) 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 had discussions with the licensee on reducing the number of lit annunciators in the control room. On a day to day basis, there are approximately twenty-five lit annunciators in the control room. Some of these alarms are normal for the existing plant conditions and therefore, provide little information or have no meaning. The inspector will continue to review and evaluate the licensee's efforts in this area during future inspections.
- (4) Shift turnovers were observed weekly to ensure proper control room and shift manning on both day and back shifts. Shift turnover checklists and log review by the oncoming and offgoing shifts were also observed by the inspector.

No items of noncompliance were identified.

b. Shift Logs and Operating Records

- (1) 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
 - Assess the effectiveness of the communications provided by the logs
- (2) The following logs and records were reviewed:
- Shift Supervisor Log
 - Nuclear Control Operator Log
 - Night Orders
 - Shift Turnover Check Sheet
 - Protective Tag Record Log
 - Daily Instrument Checks
 - Daily Core Surveillance Checks

No items of noncompliance were identified.

c. Plant Tours

- (1) During the inspection period, the inspector made observations and conducted tours of plant areas including the following:
- Control Room
 - Relay Room
 - Reactor Building
 - Turbine Building
 - Diesel Generator Rooms
 - Electric Bays
 - Pumphouse - Screenwell
 - Standby Gas Treatment Building
 - Battery Rooms
 - Site Perimeter
 - CAD Nitrogen Storage Area
 - Radwaste Building
 - Auxiliary Boiler Building
 - Stack
 - Heater Bay
 - Cable Spreading Room
 - Refuel Floor
 - Crescent Rooms

(2) The following determinations were made:

- General Plant Housekeeping: Observations relative to plant housekeeping identified no items of noncompliance.
- Fluid Leaks: No significant fluid leaks were observed.
- Piping Vibrations: No excessive piping vibrations were observed and no adverse conditions were noted.
- Monitoring Instrumentation: The inspector verified that selected instruments were functional and indicated parameters were within Technical Specification limits.
- Fire Protection: The inspector verified that selected fire extinguishers were accessible and inspected on schedule, that fire stations were unobstructed, and that adequate control over ignition sources and fire hazards was maintained.
- Radiation Protection Controls: The inspector verified that the licensee's radiation protection policies and procedures were adhered to. Specific observations included:
 - (1) Access control including barriers, tagging, posting, and maintenance of step-off pads
 - (2) Verification that requirements of RWP's in effect are appropriate and are being followed
 - (3) Verification that radiation protection instruments in use are being calibrated as required

(3) While conducting a routine tour of the site perimeter on February 19, 1981 at about 4:00 PM, the inspectors noticed a ladder laying beside the concrete enclosure used as a temporary liner storage area in the northeast corner of the protected area. The area was posted on all four sides with signs labeled "Caution, Radiation Area". The liner storage area is constructed of large concrete blocks weighing in excess of 15 tons each. It is approximately 10 feet high and is accessible only by ladder. The inspectors surveyed the outside of the area and found a maximum reading of approximately 5 millirem per hour using a XETEX 305B digital exposure ratemeter no. NRC008491 at the crack between the blocks forming the south wall of the area. The inspectors were concerned that the area was inadequately posted and that any individual qualified as a self monitor could inadvertently gain access to an area which they suspected was a high radiation area. The inspectors placed the ladder up against the wall, climbed the ladder and surveyed the top of the wall. The maximum radiation level on the south wall was approximately 250 millirem per hour. The inspectors discussed this matter with the health physics technician on duty. A review of the most recent licensee survey of the liner storage area Survey No. 36803 conducted February 18, 1981 indicated that the maximum dose at the sides of all five liners

was 2400 millirem per hour and that the dose 3 feet above the liners was 300 millirem per hour. The inspectors accompanied the licensee health physics technician while he conducted a survey outside of the liner storage area, Survey No. 36811. He obtained a maximum reading of 5.3 millirem per hour at the crack between the concrete blocks on the south side of the wall. Since a worker could receive in excess of 5 millirem in one hour or in excess of 100 millirem in a 40 hour work week, he agreed to rope off and post a larger area around the concrete liner storage area. In addition, he agreed to post the liner storage area as a "High Radiation Area" and remove the ladder from the area. The inspector informed the health physics technician that failure to post the liner storage area as a "High Radiation Area" was an item of noncompliance. In subsequent discussions licensee management personnel stated that it was not proper to post the liner storage area as a "High Radiation Area" for two reasons. First, the area is not a "High Radiation Area" as defined by 10 CFR 20.202(b)(3) because it is not accessible except by extraordinary measures. Second, the liners stored in the temporary area are packaged and labeled in accordance with DOT regulations and therefore the exemption of 10 CFR 20.204(d) applies.

After discussions with NRC Region I health physics inspectors, the inspector informed the licensee that the liner storage area was accessible enough that failure to post the area as a "High Radiation Area" as required by Technical Specification 6.11(A) is an item of noncompliance. He further stated that the exemption of 10 CFR 20.204(d) does not apply because the liners are not sufficiently prepared for transport to meet all DOT regulations required to be released from the site (50-333/81-06-06).

In addition, the inspector informed the licensee that failure to post the liner storage area "Caution, Radioactive Materials" as required by 10 CFR 20.203(e) is also an item of noncompliance (50-333/81-06-07).

Subsequent discussions including a telephone conference between licensee personnel, NRC Region I Health Physics Inspectors, and the Resident Inspectors did not change the position of either party. The licensee agreed that the prudent thing to do would be to post the liner storage area as a "High Radiation Area" and to remove the ladder from the area. However, the licensee did not agree that it was technically correct, as discussed above, and therefore considered that he had been in full compliance.

d. Physical Security

The inspector made observations and verified during regular and off-shift hours, that selected aspects of the plant's physical security systems and organization were in accordance with regulatory requirements, physical security plan and approved procedures.

(1) Physical Security Organization

-- Observations indicated that a full time member of the security

organization with authority to direct physical security actions was present, as required.

- All security members observed appeared to be capable of performing their assigned tasks.

(2) Physical Barriers

- Physical barriers in the protected and vital areas were frequently observed to assure that they were intact and randomly checked by patrolling guards.
- Isolation zones were observed to be free of obstructions and objects that could aid an intruder in penetrating the protected area.

(3) Access Control

- The inspector observed, on frequent occasions, that explosive and metal detectors were operable and used as required.
- On many occasions persons and packages were observed to be properly searched prior to entry into the protected area.
- Vehicles were observed to be properly searched and escorted or controlled within the protected area.
- Persons within the protected area displayed photo identification badges, persons in vital areas were properly authorized, and persons requiring escorts were properly escorted.

No items of noncompliance were identified.

- e. The inspector reviewed a summary of all 1980 Occurrence Reports 80-01 to 80-241 prepared by the licensee giving particular attention to those which were not identified as Licensee Event Reports (LER's).

No items of noncompliance were identified.

8. Review of Plant Operations

On February 19, 1980, the inspector attended a scheduled licensed operator annual requalification training lecture on the subject of thermodynamics, heat transfer and fluids. At the beginning of the lecture the instructor pointed out that the thermodynamics portion had been covered the previous afternoon as allowed by the schedule in order to permit more time for the first half of the annual requalification exam scheduled for the afternoon. Thus, the lecture covered only the subjects of heat transfer and fluids.

The instructor used the replacement training outlines on the subjects of heat transfer and fluids and portions of the Shift Technical Advisor Training Program Manual, Volume 2 of NEDO 24819 as the basis for the lecture. Selected subjects from each of these documents were covered. The lecture was conducted in accordance with the requirements of ITP 5, Licensed Operator

Requalification, Revision 4, dated August 7, 1980.

No items of noncompliance were identified.

9. Surveillance Observation

On February 13, 1980, the licensee declared the High Pressure Coolant Injection (HPCI) System inoperable because of a failed GEMAC controller. The inspector observed portions of the surveillance procedures listed below to determine that the HPCI system Technical Specification requirements were met. By observation and discussions with licensed operators conducting the tests the inspector determined that procedures were followed, testing was performed by qualified personnel, limiting conditions for operation were met and system restoration was correctly accomplished.

- F-ST-4G, HPCI System Inoperable Test, Revision 3, dated November 7, 1980
- F-ST-3A, Core Spray Pump Flow Rate Test, Revision 4, dated March 11, 1980
- F-ST-2A, RHR Pump Flow Rate Test (ISI), Revision 4, dated March 11, 1980
- F-ST-2C, RHR MOV Valve Operability Test, Revision 4, dated July 18, 1979
- F-ST-4A, HPCI Simulated Automatic Actuation Test, Revision 4, dated February 18, 1977

The failed controller was replaced and the new controller was tested satisfactorily within three hours of declaring the HPCI system inoperable. Consequently, of the surveillance tests listed above, only F-ST-3A and F-ST-4A were completed prior to restoration of the HPCI system to service.

No items of noncompliance were identified.

10. Followup On Licensee Event

On February 10, 1980 at about 1:45 PM reactor water conductivity exceeded the Technical Specification Limit of 5 micromhos per centimeter, reaching a maximum of approximately 6.3 micromhos per centimeter. Early warning of the high conductivity makeup water did not occur because of a failed conductivity cell in the makeup demineralized water system. It appears that the conductivity cell failed because it was subjected to a high caustic concentration as a result of leakage by closed valves one of which had its intervals removed. This was the result of improperly running the caustic pump at shutoff head during a condensate demineralizer regeneration cycle. This happened as result of a misunderstood communication between the licensed operator supervising the regeneration cycle and an auxiliary operator which led to an improper valve lineup.

Upon realizing that reactor water conductivity was in excess of the alarm setpoint at about 10:30 AM, license personnel immediately took action to isolate the source of the conductivity and to reduce conductivity by all

available means. When reactor water conductivity reached the Technical Specification limit, the licensee notified the NRC by ENS and notified the Power Control Center (PCC) that a load reduction might be necessary. By midnight reactor water conductivity was still slightly in excess of 5 micromhos per centimeter although it was decreasing. Reactor power was reduced to approximately 70 percent. By about noon February 10, 1981, conductivity had been reduced to 2.5 micromhos per centimeter and a power increase back to 100 percent was begun. Efforts to restore condensate storage tanks, makeup demineralizer system storage tanks, and reactor building closed cooling water system conductivity to normal continued until the end of February. By the end of February the licensee had not yet completed their review of the event and had not made any decision on long term corrective action. The inspector will evaluate further licensee action on this event during subsequent inspections (50-333/81-06-08).

11. Fire Protection Modifications

On February 17, 1981, the inspector attended an NRR/Licensing meeting in Bethesda, Maryland. The meeting was held to consider the licensee's request for relief from the schedule requirements for the completion of modifications in the Safety Evaluation Report for Amendment No. 47 to Facility Operating License No. DPR-59. NRR participants concluded that with certain modifications which PASNY officials agreed to that the Licensee's compensatory measures found in Operations Department Standing Order (ODSO) No. 15, Incomplete Fire Modifications, Revision 0, dated February 14, 1981 were adequate to assure equivalent protection of public health and safety. However, NRR participants were concerned that the licensee's relief request may not provide adequate justification because of a failure to adequately control the design and fabrication of the control room fire protection panel. As a result of this concern, NRR participants decided to delay the decision on the relief request pending further review. IE participants agreed to wait for the NRR decision on the relief request prior to taking any enforcement action on the matter.

On a routine tour of the facility on February 20, 1981, the inspector evaluated the effectiveness of the compensatory measures in ODSO No. 15. The inspector found the new fire door on the east side of the HPCI pump enclosure open and closed it. While the licensee had documented that the door was closed during the shift as required by ODSO No. 15, the inspector pointed out to the licensee that additional checks in that area may be prudent while modification work is still in progress and that labeling of the door might be helpful to prevent recurrence. During the same tour the inspector found a trouble light on new local fire panel 76-CP136. Again, the licensee had been documenting hourly tours of this panel as required by ODSO No. 15. Although the existence of the trouble light condition had not been documented, subsequent discussion with the licensee indicated that it had been in existence for more than the time since the previous tour and that it was known to licensee management. Further, Licensee personnel aware of the condition did not think it would degrade operation of the panel. Further investigation by the licensee revealed that the condition did degrade operation of the panel. The licensee immediately initiated hourly tours of the areas monitored by the panel until repairs were complete.

No items of noncompliance were identified.

12. Low Scram Air Header Pressure Scram Modification

The inspector reviewed the licensee's proposed modification F1-81-01 to meet the requirements of the Order For Modification of License Concerning BWR Scram Discharge Systems, dated January 9, 1981. It appeared that the licensee's intent was to install non-safety grade pressure switches in series with the scram discharge instrument volume (SDIV) level switches which provide a reactor protection system (RPS) scram signal on high SDIV level. These pressure switches would then provide a scram signal on low scram air header pressure. The inspector questioned whether this proposed modification would meet the order requirement that the modification not degrade existing safety systems like the RPS. The licensee agreed with the inspectors concern and plans to use safety grade pressure switches.

No items of noncompliance were identified.

13. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items identified during this inspection are discussed in paragraph 3b.

14. 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 February 12, 1981 and February 27, 1981, the inspectors met with licensee representatives (denoted in paragraph 1) and summarized the scope and findings of the inspection as they are detailed in this report. During the latter meeting the unresolved items were discussed.