

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

Region I

Report No. 50-286/80-21

Docket No. 50-286

License No. DPR-64 Priority -- Category C

Licensee: Power Authority of the State of New York

10 Columbus Circle

New York, New York 10019

Facility Name: Indian Point Nuclear Generating Station, Unit 3

Inspection at: Buchanan, New York

Inspection conducted: December 15-19, 1980

Inspectors: Edward J. Greenman / JFC  
Jin W. Chung, Reactor Inspector

1/15/81  
date signed

date signed

date signed

Approved by: Edward J. Greenman  
E. G. Greenman, Chief, Nuclear Support  
Section No. 2, RO&NS Branch

1/15/81  
date signed

Inspection Summary:

Inspection on December 15-19, 1980 (Report No. 50-286/80-21)

Areas Inspected: Routine, unannounced inspection by a region-based inspector of followup on prior identified items; administrative controls for surveillance procedures; surveillance testing; inspector witnessing of surveillance tests; technician qualification; and control room observation. The inspection involved 28 inspector-hours onsite by one NRC region-based inspector.

Results: Noncompliances: None.

## DETAILS

### 1. Persons Contacted

#### Principal Licensee Employees

- J. C. Boccio, Instrument and Control Supervisor
- \*J. C. Brons, Resident Manager (Effective January 1, 1981)
- \*C. Connell, Performance and Reliability Supervisor
- J. Davis, Assistant to I&C Superintendent
- \*J. Dube, Security and Safety Supervisor
- \*D. Halama, Site Q.A. Manager
- W. Hamlin, Assistant to Resident Manager
- \*W. A. Josiger, Superintendent of Power
- H. MacKay, Shift Supervisor
- \*S. L. Munoz, Technical Service Superintendent
- E. Tagliamenti, Operations Superintendent
- \*S. Zulla, Resident Manager

#### USNRC

- \*T. J. Kenny, Resident Inspector

Other licensee employees were contacted during the inspection. These included performance and engineering personnel, administrative personnel, reactor operators, I&C personnel, and technicians.

\*Denotes those present at exit interview.

### 2. Licensee Action on Previous Inspection Findings

(Closed) Deficiency (286/79-04-01): On four occasions surveillance tests had been performed with superseded procedures. The test adequacy or safety was not affected by the use of superseded revisions. The inspector verified by review of the controlled files that the superseded revisions to procedures had been replaced from the active files with the following revised procedures.

- 3PT-M17, Containment Spray Pump Test, Revision 7, November 1, 1980
- 3PT-M18, RHR Pumps Functional Test, Revision 6, April 30, 1980
- 3PT-M22, Diesel Generator. This procedure had been incorporated into 3PT-V16, Diesel Generator Functional Test, Revision 1, November 1, 1980
- 3PT-M35, Inservice Inspection Test, Revision 3, May 8, 1980

(Closed) Infraction (286/79-04-02): The administrative controls and procedures relating to the performance of surveillance tests were not fully adhered to:

- a. The manual containing the controlled copies of surveillance procedures contained superseded revisions contrary to the requirements in the administrative procedure AP-19. "Surveillance Test Program" and the Surveillance Status Board in the Control Room was not up to date. The inspector verified that the superseded revisions to the surveillance procedures had been removed from the active files and the surveillance test schedule in the computer file was up to date. In addition, the administrative control procedure, AP-19, was revised on November 30, 1979 to delete Step D in the procedure, which requires updating of the Surveillance Test Status Board. A licensee representative stated that the Status Board was used for information only, and the surveillance schedule and status were routinely maintained in the computer file.
- b. Two of the four completed surveillance test procedures did not have the component cooling flow logged. A licensee representative stated that personnel performing the surveillance testing had been reinstructed to complete the information and the data sheet as required in the procedures.
- c. Four of the six completed Diesel Generator Functional surveillance tests did not have the PH and Chromate values recorded. A licensee representative stated that the PH and Chromate values were routinely obtained in accordance with the Chemistry Sampling procedure and the values were transcribed to the surveillance procedure 3PT-M22 from the sampling record. The inspector verified by review of the procedure 3PT-M22 that the steps 3.27, 3.3.7, and 3.4.7 were deleted and the rest of the procedural steps in 3PT-M22 had been incorporated into 3PT-V16.
- d. The data sheet for the surveillance test SOP-RCS-4, "RCS Leakage Surveillance" has no provisions for recording the previous test values of condensate level, dew point, and containment activity. A licensee representative stated, and the inspector concurred, that these values were normally monitored by other means and were inadvertently retained in the procedure. The inspector verified that the procedure SOP RCS-4 was revised on September 30, 1980 to delete the procedural steps, consistent with the data sheet.
- e. Test instruments used were not recorded on data sheets associated with the following completed surveillance tests: 3PT-R3D performed August 9, 1978; 3PT-R10(A) performed June 9, 1978; 3PC-R2 performed June 28, 1978; 3PC-R5B performed July 27, 1978; 3PC-R11 performed

July 3, 1978; and, 3PC-R8 performed July 21, 1978. The inspector verified that the calibration data for the test instruments, the ones thought to be missing, were attached to the back of the completed test packages. A licensee representative stated and the inspector verified that the test gauge number and calibration curve were normally attached to the procedure unless otherwise specified in the procedure.

(Closed) Unresolved Item (286/79-04-05): Procedures 3PC-R5B, 3PC-R11 and 3PC-R8 contain notations that may have required temporary procedure changes. The inspector verified that the temporary procedure changes had been incorporated into the procedures, and the following revisions were implemented.

- 3PC-R8, Residual Heat Flow Calibration, Revision 3, September 24, 1980
- 3PC-R11, Volume Control Tank Level, Revision 2, May 29, 1979
- 3PC-R5B, 6.9 KV Under Frequency, Revision 3, February 27, 1979

(Closed) Unresolved Item (286/79-04-06): The surveillance procedures 3PT-M31, 3PT-Q10, and 3PT-SA1, include components which may require evaluation for calibration. A licensee representative stated that the instruments and the components in the procedures were either calibrated by the manufacturers or regularly calibrated from the calibration sources traceable to the National Bureau of Standards. The inspector verified by review of the following procedures that the procedures were reviewed and the revisions were issued.

- 3PT-M31, Revision 4, October 11, 1980
- 3PT-Q10, Revision 2, October 6, 1980
- 3PT-SA1, Revision 4, October 29, 1980

(Closed) Infraction (286/79-19-01): No written procedures were established for 23 control room annunciator alarms. The inspector verified by review of Alarm Response Manual that the following procedures were established for the control room alarm annunciators:

(a) Panel SBF-2, Safeguards

- ARP 5-17, 480 Volt Safeguard Bus Undervoltage, Revision 3, May 20, 1980

(b) Panel SDF, Turbine Recorder, Revision 3, November 20, 1980

- ARP 7-2, Condenser Hotwell No. 32 High Level
  - ARP 7-4, Condenser Hotwell No. 32 Low Level
  - ARP 7-5, Condenser Hotwell No. 32 Low Low Level
  - ARP 7-12, Seismic Event Occurred
  - ARP 7-13, Pressurizer Relief Tank High High Level
  - ARP 7-14, Pressurizer Relief Tank High Level
  - ARP 7-15, Heater Drain System High Level
  - ARP 7-17, Steam Generator Blowdown Analyzer Trouble
  - ARP 7-17, Loss of Load Interlock
  - ARP 7-16, Test/Manual Defeat SI Train A
  - ARP 7-17, Test/Manual Defeat SI Train B
- (c) Panel SGF, Auxiliary Coolant System, Revision 3, January 21, 1980
- ARP 10-13, High Rate Pressure Change
  - ARP 10-13, Rate of Pressure Change Occurred
  - ARP 10-13, RCS Overpressurization Temperature Trip
- (d) Panel PJF, Cooling Water and Air, Revision 2, January 21, 1980
- ARP 12-2, Refueling Water Storage Tank High Level
  - ARP 12-4, Refueling Water Storage Tank Low Level
  - ARP 12-5, Diesel Generator No. 33 Auto Start Defeated
  - ARP 12-6, Diesel Generator No. 32 Auto Start Defeated
  - ARP 12-9, Diesel Generator No. 31 Auto Start Defeated
  - ARP 12-4, Instrument Air Refrigerant Dryer Bypass Valve Open
- (e) Panel SMF, Safety Injection, Revision 2, November 21, 1980
- ARP 15-4, Carbon Filter Fire Protection Trouble

-- ARP 15-8, Fan No. 35 Carbon Filter High Temperature

(Closed) Deficiency (286/79-19-02): The procedures had not been reviewed by the onsite review committee, PORC. The inspector confirmed by review of the following procedures that the procedures had been reviewed by PORC prior to implementation.

(a) Operating Procedures

-- SOP-RC-2, Revision 1, February 21, 1980

-- SOP-RM-4, Revision 1, February 21, 1980

-- SOP-FW-3, Revision 1, February 21, 1980

-- SOP-EL-6, Revision 2, March 15, 1980

(b) Emergency Procedures

-- PEP-C-1, Revision 2, December 21, 1979

-- PEP-RW-3, Revision 2, April 30, 1980

-- PEP-C-2, Revision 3, December 21, 1979

(c) A total of sixty-seven checkoff lists had been reviewed by PORC during November 30, 1979 through November 25, 1980.

3. Administrative Controls for Surveillance Procedures

The inspector performed a review, on a sampling basis, of the following administrative procedures for conformance with Technical Specifications, Section 6, "Administrative Controls"; ANSI N18.7, "Administrative Controls for Nuclear Power Plants"; and, Regulatory Guide 1.33 "Quality Assurance Program Requirements."

-- AP-3, Procedure Preparation, Review and Approval, Revision 5, September 30, 1980

-- AP-4, Procedure Adherence and Use, Revision 1, June 1, 1979

-- AP-15, Training Procedure, Revision 1, September 19, 1980

-- AP-9, Work Requests, Revision 0, effective upon receipt of operating license

-- AP-17, Calibration of Measuring and Test Equipment, Revision 3, September 26, 1979

- AP-18, Record Control and Storage, Revision 2, February 21, 1980
- AP-19, Surveillance Test Program, Revision 3, November 30, 1979
- AP-23-1, Instrument and Control Procedure Controls, Revision 0, April 25, 1978

No unacceptable conditions were identified.

#### 4. Surveillance Testing

- a. The inspector reviewed surveillance tests on a sampling basis to verify the following:
  - Tests required by Technical Specifications are available and covered by properly approved procedures.
  - Test format and technical content are adequate and provide satisfactory testing of related systems or components.
  - Tests have been reviewed as required by Facility Administrative Requirements.
  - Tests were performed within the time frequencies specified by the Technical Specifications and appropriate action was taken for any item failing acceptance criteria.
- b. The following surveillance tests for the periods indicated were reviewed.
  - 3PT-R3B, Safety Injection Test, Revision 1, October 16, 1979. Tests performed November 6, 1979 and October 24, 1980.
  - 3PT-R3D, Safety Injection Test, Revision 0, August 7, 1978. Tests performed August 16, 1978 and November 18, 1979.
  - 3PT-R4, Full Length Rod Drop Time Test, Revision 1, August 15, 1978; Revision 2, July 30, 1979. Tests performed August 16, 1978 and January 24, 1980.
  - 3PT-R1, Containment Sump Level Analog Channel Functional Test, Revision 0, March 28, 1978; Revision 1, September 19, 1980. Tests performed November 19, 1979 and September 19, 1980.
  - 3PT-M1, Nuclear Power Range Channels, Revision 17, May 9, 1980. Tests performed August 9, 1980, September 7, 1980, October 25, 1980, and November 30, 1980.

- 3PT-A15, H.P. Fire System Valve Cycling Test, Revision 0, December 4, 1978. Tests performed October 26, 1978 and October 24, 1979.
- 3PT-SA13, Fire Protection System Smoke Detectors, Revision 1, June 1, 1979. Tests performed August 26, 1979, February 6, 1980, July 19, 1980, and November 25, 1980.
- 3PC-R6, Full Length Rod Position Indication System Calibration, Revision 1, July 13, 1978; Revision 2, December 24, 1979. Tests performed August 17, 1978 and January 25, 1980.
- 3PT-R3D, Safety Injection Test Blackout, Revision 1, December 8, 1980. Tests performed December 13, 1980 and November 18, 1979.
- 3PT-R35, Containment Isolation Valve Leakage Test, Revision 0, November 23, 1977. Tests performed August 14, 1978 and December 17, 1979.
- 3PC-R3, Pressurizer Level Calibration, Revision 1, June 29, 1978. Tests performed July 22, 1978 and December 1, 1979.
- 3PT-C58, Safety Injection System RWST Valves, Revision 0, October 18, 1980. Test performed October 20, 1980.
- 3PT-A3, Fire Protection System, Revision 0, March 28, 1978. Tests performed March 6, 1979 and March 15, 1980.
- 3PT-A5, Electrical Heat Tracing, Revision 0, March 28, 1978. Tests performed November 2, 1978 and February 14, 1980.
- 3PT-W1, Diesel Generator Test, Revision 5, September 30, 1980. Ten tests performed October 14, 1980 through December 4, 1980.
- 3PT-V10A, RCS Hydrostatic Test (Hot), Revision 0, July 29, 1980. Test performed July 29, 1980.
- 3PT-V10, Special RCS Hydrostatic Test, Revision 3, January 16, 1980. Test performed January 22, 1980.
- 3PT-M28, N.I. Comparator and Rate Circuit, Revision 2, March 28, 1978. Five tests performed July 25, 1980 through November 16, 1980.
- 3PT-M24, Low Pressure Steam Pump Test, Revision 2, March 9, 1978. Five tests performed July 2, 1980 through September 28, 1980.

- 3PT-M18, RHR Pumps Functional Test, Revision 6, April 30, 1980. Five tests performed August 14, 1980 through December 9, 1980.
- 3PC-R5B, 6.9KV Underfrequency Relay Calibration and Response Time Test, Revision 3, February 27, 1979. Test performed October 22, 1980.
- 3PC-R21, Calibration Check of Boron Injection Tank Recirculation Flow Indicator, Revision 2, October 1, 1980. Tests performed October 18, 1979 and October 15, 1980.
- 3PT-M21, Station Batteries Surveillance, Revision 3, March 28, 1978; Revision 4, September 5, 1980. Five tests August 9, 1980 through December 5, 1980.
- 3PT-R5, Pressurizer Safety Valves Setting Test, Revision 3, October 29, 1979. Tests performed October 18-19, 1980, and October 31, 1979.
- 3PT-R6, Main Steam Safety Valve Setting Test, Revision 2, September 14, 1979. Tests performed September 5, 1979 and October 2, 1980.
- 3PC-R1(C), Reactor Coolant Loop Wide Range RTD Calibration, Revision 1, August 3, 1978; Revision 2, September 30, 1980. Test performed September 16, 1980.
- 3PT-Q7, Diesel Generator Mechanical Overspeed Trip Test, Revision 1, March 18, 1978. Tests performed June 29, 1980, September 20, 1980, and October 22, 1980.
- 3PT-V3, Reactor Coolant System Hydrostatic Test, Revision 0, January 26, 1976, Tests performed January 6, 1976 and November 26, 1977.
- 3PT-M14A, SIS Logic Channel Functional Test A, Revision 4, June 4, 1979; Revision 5, July 28, 1980. Five tests performed May 12, 1980 through November 12, 1980.

c. Findings

- (1) During the operability and preventive maintenance test of the Fire Protection System, 3PT-A3, performed on March 15, 1980, the licensee identified that the hoses were either not connected or missing, and the nozzles hand wheels were missing at

fire stations #311, #314, and #38, and the test was declared as unacceptable. However, neither corrective action was taken nor Maintenance Work Request (MWR) was issued. The inspector toured the above fire stations to verify the current status of the equipment, and verified that a hose at station #38 was not connected.

A licensee representative stated that the fire hose was being used during the outages to clean the area and the hose would be connected as soon as possible. This item is unresolved pending NRC:RI re-inspection of the fire station (286/80-21-01).

- (2) The Intake Structure Electrical Heat Tracing Test, 3PT-A5, performed on November 2, 1978, identified electrical circuit problems in that the circuits 20, 21, 22, 24, 25, 33, 34, and 37 were not functioning properly, and the test panel lights were erratic due to the loose fitting of the light sockets and rusting. Subsequently an MWR was issued. However, similar problems had been identified again during the test on February 14, 1980. The licensee acknowledged the repetitive problems associated with the heat tracing circuits, and stated that the problems would exist until the completion of the construction work to enclose the area. A licensee representative further stated that a tentative measure would be evaluated to resolve the problem. This item is unresolved pending NRC:RI inspection of the corrective action (286/80-21-02).
- (3) The inspector determined that the Diesel Generator Mechanical Overspeed Trip Test, 3PT-Q7, performed October 12, 1980, was conducted with the superseded procedure. A licensee representative stated that the October test would be invalidated since the test was not required according to the three-month test frequency requirements. The inspector verified that the test was re-scheduled for December 20, 1980 and the October test was removed from the file. This area will be re-inspected pending the scheduled test on December 20, 1980 (286/80-21/03).
- (4) The inspector noted by review of the Low Pressure Steam Dump Test, 3PT-M24, performed September 2, 1980 that the Channel II Annunciator for the Steam Dump Valve No. 2 had failed to meet the operability criteria. However, upon completion of the corrective work per MWR the licensee could not produce any objective evidence of the post maintenance retest. The licensee representative stated that the completed MWR would be evaluated to ensure the operability of the annunciator. This area will be reviewed during subsequent re-inspection pending the licensee evaluation of the annunciator operability (286/80-21-04).

## 5. Inspector Witnessing of Surveillance Tests

- a. Surveillance testing was witnessed to verify the following.
  - Required procedures were available, in use, and followed.
  - Special test equipment required by procedure was calibrated and in use.
  - Test prerequisites were met and initial conditions were observed properly.
  - The procedure was adequately detailed to assure performance of a satisfactory surveillance test.
- b. The following two surveillance tests were witnessed:
  - 3PT-M20, Auxiliary Boiler Feed Pump Test, performed December 16, 1980.
  - 3PT-M13B, Reactor Trip Protection Train B, performed December 18, 1980.

### c. Findings

During the #33 ABF Pump surveillance test, the inspector observed that the pressure gauge used for the pump discharge pressure measurement was not properly connected and the technician performing the test recorded the gauge reading on the data sheet while there was a significant leakage at the gauge connector. This did not affect the operability of the pump since the actual discharge pressure would have been higher than the value recorded by the technicians without the leaky connection. A licensee representative acknowledged the inspector's concern and stated that the technician performing the tests would be retrained to conduct the tests properly in accordance with the procedures.

The inspector further observed that temperature probe, 1P3-3281 Digital Heat Prober, for the pump bearing temperature measurement did not have the calibration label on the instrument, and the licensee could not produce any objective evidence of calibration or documentation of calibration. A licensee representative stated that the probe would be calibrated and an administrative control measure of test equipment would be implemented.

This item is unresolved pending NRC:RI inspection of the instrument calibration (286/80-21-05).

## 6. Technician Qualifications

The inspector reviewed the qualification records of four currently assigned technicians having responsibility for surveillance testing of safety related systems and components, to ensure that the personnel qualifications met the minimum training and experience guidelines of ANSI N18.1, "Selection and Training of Nuclear Power Plant Personnel."

No unacceptable conditions were identified.

## 7. Control Room Observations and Facility Tours

- a. The inspector observed control room operations for control room manning, shift turnovers, and facility operation in accordance with Administrative and Technical Specification requirements.

In addition, the inspector toured Turbine/Generator Building for housekeeping practices and work in progress, and the fire hose stations.

- b. Findings

The fire hose at the fire station #38 was not connected, and this item was incorporated into 4.c(1).

## 8. Unresolved Items

Unresolved items are findings about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance or deviations. Unresolved items disclosed during the inspection are discussed in Paragraphs 4.c(1), 4.c(2), and 5.c.

## 9. Entrance and Exit Interviews

Licensee management was informed of the purpose and scope of the inspection at the entrance interview, and the findings of the inspection were periodically discussed with the licensee representatives as summarized below:

<u>Date</u>	<u>Reportable Details Covered</u>
December 15, 1980	Entrance Interview
December 16, 1980	5.c
December 18, 1980	4.c(1), 4.c(2), 4.c(4)
December 19, 1980	5.c, 4.c(1), 4.c(3), Exit

The inspector conducted an exit interview with licensee representatives (denoted in paragraph 1) at the conclusion of the inspection, where the findings of the inspection were presented and acknowledged by the licensee.