

September 6, 2000

Mr. Robert J. Barrett  
Site Executive Officer  
New York Power Authority  
Indian Point 3 Nuclear Power Plant  
Post Office Box 215  
Buchanan, NY 10511

**Subject: NRC INTEGRATED INSPECTION REPORT NO. 05000286/2000-005**

Dear Mr. Barrett:

On August 19, 2000, the NRC completed an inspection at the Indian Point 3 nuclear power plant. The enclosed report presents the results of that inspection. The results were discussed on August 31, 2000, with you and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

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Sincerely,

/RA/

James C. Linville, Chief  
Projects Branch 6  
Division of Reactor Projects

Docket No.05000286  
License No. DPR-64

Enclosure: Inspection Report No. 05000286/2000-005

cc w/encl:

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 05000286  
License No. DPR-64

Report No. 05000286/2000-005

Licensee: Power Authority of the State of New York,  
doing business as The New York Power Authority (NYPA)

Facility: Indian Point 3 Nuclear Power Plant

Location: P.O. Box 215  
Buchanan, New York 10511

Dates: July 2 - August 19, 2000

Inspectors: Peter Drysdale, Senior Resident Inspector  
Jennifer England, Resident Inspector  
Paul Kaufman, Senior Reactor Inspector  
Stephen Pindale, Reactor Inspector  
Sean Peters, Reactor Inspector  
Jason Jang, Senior Health Physicist

Approved by: James Linville, Chief  
Projects Branch 6  
Division of Reactor Projects

## SUMMARY OF FINDINGS

IR 05000286/2000-005; on 07/02 - 08/19/00; Indian Point 3 Nuclear Power Plant.

The report covered a seven-week period of inspection conducted by resident and regional inspectors per the NRC's revised reactor oversight process (Attachment 1). There were no findings identified during this inspection.

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## Report Details

### **SUMMARY OF PLANT STATUS**

The Indian Point 3 plant remained at full power throughout the inspection period.

#### **1. REACTOR SAFETY (Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity)**

##### 1R04 Equipment Alignment

###### a. Inspection Scope (71111.04)

On July 6, 2000, the inspector performed a walkdown of the 32 and 33 auxiliary boiler feed water pumps (ABFP) using Checkoff List COL-FW-2 "Auxiliary Feedwater System," and piping diagrams 9321-F-20183, 20173, and 20193. During this inspection, the 31 ABFP was out of service for a motor inspection and greasing of the motor-pump coupling.

The inspectors completed a full walkdown of all accessible portions of the residual heat removal (RHR) system inside the Primary Auxiliary Building (PAB) to verify equipment alignment. Documents reviewed included: Checkoff List COL-RHR-1 "Residual Heat Removal System," System Operating Procedure SOP-RHR-1 "Residual Heat Removal System," Emergency Operating Procedure ES-1.2 "Post-LOCA Cooldown & Depressurization," plant flow diagram drawings 27353, 27513, 27203, 27503, and section 6.7 and 9.3, of the Updated Final Safety Analysis Report. The inspectors also reviewed outstanding maintenance activities, open work requests, outstanding corrective action program deficiencies, temporary modifications, and operator work-arounds associated with the RHR system.

On July 24, 2000, the inspectors performed a walkdown of the 31 and 33 component cooling water (CCW) pumps using Checkoff List COL-CC-1 "Component Cooling System," System Operating Procedure SOP-CC-1B "Component Cooling System Operation," and piping diagram 9321-F-27513. During this inspection the 32 CCW pump was removed from service for an alignment and motor inspection.

###### b. Issues and Findings

There were no findings identified during this inspection.

##### 1R05 Fire Protection

###### a. Inspection Scope (71111.05)

The inspectors conducted tours of the plant and examined the programmatic controls for combustible and flammable material, and the availability and material condition of fire protection and suppression equipment in the following areas

- 480 volt switchgear room
- Primary auxiliary building
- Fire pump and fire water storage tank
- Turbine building

b. Issues and Findings

There were no findings identified during this inspection.

1R12 Maintenance Rule Implementation

a. Inspection Scope (71111.12)

The inspectors reviewed problems involving selected in-scope structures, systems, and components (SSCs) to assess the effectiveness of the maintenance program. The reviews focused on proper maintenance rule scoping, characterization of failed SSCs, safety significance classifications, 10 CFR 50.65 (a)(1) and (a)(2) classifications, and performance criteria for SSCs classified as (a)(2), or goals and corrected actions for SSCs classified as (a)(1). The inspectors reviewed NYPA's scoping documents, deficiency/event reports, and completed work orders. The following SSC deficiencies were reviewed:

- 33 Control rod drive fan motor failure
- 33 Service water pump failed surveillance
- 34 Service water pump vacuum breaker leakage
- 32 Auxiliary feedwater pump steam pressure control valve malfunction
- 32 Auxiliary feedwater pump bearing cooling water check valve failure

b. Issues and Findings

There were no findings identified during this inspection.

1R13 Maintenance Risk Assessment and Emergent Work

a. Inspection Scope (71111.13)

The inspectors reviewed the maintenance risk assessments and corrective maintenance work packages for the following emergent work:

- 32 Component cooling water pump oil seal leakage repair

b. Issues and Findings

There were no findings identified during this inspection.

1R15 Operability Evaluations

a. Inspection Scope (71111.15)

The inspector reviewed operability determinations (ODs) for the technical adequacy of the evaluations, whether continued operability was warranted, and whether other existing degraded systems adversely impacted the affected system or compensatory actions. The following operability evaluations were evaluated:

- 00-23, Aluminum Content in Containment Exceeding FSAR Value
- 00-24, Chemical and volume control system leakage outside containment



- 00-25, 33 Emergency diesel generator water jacket heater out of service

b. Issues and Findings

There were no findings identified during this inspection.

1R19 Post Maintenance Testing

a. Inspection Scope (71111.19)

The inspectors reviewed post-maintenance test procedures and associated testing activities to assess whether 1) the effect of testing in the plant had been adequately addressed by the control room, 2) testing was adequate for maintenance performed, 3) acceptance criteria were clear and adequately demonstrated operational readiness consistent with design and licensing documents, 4) test instrumentation had current calibrations, range, and accuracy for the application, and 5) test equipment was removed following testing. The following activities were evaluated:

- 3PT-Q120A, "31 ABFP Surveillance and IST (In service test)," following motor preventive maintenance and greasing of the coupling
- Retest following preventive maintenance on the emergency diesel generator cell exhaust fan
- 3PT-Q120B, "32 ABFP Surveillance and IST," following preventive and corrective maintenance on the pump turbine coupling and auxiliary feedwater regulating valve BFD-FCV-405C for the 33 steam generator
- 3PT-Q101, "Main Steam Valves PCV-1310A/B and PCV-1139 Stoke Test," following corrective maintenance on the PCV-1310A limit switch
- 3PT-Q66B, "32 Component Cooling Water Pump Test," following rework to replace a leaking oil seal on the inboard side of the pump.

b. Issues and Findings

There were no findings identified during this inspection.

1R22 Surveillance Testing

a. Inspection Scope (71111.22)

The inspector reviewed surveillance test procedures and associated testing activities to assess whether 1) the test preconditioned the component(s) tested, 2) the effect of testing was adequately addressed in the control room, 3) the acceptance criteria demonstrated operational readiness consistent with design calculations and licensing documents, 4) the test equipment range and accuracy was adequate with proper calibration, 5) the test was performed in the proper sequence, and 6) the test equipment was removed following testing.

- 3PT-Q38A, "31 Boric Acid Transfer Pump Functional Test"
- 3PT-R3B25, "36 Service Water Pump Load Sequencer Calibration"
- 3PT-M47, "Meteorological Facility Diesel Generator Functional Test"

b. Issues and Findings

There were no findings identified during this inspection.

## 2. RADIATION SAFETY

### (Cornerstone: Public Radiation Safety)

#### 2PS1 Radiological Environmental Monitoring Program (REMP)

##### a. Inspection Scope

The inspector reviewed the following documents and conducted the following activities to evaluate the effectiveness of the licensee's REMP. The requirements of the REMP were specified in the Technical Specification/Offsite Dose Calculation Manual (TS/ODCM):

1. The 1999 Annual REMP Report;
2. The most recent ODCM (Revision 13, March 8, 2000) and technical justifications (or 50.59 safety evaluation) for ODCM changes, including sampling locations;
3. The most recent calibration results for the meteorological monitoring instruments and weekly display validation log (between meteorological monitoring tower and the control room);
4. The most recent calibration results for all air samplers (5);
5. The measurement laboratory quality control (QC) program, including the interlaboratory comparison program and the corrective actions for any deficiencies;
6. Deviation/Event Reports 00-01973, "Loss of Power to air sampler;" 00-01811, "Failure to obtain required fish sample for Radiological Environmental Program;" 99-01745, "Incorrect Distance Listed in ODCM;" 00-01699, "10-meter Tower Wind Stability Class Display out-of -service;" and 00-01468, "Failure of the 122-meter Wind Speed Channel"
7. 1999 Meteorological Program Self-assessment (IP-RES-99-245);
8. 1999 QA audit for the REMP/ODCM implementations (Audit Report Number A99-09-I, IP2/IP3 Joint Audit of the REMP and Meteorological Monitoring Program);
9. The Land Use Census. (Procedure and result);
10. Implementation of the environmental thermoluminescent dosimeters (TLDs) program;
11. Walk-down for determining whether all air samplers, composite water sampler, vegetable garden, and 20% of TLDs were located as described in the ODCM and for determining the equipment material condition;
12. Observation of water sampling techniques; and
13. Associated REMP procedures.

##### b. Issues and Findings

There were no findings identified during this inspection.

#### 2PS2 Radioactive Material Control Program

##### a. Inspection Scope

The inspector reviewed the following documents and licensee activities to ensure that the licensee's surveys and controls were adequate to prevent the inadvertent release of licensed material to the public domain.

- The methods used for control, survey, and release from the Radiologically Controlled Area (RCA);
- The most recent calibration results for the radiation monitoring instrumentation (small articles monitor), including the (a) alarm setting, (b) response to the alarm, and (c) the sensitivity;
- The licensee's criteria for the survey and release of potentially contaminated material; and
- Associated procedures and records to verify for the lower limits of detection.

The review was against criteria contained in 10CFR20, NRC Circular 81-07, NRC Information Notice 85-92, NUREG/CR-5569, Health Position Data Base (Positions 221 and 250), and the licensee's procedures.

a. Issues and Findings

There were no findings identified during this inspection.

**4. OTHER ACTIVITIES (OA)**

4OA2 Performance Indicator Verification

a. Inspection Scope (71151)

Safety System Functional Failures and RCS Leak Rate

The inspector reviewed the safety system functional failures and reactor coolant system leak rate performance indicators (PIs). The inspector used Licensee Event Reports (LERs) for the past year, NEI 99-02 "Regulatory Assessment Indicator Guideline," and completed procedures SOP-RCS-4 "Reactor Coolant Leakage Surveillance" and SOP-RCS-5, "Reactor Coolant Leakage Evaluation," for this review.

RETS/ODCM Radiological Effluent Occurrences

The inspector reviewed the adequacy and effectiveness of the licensee's implementation of the public exposure PI. The following documents were reviewed to ensure the licensee met all requirements of the PI from the third quarter 1999 to the second quarter of 2000 (four quarters):

1. Monthly projected dose assessment results due to radioactive liquid and gaseous effluent releases; and
2. Quarterly projected dose assessment results due to radioactive liquid and gaseous effluent releases.

b. Issues and Findings

There were no findings identified during this inspection.

#### 4OA4 Licensee Event Report Reviews

##### (Closed) LER 2000-007-00 Automatic Reactor Trip After Turbine Trip Due to Low Level in Steam Generator 31 as a Result of Personnel Error During Transfer of Feed Control

This event was discussed in NRC Inspection Report (IR) 05000286/2000-004. The report satisfied the requirements of 10CFR50.73, and no new issues were revealed by this LER. This LER is closed.

##### (Closed) LER 2000-008-00 Automatic Reactor Trip as a Result of Direct Trip from the Buchanan 345 KV Substation upon Protective Relay Conductors Low Resistance Fault

The subject of this LER was discussed in IR 05000286/2000-004. The reactor trip was not complicated and was a minor issue. The LER revealed no new issues and satisfied the reporting requirements of 10CFR50.73. This LER is closed.

#### 4OA5 Performance Indicator Data Collecting and Reporting Process Review

##### a. Inspection Scope (TI 2515/144)

In accordance with Temporary Instruction 2515/144, "Performance Indicator Data Collecting and Reporting Process Review," the inspectors reviewed the Emergency Response Organization Drill/Exercise Participation and the Occupational Exposure Control Effectiveness Performance Indicators. The inspectors reviewed LIC-SD-02, "Performance Indicator Reporting," NEI 99-02, "Regulatory Assessment Indicator Guideline," EP-ADM-07, "Emergency Planning Performance Indicators," and RE-UOE-14-4, "Radiological Event Classification and Investigation."

##### b. Issues and Findings

There were no findings identified during this inspection.

#### 4OA6 Meetings

##### Exit Meeting Summary

On August 31, 2000, the inspectors presented the inspection results to Mr. R. Barrett and other NYPA staff members who acknowledged the inspection results presented. The inspector asked NYPA personnel whether any materials examined during the inspection were considered proprietary. No proprietary information was identified.

#### **PARTIAL LIST OF PERSONS CONTACTED**

R. Barrett	Site Executive Officer
R. Burroni	I&C Manager
F. Dacimo	Plant Manager
J. Comiotes	General Manager-Operations
J. DeRoy	Director, IP-3 Engineering
R. Deschamps	Health Physics Manager
D. Mayer	General Manager-Support Services
J. Perrotta	Quality Assurance Manager

K. Peters	Licensing Manager
P. Rubin	Assistant Operations Manager
J. Russell	General Manager-Maintenance
A. Vitali	Maintenance Manager
J. Wheeler	Training Manager

**ITEMS OPENED, CLOSED, AND DISCUSSED**

Closed

LER 2000-007-00 Automatic Reactor Trip After Turbine Trip Due to Low Level in Steam Generator 31 as a Result of Personnel Error During Transfer of Feed Control

LER 2000-008-00 Automatic Reactor Trip as a Result of Direct Trip from the Buchanan 345 KV Substation upon Protective Relay Conductors Low Resistance Fault

**LIST OF ACRONYMS USED**

ABFP	auxiliary boiler feedwater pump
CCW	component cooling water
COL	checkoff list
IR	inspection report
IST	in-service test
LER	Licensee Event Report
NRC	Nuclear Regulatory Commission
NYPA	New York Power Authority
OD	operability determinations
ODCM	Offsite Dose Calculation Manual
PAB	primary auxiliary building
PAR	publicly available records
PI	performance indicator
QA	Quality Assurance
QC	Quality Control
RCA	Radiologically Controlled Area
REMP	Radiological Environmental Monitoring Program
RHR	residual heat removal
SSCs	structures, systems and components
TLD	thermoluminescent dosimeter
TI	Temporary Instruction
TS	Technical Specifications

## ATTACHMENT 1

### NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

#### Reactor Safety

- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

#### Radiation Safety

- Occupational
- Public

#### Safeguards

- Physical Protection

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margins and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margins but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <http://www.nrc.gov/NRR/OVERSIGHT/index.html>.