

June 16, 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: INDIAN POINT 3 - NRC INSPECTION REPORT NO. 05000286/2000-002**

Dear Mr. Barrett:

On May 20, 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 June 2, 2000 with Mr. Dacimo 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. During the seven-week period covered by the inspection, your staff conducted activities at the facility with an adequate focus on safe plant operations.

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Sincerely,

/RA/

Peter W. Eselgroth, Chief  
Projects Branch 2  
Division of Reactor Projects

Docket No. 05000286  
License No. DPR-64

Enclosure: Inspection Report No. 05000286/2000-002

cc w/encl:

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 05000286  
License No. DPR-64

Report No. 05000286/2000-002

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: April 2 - May 20, 2000

Inspectors: Peter Drysdale, Senior Resident Inspector  
Jennifer England, Resident Inspector

Approved by: Peter Eselgroth, Chief  
Projects Branch 2  
Division of Reactor Projects

## SUMMARY OF FINDINGS

Indian Point 3 Nuclear Power Plant  
NRC Inspection Report 05000286/2000-002

The report covered a seven-week period of resident inspection. The significance of issues is indicated by their color (GREEN, WHITE, YELLOW, RED) and was determined by the Significance Determination Process in draft Inspection Manual Chapter 0609 (see Attachment 1).

No findings were identified during this inspection.

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## Report Details

### **SUMMARY OF PLANT STATUS**

The Indian Point 3 plant remained at full power during the inspection period, except for one short duration down power to 93% on May 5 to conduct main turbine stop and control valve testing.

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

##### 1R04 Equipment Alignment

###### a. Inspection Scope

On April 6, 2000, the licensee performed planned maintenance on the 31 residual heat removal pump breaker (powered from the 31 emergency diesel generator (EDG)), the 312 auxiliary feedwater pump room fan, and performed surveillance test PT-M62 "480V Under Voltage/Degraded Grid Protection System Functional." During these activities, the inspector performed a partial system walkdown of the starting air and fuel oil systems of the 32 EDG, and of the starting air system on the 33 EDG.

During May 17 - 24, 2000, the inspector performed a partial walkdown of the containment isolation valve (CIV) system after three solenoid-operated valves (SOV-512, -513, and -514) in the CIV system were de-energized for preventive maintenance. The inspection focused on the alignment of the 15 high risk significant CIVs, and all other system valves that receive a "Phase A" containment isolation signal (closure of all nonessential process lines following a safety injection actuation) and a "Phase B" isolation signal (i.e., closure of all essential process lines following an actuation of containment spray).

###### b. Issues and Findings

There were no findings identified during this inspection.

##### 1R05 Fire Protection

###### a. Inspection Scope

The inspectors focused on the material condition and availability of fire protection equipment, and transient fire loads during tours of the following plant areas:

- 31, 32, and 33 emergency diesel generator cells; April 6
- Upper and lower electrical tunnels; April 9
- Cable spreading room; April 20
- Primary auxiliary building; April 24
- Auxiliary boiler feedwater pump room; May 16
- 480 VAC switchgear room; May 16

b. Issues and Findings

There were no findings identified during this inspection.

1R11 Operator Requalification Training

a. Inspection Scope

On May 8, 2000, the inspector observed and evaluated portions of the licensed operator requalification training for Crew E in the plant simulator facility. The training consisted of operator proficiency in the use of substantial revisions to Emergency Operating Procedure E-0, "Reactor Trip or Safety Injection," and RO-1, "BOP Operator Actions During Use of EOPs." The inspector evaluated operator performance in mastering the training objectives for mitigating the consequences of plant events.

b. Issues and Findings

There were no findings identified during this inspection.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspector reviewed the implementation of the Maintenance Rule (MR) as related to the following topics:

- 35 service water pump test failure on April 6, 2000
- Containment isolation valve system performance criteria for returning the system to MR a(2) status.

b. Issues and Findings

There were no findings identified during this inspection.

The inspector determined that the licensee's service water action plan to exit MR status "a(1)" was not properly updated to reflect recent service water pump test failures and performance problems. The service water system had been in MR "a(1)" status since 1996, and entered "a(1)" status because the pumps did not start when required. The system remained in "a(1)" because of excessive pump unavailability due to accelerated degradation of pump differential pressure. The licensee determined that the degradation was caused by a higher than expected rates of impeller erosion. The licensee's corrective actions for this degradation included a replacement of the pump shaft with an upgraded material. The inspector identified that the action plan used to remove the system from "a(1)" status did not address the current service water pump unavailability performance problems as required by Technical Support Procedure TSP-053, "System Performance Monitoring and Trending." The licensee indicated that the action plan would be updated by the end of July 2000.



### 1R13 Maintenance Risk Assessment and Emergent Work

#### a. Inspection Scope

The inspectors reviewed the maintenance risk assessments, corrective maintenance work packages, and observed activities associated with the following emergent work:

Emergent work to troubleshoot and repair the following equipment:

- 32 Feedwater regulating valve controller; April 2-5
- 32 Reactor coolant pump low oil alarm, and subsequent changeout of the level sight glass vent valve and tubing; May 15-19
- 33 Control rod drive fan failures and troubleshooting; May 15-19, (DER 00-1151)

#### b. Issues and Findings

There were no findings identified during this inspection.

### 1R15 Operability Evaluations

#### a. Inspection Scope

The inspector reviewed operability determinations (ODs) associated with the following plant challenges:

- OD 00-013, "Degraded 35 service water pump" test failure"; April 6
- OD 00-015, "Determine if pushbutton for non-SI blackout logic defeat reset does not adversely affect plant safety, EDG loading, or ESF actuations"; April 19
- OD 00-017, "Upgrade evaluations for non-CAT I components"; May 12

#### b. Issues and Findings

There were no findings identified during this inspection.

### 1R16 Operator Work-arounds

#### a. Inspection Scope

The inspector also reviewed the entire list of operator work-arounds and the licensee's procedure for determining impact on plant safety, and for the aggregate effect of work-arounds on operator effectiveness.

#### b. Issues and Findings

There were no findings identified during this inspection.

1R19 Post Maintenance Testinga. Inspection Scope

The inspector reviewed and/or observed a portion of the following post maintenance tests:

- 31 EDG quarterly surveillance test following adjustments to EDG engine timing
- SOV-1007 post work test
- Low pressure steam dump valve AOV-1208, post-maintenance test for stroke time following preventive maintenance and packing adjustment

b. Issues and Findings

There were no findings identified during this inspection.

1R22 Surveillance Testinga. Inspection Scope

The inspector reviewed the following surveillance tests:

- 3PT-Q118A, "RHR pump functional test"; April 19
- 3PT-Q120B, "32 ABFP (turbine driven) surveillance and IST"; May 9
- 3PT-M7, "Individual rod position indication surveillance test"; May 16
- 3PT-Q116B, "32 SI pump surveillance test"; May 17

b. Issues and Findings

There were no findings identified during this inspection.

The inspector determined that the licensee's review of NRC Information Notice 97-16, "Preconditioning Plant Structures, System, and Components Before ASME Code In-service Testing or Technical Specification Surveillance Testing," was not performed in accordance with Administrative Procedure AP-37.3 "Feedback of Operating Experience." The licensee's review did not include a review for preconditioning activities during surveillance tests involving pumps. This Information Notice specifically listed venting a residual heat removal pump as an example of preconditioning. Surveillance test 3PT-Q118A, "Residual heat removal (RHR) pump functional test," required that the pump seal package be vented prior to starting the pump. The licensee initiated DER 00-01006 to address this discrepancy, and to evaluate other plant pump tests for potential preconditioning.

#### 1R23 Temporary Modifications

##### a. Inspection Scope

The inspector reviewed the licensee's documentation for Temporary Modification 99-03737-01, "Installation of the CCR Alarm Jumper for AC-MOV-1870," its associated nuclear safety analysis (NSE 99-3-090), and the daily verifications of valve position required by the safety analysis. The inspector also reviewed the licensee's test results to confirm the function of the alarm for other safeguards valves that input to the same CCR annunciator.

##### b. Issues and Findings

There were no findings identified during this inspection.

#### 4. **OTHER ACTIVITIES [OA]**

##### 4OA1 Identification and Resolution of Problems

Inspection findings in previous sections of this report also had implications regarding NYPA's identification, evaluation, and resolution of problems, as follows:

- Section 1R22 - Surveillance testing of the RHR pump
- This demonstrated weak evaluation of Information Notice 97-16.

Additional items associated with the NYPA's corrective action program were reviewed without findings and are listed in Sections 1R04, 1R05, and 1R15 of this report.

##### 4OA2 Performance Indicator Verification

##### a. Inspection Scope

The inspector reviewed the performance indicator for unplanned scrams per 7,000 critical hours. The inspector's review included records for the period of April 1, 1999, through March 31, 2000.

##### b. Issues and Findings

There were no findings identified during this inspection.

##### 4OA4 Other

(Closed) Licensee Event Report (LER) 2000-002-00, "Plant Outside Design Basis Due to Routing of Component Cooling Water Piping Within the Fuel Storage Building Which was not Designed for Tornado Effects During Original Plant Design"

On April 27, 2000, the licensee reported a condition in a portion of one loop of the component cooling water (CCW) piping that did not satisfy design requirements for protection against tornado-generated missiles, as stated in the Final Safety Analysis Report (FSAR). Two sections of CCW piping in the fuel storage building were susceptible to damage and placed the plant outside its design basis. The inspectors

performed an in-office review of the LER and concluded that it satisfied the provisions of 10 CFR 50.73 for reporting conditions outside the design basis of the plant. This item is closed.

(Closed) LER 2000-003-00, "Automatic Actuation of Auxiliary Boiler Feedwater Pump 32 During Testing of Emergency Diesel Generator 32 Due to High Resistance in the Contacts of the Reset Switch in the Non-Safety Injection Blackout Logic Defeat Circuitry"

On May 17, 2000, the licensee reported an actuation of the 32 auxiliary boiler feedwater pump (ABFP) during testing of the 32 EDG on April 19, 2000, which was caused by the failure of a safety-related switch in the control room. A high switch contact resistance created an open circuit in the non-SI blackout logic reset switch and prevented a seal-in of the defeat logic. The inspectors performed an in-office review of the LER, and considered the licensee's actions and report content to satisfy the requirements of 10 CFR 50.73. This item is closed.

#### 4OA5 Meetings

##### Exit Meeting Summary

On June 2, 2000, the inspectors presented the inspection results to Mr. Barrett and other members of licensee management who acknowledged the results presented.

The inspector asked NYPA personnel whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified. The inspector also pointed out two necessary typographical corrections to Inspection Report 05000286/2000-001, Attachment 1: 1) LER 2000-007 should be corrected to 2000-001, and 2) LER 1998-004 should be corrected to 1999-004. The licensee acknowledged these corrections.

### 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 2000-002-00	Plant Outside Design Basis Due to Routing of Component Cooling Water Piping Within the Fuel Storage Building Which was not Designed for Tornado Effects During Original Plant Design
LER 2000-003-00	Automatic Actuation of Auxiliary Boiler Feedwater Pump 32 During Testing of Emergency Diesel Generator 32 Due to High Resistance in the Contacts of the Reset Switch in the Non-Safety Injection Blackout Logic Defeat Circuitry

### LIST OF ACRONYMS USED

ABFP	Auxiliary Boiler Feedwater Pump
ACTS	Action Commitment Tracking System
AOV	Air-Operated Valve
BOP	Balance-of-Plant
CCR	Central Control Room
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CIV	Containment Isolation Valve
DER	Deficiency and Event Report
EDG	Emergency Diesel Generator
LER	Licensee Event Report
MR	Maintenance Rule
NRC	Nuclear Regulatory Commission
NSE	Nuclear Safety Evaluation
NYPA	New York Power Authority
OD	Operability Determination
PT	Periodic Test
RHR	Residual Heat Removal
SI	Safety Injection
SOV	Solenoid-Operated Valve
TS	Technical Specification

## 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>.