

October 15, 2002

Mr. Robert J. Barrett  
Vice President, Operations  
Entergy Nuclear Operations, Inc.  
Indian Point Nuclear Generating Unit 3  
295 Broadway, Suite 3  
Post Office Box 308  
Buchanan, NY 10511-0308

SUBJECT: INDIAN POINT 3 NUCLEAR POWER STATION - NRC PROBLEM  
IDENTIFICATION AND RESOLUTION INSPECTION REPORT  
NO. 50-286/02-006

Dear Mr. Barrett:

On October 3, 2002, the Nuclear Regulatory Commission (NRC) completed a team inspection at the Indian Point 3 Nuclear Power Station. The enclosed report presents the results of that inspection. The results were discussed on October 3, 2002, with you and other members of your staff.

This inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, compliance with the Commission's rules and regulations, and with the conditions of your operating license. Within this area, the inspection involved selected examination of procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the sample selected for review, there were no findings of significance identified during this inspection. The team concluded that problems were properly identified, evaluated, and resolved within the problem identification and resolution programs (PI&R). Quality assurance audits and department self-assessments focused on identifying corrective action program enhancements.

Mr. Robert J. Barrett

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Sincerely,

***/RA/***

David C. Lew, Chief  
Performance Evaluation Branch  
Division of Reactor Safety

Docket Nos.: 50-286  
License Nos.: DPR-64

Enclosure: Inspection Report 50-286/02-006

cc w/encl: J. Yelverton, Chief Executive Officer  
M. Kansler, Senior Vice President and Chief Operating Officer  
J. DeRoy, General Manager of Plant Operations  
D. Pace, Vice President - Engineering  
J. Knubel, Vice President Operations Support  
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J. Kelly, Director - Licensing  
C. D. Faison, Manager - Licensing  
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J. Comiotes, Director, Nuclear Safety Assurance  
J. McCann, Manager, Nuclear Safety and Licensing  
Mayor, Village of Buchanan  
J. G. Testa, Mayor, City of Peekskill  
J. M. Fulton, Assistant General Counsel  
W. Flynn, President, New York State Energy Research  
and Development Authority  
J. Spath, Program Director, New York State Energy Research  
and Development Authority  
P. D. Eddy, Electric Division, New York State Department of Public Service  
C. Donaldson, Esquire, Assistant Attorney General, New York Department  
of Law  
R. Schwartz, SRC Consultant  
R. Toole, SRC Consultant  
C. Hehl, SRC Consultant  
R. Albanese, Executive Chair, Four County Nuclear Safety Committee  
S. Lousteau, Treasury Department, Entergy Services, Inc.  
Chairman, Standing Committee on Energy, NYS Assembly  
Chairman, Standing Committee on Environmental Conservation, NYS Assembly  
Chairman, Committee on Corporations, Authorities, and Commissions  
Assemblywoman Sandra Galef, NYS Assembly  
C. Terry, Niagara Mohawk Power Corporation  
County Clerk, Westchester County Legislature  
A. Spano, Westchester County Executive  
R. Bondi, Putnam County Executive  
C. Vanderhoef, Rockland County Executive  
E. A. Diana, Orange County Executive  
M. Elie, Citizens Awareness Network  
J. Riccio, Greenpeace  
F. Zalcmann, Pace Law School, Energy Project  
A. Matthiessen, Executive Director, Riverkeeper, Inc.  
P. Leventhal, The Nuclear Control Institute  
K. Copeland, Pace Environmental Litigation Clinic  
R. Witherspoon, The Journal News

Mr. Robert J. Barrett

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No: 50-286

License No: DPR-64

Report No.: 50-286/02-006

Licensee: Entergy Nuclear Northeast

Facility: Indian Point 3 Nuclear Power Plant

Location: Buchanan, New York

Dates: September 16 - October 3, 2002

Inspectors: G. Cranston, Reactor Inspector (Team Leader), Division of Reactor  
Safety  
T. Kim, Senior Project Manager, Office of Nuclear Reactor Regulation  
W. Bennett, Contractor

Approved by: David C. Lew, Chief  
Performance Evaluation Branch  
Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000286-02-006; on 9/16 - 10/3, 2002; Indian Point 3 Nuclear Power Plant; biennial baseline inspection of the identification and resolution of problems.

The inspection was conducted by one regional inspector, one headquarters project manager, and one contractor. No findings were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

### Identification and Resolution of Problems

The NRC inspection team concluded that the overall implementation of the corrective action program at Indian Point 3 was adequate. In general, the threshold for problem identification was appropriate and problems were properly identified, evaluated and corrected. Problems were entered into the corrective action program at an appropriate threshold. The licensee adequately prioritized and evaluated issues, and their evaluations were of adequate depth to identify the causes and appropriately broad in considering the extent of condition. The corrective actions were reasonable and adequately implemented.

## Report Details

### **4. OTHER ACTIVITIES (OA)**

#### 4OA2 Problem Identification and Resolution of Problems

##### a. Effectiveness of Problem Identification

##### (1) Inspection Scope

The team reviewed items selected from various licensee processes and activities to determine if the licensee was properly identifying, characterizing and entering problems into the corrective action process for evaluation and resolution. The licensee's primary process for identifying and resolving problems is the Condition Report (CR) process; items entered into this process are referred to as CRs. The team reviewed CRs identified in Attachment 1 to determine the licensee's threshold for identifying problems and entering them into the corrective action process.

The team also reviewed items from the licensee's operating, maintenance and quality assessment processes to determine if personnel were appropriately initiating CRs when problems were identified via these processes. The team reviewed a sample of the control room work order tracking list, operator work-arounds (burdens), control room deficiencies, temporary modifications, system health reports, problem identification tags (PIDs), emergency preparedness items, quality assurance (QA) audits, self assessments, operating experience information, corrective maintenance and elective maintenance work orders, and minutes from the safety review committee (SRC) meetings. The team attended a SRC subcommittee meeting which reviewed the Indian Point 3 corrective action program. The team also performed plant walkdowns and conducted interviews with plant personnel to determine if problems were appropriately identified.

##### (2) Findings

The team determined that the licensee was effective at identifying problems at the appropriate threshold and entering them into the corrective action system. This was evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee during the review period. Licensee audits and assessments were of good depth and identified issues similar to those that were self-revealing or raised during previous NRC inspections. Also, during this inspection, there were no instances identified where conditions adverse to quality were being handled outside the corrective action program.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The team reviewed items selected from the licensee's corrective action processes to determine whether the issues were properly evaluated and resolved. The review included the appropriateness of the assigned significance, the timeliness of resolutions, and the scope and depth of the root cause evaluations (or apparent cause evaluation). The samples included those designated as significant and covered the seven cornerstones. The team screened Condition Reports (CRs) in the licensee's corrective action process and selected those listed in Attachment 1 of this report for detailed review.

The team also reviewed the licensee's activities regarding the ongoing problem of service water (SW) system leaks, primarily at welded joints. There have been over forty (40) leaks reported over the last four years with five occurring this year.

(2) Issues

From the samples reviewed, the team concluded that the licensee, in general, adequately prioritized and evaluated issues entered in the CR process. The licensee's assessments properly considered operability and reportability requirements. The licensee's evaluations were generally of adequate depth to identify the causes and appropriately broad in considering the extent of condition.

Regarding the SW system, the identified leaks were minor and, except for one leak, have not adversely impacted plant operation. The licensee has implemented a SW system pipe replacement program which is ongoing with work activities scheduled in their long term action plan. Additionally, the licensee has an Action Plan in place which identifies other activities and inspections to prevent or minimize the probability of future SW system leaks.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The team reviewed the corrective actions associated with selected CRs to determine whether the corrective actions addressed the identified causes and were completed or scheduled to be completed in a timely fashion.

The team reviewed CRs for repetitive problems and CRs related to previously issued NRC non-cited violations to determine whether corrective actions were completed and effective. The team also reviewed the backlog of corrective actions to determine if there were items that individually or collectively represented an adverse effect on plant risk or an adverse trend in the implementation of the corrective action program. The team observed that effectiveness reviews were conducted for all Significance Level A (there are four significance levels with A being the highest) CRs as required by procedure about one year after the associated corrective action was completed. Additionally, the licensee conducted effectiveness reviews on most Level B CRs.

(2) Issues



Overall, the team concluded that the licensee developed and implemented corrective actions that appeared reasonable to address the identified problems. Based on the sample reviewed, the team determined that the corrective actions were completed or scheduled to be completed in a timely manner. In general, effectiveness reviews adequately verified the effectiveness of the corrective action. The team noted that the licensee was in the process of evaluating the effectiveness of the Indian Point 3 effectiveness reviews based on a presentation made at the Safety Review Committee subcommittee meeting, which was attended by the inspection team.

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

The team reviewed the licensee's Employee Speak Out Program implementation and, during interviews with plant personnel including the licensee Employee Speak Out Program Coordinator, considered if conditions were apparent or existed that would challenge the establishment of a safety conscious work environment at the Indian Point Unit 3 plant.

(2) Issues

There were no findings identified during this part of the inspection.

4OA6 Meetings, Including Exit

.1 Exit Meeting Summary

The team presented the inspection results to Mr. Robert Barrett and other members of the Indian Point 3 staff during an exit meeting on October 3, 2002. No information examined or reviewed during the inspection was considered to be proprietary.

## Attachment 1

**KEY POINTS OF CONTACT**

H. Anderson	Coordinator, Operations Corrective Action and Analysis
J. Barnes	System Engineering Manager
J. Bouffort	System Engineer
R. Buckley	Self-Assessment Coordinator
T. Chan	System Engineer
B. Christman	Manager, Operations Support
J. Comiotes	Director, Nuclear Safety Assurance
V. Coulehan	Senior Project Manager, Operating Experience
J. DeRoy	Plant Manager
M. Devlin	Engineer
J. Donnelly	Manager, Corrective Action & Analysis
Z. Eisenberg	System Engineer
M. Garofalo	QA Supervisor
R. Hansler	Reactor Engineer
W. Hawkins	Safety Programs Administrator
J. Hill	System Engineer and Electrical Engineering Supervisor
J. Inglis	Senior Maintenance Engineer
F. Inzinillo	Manager, Emergency Preparedness
J. Kayani	Program Engineer
K. Kirkpatrick	Coordinator, Operating Experience
E. Libby	Supervisor, Technical Support
B. Magurno	Chemistry Technician
W. Mastrogiacono	Supervisor, Construction Engineering
J. McCann	Manager, Licensing
G. Mosher	System Engineer
J. Nickerson	Manager of Safety and Fire Protection
J. Perrotta	Quality Assurance Manager
D. Poole	Member, Safety Review Committee
R. Porter	Operations Engineer
S. Prussman	Licensing Engineer
C. Putnam	System Engineer
J. Raffaele	Electrical Design Supervisor
A. Remskar	Coordinator, Operating Experience
S. Rokerya	Licensing
T. Schaeffer	I & C Maintenance
F. Schillinger	Site PM Coordinator
R. Schmitt	Supervisor, Electrical Maintenance
B. Shepard	I & C Engineer
I. Sinert	System Engineer
M. Smith	Director, Engineering
S. Smith	Supervisor, BOP Systems Engineering
B. Taggart	Speak-out Employee Concerns Representative
M. Tesoriero	Program and Components Engineer
G. Vranjesic	Senior Electrical Engineer

J. Whitney  
G. Wilverding

System Engineer  
Coordinator, Safety Review Committee

### LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

#### Opened/Closed

None

### PARTIAL LIST OF DOCUMENTS REVIEWED

#### Condition Reports

00-0670	01-1901	01-3260	01-4268	02-0368
00-1495	01-1911	01-3261	01-4270	02-0379
00-2623	01-1963	01-3290	01-4284	02-0418
00-3246	01-2014	01-3300	01-4289	02-0446
00-3308	01-2032	01-3308	01-4318	02-0494
01-0008	01-2045	01-3311	01-4331	02-0527
01-0119	01-2146	01-3312	01-4347	02-0540
01-0141	01-2175	01-3370	01-4388	02-0635
01-0172	01-2215	01-3412	01-4423	02-0664
01-0238	01-2215	01-3416	01-4449	02-0698
01-0327	01-2568	01-3417	01-4492	02-0701
01-0331	01-2623	01-3421	01-4503	02-0721
01-0390	01-2655	01-3449	01-4512	02-0729
01-0398	01-2771	01-3498	01-4517	02-0815
01-0573	01-2781	01-3514	01-4562	02-0835
01-0690	01-2796	01-3541	01-4567	02-1022
01-0701	01-2806	01-3584	01-4587	02-1138
01-0721	01-2922	01-3606	02-0019	02-1160
01-0769	01-2984	01-3610	02-0024	02-1168
01-0794	01-2993	01-3620	02-0029	02-1190
01-0835	01-3013	01-3630	02-0048	02-1201
01-1138	01-3095	01-3656	02-0058	02-1212
01-1139	01-3113	01-3697	02-0065	02-1308
01-1161	01-3116	01-3732	02-0093	02-1380
01-1168	01-3125	01-3812	02-0141	02-1387
01-1190	01-3149	01-3902	02-0211	02-1390
01-1201	01-3154	01-3915	02-0238	02-1399
01-1212	01-3164	01-4041	02-0248	02-1409
01-1362	01-3172	01-4094	02-0255	02-1432
01-1390	01-3177	01-4102	02-0266	02-1442
01-1446	01-3204	01-4165	02-0293	02-1492
01-1495	01-3245	01-4262	02-0310	02-1529
01-1680	01-3246	01-4263	02-0326	02-1534
01-1898	01-3251	01-4265	02-0327	02-1559

02-1576	02-1963	02-2621	02-2882	02-3312
02-1666	02-1966	02-2626	02-2945	02-3412
02-1694	02-1974	02-2655	02-3025	02-3430
02-1710	02-2014	02-2662	02-3115	02-3514
02-1717	02-2038	02-2711	02-3154	02-3606
02-1727	02-2093	02-2771	02-3155	02-3606
02-1853	02-2140	02-2781	02-3155	02-3622
02-1898	02-2146	02-2782	02-3157	02-3820
02-1901	02-2408	02-2788	02-3176	02-3839
02-1904	02-2437	02-2806	02-3210	99-2623
02-1911	02-2568	02-2869	02-3300	

Work Requests

020148949	990341707	010001021	020148942
000456801	950644623	010002508	027709221
010484927	980543400	020149014	027709222
980346500	980544800	010005501	010396200
020004512	980072602	010444500	
020003705	010001013		

Effectiveness Reviews

ACT-01-54135	ACT-01-55029	ACT-01-56634	ACT-01-58054
ACT-01-54165	ACT-01-55252	ACT-01-57370	
ACT-01-54419	ACT-01-55763		

Quality Assurance Audit Reports

A01-07I	Indian Point 3 (IP3) Radiological Environmental Monitoring and Meteorological Monitoring Programs, August 18, 2001.
A01-08I	IP3 Fire Protection Program, October 9, 2001.
A01-09I	Surveillance Test Program, December 20, 2001.
A01-10I	Corrective Action Program, January 1, 2002.
A01-11I	Indian Point 3 (IP3) Radiological and Non-Radiological Effluent Monitoring Programs, February 5, 2002.
A01-12I	Document Control, April 2, 2002.
A01-13I	IP3 Control of Measuring and Test Equipment, February 14, 2002.
A01-14I	IP3 Security and Fitness for Duty, February 14, 2002.
A02-01I	Indian Point 3 (IP3) Training and Qualification of Plant Staff, March 12, 2002.
A02-03I	On-Site Review Committee and Safety Review Committee, June 19, 2002.
A02-06I	Indian Point 3 (IP3) Emergency Planning Program, July 17, 2002.
A02-07I	Environmental Qualification Program, May 20, 2002.

System Health Reports

B06-0142 Reactor Protection & Control System Health Report, 1<sup>st</sup> Quarter 2002.  
 E21-0010 Component Cooling Water Health Report, 1<sup>st</sup> Quarter 2002.  
 E25-0034 Chemical and Volume Control System Health Report, 1<sup>st</sup> Quarter 2002.  
 E26-0048 Emergency Diesel Generator System Health Report, 1<sup>st</sup> Quarter 2002.  
 E32-0087 Control Building Heating and Ventilation System Health Report, 1<sup>st</sup> Quarter 2002.  
 E34-0138 Residual Heat Removal System Health Report, 1<sup>st</sup> Quarter 2002.  
 F38-0042 480V System Health Report, 1<sup>st</sup> Quarter 2002.  
 F38-0043 6.9KV System Health Report, 1<sup>st</sup> Quarter 2002.  
 F38-0044 DC Power System Health Report, 2<sup>nd</sup> Quarter 2002.  
 F38-0044 DC Power System Health Report, 1<sup>st</sup> Quarter 2002.  
 F42-0108 Main Steam System Health Report, 1<sup>st</sup> Quarter 2002.  
 F44-0151 Service Water System Health Report, 1<sup>st</sup> Quarter 2002.

Procedures

AP-8.5 Screening & Assignment of Deficiency/Event Reports, Revision 1  
 ENN-LI-102 Corrective Action Process, Rev. 2, May 20, 2002.  
 ENN-LI-104 Assessment Process, Rev. 2.  
 ENN-OE-100 Operating Experience Program, Rev. 0, March 25, 2002.  
 ENN-PL-151 Policy on Operating Experience (OE), Rev. 0, December 10, 2001.  
 OD-35 Component Verification and System Status Control, Rev. 13.  
 SMM-IS-104 Electrical Safety Program, Revision 0.  
 SOP-CB-005 Isolation Valve Seal Water System Operation, Rev. 12.  
 SOP-CM-002 Fuel Storage Building Crane Operation, Rev. 12.

Safety Review Committee Meeting Minutes

2002-01, February 28 - March 1, 2002  
 2002-02, May 22, 2002  
 2002-03, June 10, 2002  
 2002-04, June 20-21, 2002

Inspection Performance Monitoring Reports

2001-0190, October 15, 2001  
 2002-0003, January 17, 2002  
 2002-0019, February 7, 2002  
 2002-0052, February 11, 2002  
 2002-0097, June 17, 2002  
 2002-0098, June 18, 2002  
 2002-0112, July 17, 2002  
 2002-0116, July 30, 2002

Operability Determinations

01-038, October 25, 2001  
 02-001, January 17, 2002  
 02-009, March 7, 2002

Miscellaneous Documents

DCP 97-3-367	Design Change Package, Delete NIS Rod Drop Turbine Runback, September 25, 2002.
PID 01103	Leak at weld location EOC-28, 18" service water line, July 13, 2001.
SR-02-16	QA Surveillance Report, Problem Identification and Reporting, September 5, 2002.
TM-00-3-099	Temporary Power to 31 Control Rod Drive Motor.
TM-00-3-100	Temporary Power to 33 Control Rod Drive Motor Fan.
TM-00-3-103	Temporary Power to 31 Control Rod Drive Motor Fan.
-	Industrial Safety Rulebook, Electrical Safety, August 28, 2002.
-	Quarterly Review of the Cumulative Effects of Operator Workarounds and Central Control Room Deficiencies, 2 <sup>nd</sup> Quarter 2002.
-	LCO Tracking Sheet 2002-0025, IVSWS Operability, January 24, 2002.
-	2002-12 Self Assessment on Design Basis Documents, dated June 27, 2002.

Non-Cited Violations

50-286/2001-008-01	Failure to control licensed radioactive material in accordance with 10CFR20.
50-286/2001-009-01	Failure to hydrostatically test self contained breathing apparatus air cylinders.
50-286/2001-010-01	Failure to implement proper design control for a safety related system.
50-286/2001-011-01	Failure to identify the correct valve lineup for testing the aux feedwater system.
50-286/2001-011-02	Failure to pressure leak test the AFW system suction piping per ASME XI.
50-286/2001-012-02	Inadequate procedure for transition to cold shutdown during shutdown from outside the control room.
50-286/2002-003-01	Violation of 10CFR50.54(q) for a decrease in the effectiveness of site emergency plan.

**LIST OF ACRONYMS USED**

CR	Condition Report
DRS	Division of Reactor Safety
EP	Emergency Planning
NCV	Non-cited violation
OA	Other Activities
OE	Operating Experience
PID	Problem Identification Tag
QA	Quality Assurance
SDP	Significance Determination Process
SRC	Safety Review Committee
SW	Service Water
TM	Temporary Modification
WR	Work Request
LCO	Limiting Condition for Operation
IVSWS	Isolation Valve Seal Water System