

March 4, 2002

Mr. Fred Dacimo
Vice President - Operations
Entergy Nuclear Operations, Inc.
Indian Point Nuclear Generating Unit 2
295 Broadway, Suite 1
Post Office Box 249
Buchanan, NY 10511-0249

SUBJECT: ANNUAL ASSESSMENT LETTER - INDIAN POINT 2 (REPORT 50-247/02-01)

Dear Mr. Dacimo:

On January 31, 2002, the NRC staff completed its end-of-cycle plant performance assessment of Indian Point 2 (IP2). The end-of-cycle review for IP2 involved the participation of all technical divisions in evaluating performance indicators for the most recent quarter and inspection results for the period from April 1, 2001 through December 31, 2001. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

Overall, IP2 operated in a manner that preserved public health and safety. Although overall performance was acceptable, it remained within the multiple degraded cornerstone column of the Action Matrix. The degraded cornerstones were based on several inspection findings in the initiating events and mitigating systems cornerstones. These degraded cornerstones are associated principally with the performance problems revealed during an August 1999 reactor trip with electrical distribution system complications and a February 2000 steam generator tube failure.

NRC oversight of IP2 activities remained at heightened levels throughout this assessment period. Regulatory performance meetings were conducted in April, June, and December 2001, in which we reviewed status of your performance improvement efforts. On September 6, 2001, Entergy Nuclear Operations became the new owner of IP2. Subsequently, you requested we reschedule team inspections which we had planned to evaluate status of several degraded cornerstone issues. You indicated rescheduling these inspections would permit you to immediately undertake a number of improvement initiatives, including a mid-cycle outage to address some longstanding equipment problems and a comprehensive self-assessment. The self-assessment was performed over a three-week period in October of 2001 by a large team of industry professionals. As discussed, at the December 2001 regulatory performance meeting, this team confirmed many of the weaknesses identified in previous NRC inspections and assessments. In January 2002, you submitted your Fundamentals of Improvement Plan (FIP) which is intended to guide further improvement efforts at the station.

During the assessment period, we identified ongoing substantive cross-cutting issues in human performance and problem identification and resolution (PI&R). While some progress has been

noted, these cross-cutting issues also indicate the need for continuing management attention to improvement efforts. The findings in the PI&R area involved a number of untimely or ineffective corrective actions. In the human performance area, knowledge and skill weaknesses were noted during operator response to certain plant problems and events. These weaknesses were indicative of operator training weaknesses and inconsistent enforcement of high performance standards for operating crews while on-shift. One inspection finding of substantial significance in the mitigating systems cornerstone involved weak operator performance during requalification exams last Fall, as described in our December 5, 2001 and February 28, 2002 letters. Emergency preparedness inspection findings, noted in last year's assessment, were closed during this assessment period based on improved performance. Enclosures 1 and 2 provide additional details regarding performance indicators and significant inspection findings for IP2.

As stated in prior correspondence, the NRC will continue heightened oversight of Indian Point 2 until we gain confidence that your performance improvement program has substantially addressed performance issues that underlie the degraded cornerstones. In this regard, we plan a variety of activities including inspections, site visits, quarterly assessments and meetings during which we will review performance metrics, and independently verify corrective actions. For example, on February 27, the NRC conducted a meeting to review the status of your FIP efforts. We plan to hold a follow-up to this meeting with you in May 2002. The June 2002 NRC supplemental team inspection will be key in evaluating your progress. You will note that our inspection plan includes a supplemental inspection in December 2002 that could be conducted, if needed as a follow up. Enclosure 3 details inspections that are planned through March 31, 2003. The inspection plan is provided to facilitate resource planning and to allow for scheduling conflicts and personnel availability issues to be resolved in advance of inspector onsite arrival. Routine resident inspections are not listed due to their ongoing and continuous nature.

Consistent with the Reactor Oversight Process, we are finalizing plans to meet with you to discuss NRC's assessment of your performance during the recently completed assessment period, and your continuing actions to affect performance improvements at IP2. This meeting, which will be open for public observation, is scheduled for 7:00 p.m., March 14, 2002. The meeting location will be announced in our Meeting Notice. Also, in accordance with IMC 0305, "Operating Reactor Assessment Program", the recent performance of your plant will be discussed at the upcoming Agency Action Review meeting. We will notify you via separate correspondence if any agency actions change as an outcome of the March meeting.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued safeguards advisories recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the Nation's nuclear power plants, including IP2 remain at a high level of security. On February 25, 2002, the NRC issued an Order to all nuclear power plant licensees, requiring them to take certain additional interim compensatory measures to address the generalized high-level threat environment. These additional compensatory requirements will provide the NRC with reasonable assurance that public health and safety and the common defense and security continue to be adequately protected in the current generalized high-level

threat environment. These requirements will remain in effect pending notification from the Commission that a significant change in the threat environment occurs, or until the Commission determines that other changes are needed following a more comprehensive re-evaluation of current safeguards and security programs. To date, we have monitored IP2 actions in response to the terrorist attacks through a series of audits. With the issuance of the Order, we will evaluate IP2 compliance with these interim requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/NRC/ADAMS/index.html> (the Public Electronic Reading Room).

If circumstances arise which cause us to change this inspection plan, we will contact you to discuss the change as soon as possible. Please contact Peter Eselgroth at 610-337-5234 with any questions you may have regarding this letter or the inspection plan.

Sincerely,

/RA by
James T. Wiggins
Acting For/

Hubert J. Miller
Regional Administrator

Docket No. 50-247
License No. DPR-26

Enclosures:

1. IP2 Performance History Chart
2. IP2 Performance History Details
3. IP2 Inspection Schedule

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ENCLOSURE 1

IP2 PERFORMANCE HISTORY CHART- INPUTS TO NRC ACTION MATRIX (EXPLANATORY NOTES FOLLOW)

Cornerstone	CY 2000				CY 2001				CY 2002
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
IE		PI1 White	IF1 Red	IF1 Red	IF1 Red	IF1 Red	→	→ ¹	→ ²
MS	IF2 Yellow PI2 White	IF2 Yellow PI2 White	→ PI2 White	→ PI2 White	→	→	→	→ ³ IF3 Yellow	→ ⁴ IF3 Yellow ⁵
BI	PI3 Yellow								
EP	IF4 White	IF4 White IF5 White IF6 White IF7 White	IF5 White IF6 White IF7 White	IF5 White IF6 White IF7 White	IF5 White IF6 White IF7 White	→	→ ⁶		
Matrix Column	N/A	Multiple Degraded	Multiple Degraded	Multiple Degraded	Multiple Degraded	Multiple Degraded	Multiple Degraded	Multiple Degraded	Multiple Degraded

(→) indicates a continuing finding

¹ Inspections previously scheduled for this quarter were delayed at licensee request.

² These issues are scheduled to be inspected for potential closure in June 2002.

³ Inspections previously scheduled for this quarter were delayed at licensee request.

⁴ These issues are scheduled to be inspected for potential closure in June 2002.

⁵ This is a YELLOW finding for annual operator requalification examination failures. A supplemental inspection to review this matter is planned for April 2002.

⁶ Because of sufficient performance improvement observed during a June 2001 EP exercise, the NRC closed out the degraded cornerstone in this area.

ENCLOSURE 2

IP2 Performance History Details (Inputs to NRC Action Matrix)

CURRENT PERFORMANCE INDICATORS AND INSPECTION FINDINGS:

- ! All PIs for ROP-2 were green.
- ! There were 17 **GREEN** findings and one **YELLOW** finding during ROP-2. The **YELLOW** finding was based on inspection follow-up of the September and October 2001 annual operator requalification examinations, and was based on the high number of failures of operators during simulator examinations. This inspection finding affected Mitigating System Cornerstone. (IF3)
- ! In addition to these current PIs and findings, the **RED and YELLOW** findings (described below) continued to affect the assessment of IP2 performance. The NRC has conducted supplemental inspections to review licensee progress in addressing the underlying causes for these findings. Currently, a supplemental inspection is planned for June 2002 to review these issues with a follow up inspection planned for December 2002, if needed.

HISTORICAL PERFORMANCE INDICATORS:

A description of historical performance indicators is discussed below:

- ! An **Initiating Events PI** was determined to be **WHITE** based on excessive reactor trip frequency. This was primarily due to the August 1999 automatic and the February 2000 manual reactor trips. (PI1)
- ! A **Mitigating Systems PI** was determined to be **WHITE** based on excessive emergency diesel generator unavailability. This was due to an improper setpoint for an Emergency Diesel Generator breaker as revealed by investigation of the August 1999 event. (PI2)
- ! During the February 2000 steam generator tube failure, the actual leak rate caused the **Barrier Integrity PI** was determined to be **YELLOW** based on exceeding the Technical Specification Leak Rate (ConEd Reported 109 gpm) for Steam Generator Tube Integrity based on the first quarter 2000 PI data. (PI3)

HISTORICAL INSPECTION FINDINGS:

A description of historical inspection findings is discussed below:

NRC inspections identified and/or confirmed risk significant findings in three cornerstones: Initiating Events, Mitigating Systems, and Emergency Preparedness. These were based on applying the ROP Significance Determination Process (SDP) to findings that were the result of licensee performance problems or issues.

- ! An **inspection finding for the Initiating Event Cornerstone** was determined to be **RED** based on a significant increase in the likelihood of a steam generator tube rupture with a corresponding increase in Core Damage Frequency (CDF) and large early release frequency (LERF). The licensee performance issue that led to this finding was a steam

generator tube inspection program that was deficient in many respects, specifically in that timely corrective actions were not taken for conditions adverse to quality. The NRC's assessment was that the final determination was **RED**, which, by itself, places the plant in the multiple degraded cornerstone category. (IF1)

- ! Based on inspection follow-up of the August 1999 event, an **inspection finding for the Mitigating System Cornerstone** was determined to be **YELLOW** based on the unavailability of certain auxiliary feedwater components and a degradation in feed and bleed capability. Some of the important licensee performance issues that led to these findings were the improper configuration of a Station Auxiliary Transformer Tap Changer and an improper setpoint for an Emergency Diesel Generator breaker. An NRC benchmarking study was performed of relevant findings during the ROP pilot phase (published in the ROP "Feasibility Review," Attachment 7 to SECY 00-0049) and the study categorized this finding as **YELLOW**, which is a degraded cornerstone. Although this finding pre-dated initial ROP implementation, it provided important performance insights. (IF2)

- ! Based on NRC observations of a September 1999 exercise, an **inspection finding for the Emergency Preparedness Cornerstone** was determined to be **WHITE** based on a failure to identify an improper classification during self-critique of a September exercise. (IF4)

- ! **Three Inspection findings for the Emergency Preparedness Cornerstone** was determined to be **WHITE** based on problems associated with ERO augmentation, accountability of onsite personnel, and joint news center effectiveness during the February 2000 steam generator tube failure, and during previous drills and exercises. This resulted in a degraded cornerstone. (IF5, IF6, IF7). This degraded cornerstone was cleared following a remedial emergency preparedness exercise and 95002 supplemental inspection conducted in June 2001.

Indian Point
Inspection / Activity Plan
12/30/2001 - 03/31/2003

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates		Inspection Type
				Start	End	
	ASSESS - REVIEW ENTERGY SELF ASSESSMENTS		2			
2	IP 71152	Identification and Resolution of Problems		01/28/2002	02/01/2002	Other Routine
	711117B - MODS		3			
2	IP 7111102	Evaluation of Changes, Tests, or Experiments		02/11/2002	02/15/2002	Baseline Inspections
2	IP 711117B	Permanent Plant Modifications		02/11/2002	02/15/2002	Baseline Inspections
	71121 - OCC RAD SAFETY		1			
2	IP 7112101	Access Control to Radiologically Significant Areas		02/25/2002	03/01/2002	Baseline Inspections
2	IP 7112102	ALARA Planning and Controls		02/25/2002	03/01/2002	Baseline Inspections
2	IP 7112103	Radiation Monitoring Instrumentation		02/25/2002	03/01/2002	Baseline Inspections
2	IP 71151	Performance Indicator Verification		02/25/2002	03/01/2002	Baseline Inspections
	711111B - REQUESTED PLNT. OPERATIONAL EVAL.		1			
2	IP 7111111B	Licensed Operator Requalification		02/21/2002	02/21/2002	Baseline Inspections
	95002 - REVIEW CA FOR RO/SRO REQUAL FAILURES		4			
2	IP 95002	Inspection For One Degraded Cornerstone Or Any Three White Inputs In A Strategic Performar		03/21/2002	03/22/2002	Supplemental Program
2	IP 95002	Inspection For One Degraded Cornerstone Or Any Three White Inputs In A Strategic Performar		04/08/2002	04/12/2002	Supplemental Program
2	IP 41500	Training And Qualification Effectiveness		04/08/2002	04/18/2002	Other Routine
2	IP 95002	Inspection For One Degraded Cornerstone Or Any Three White Inputs In A Strategic Performar		04/15/2002	04/18/2002	Supplemental Program
2	IP 95002	Inspection For One Degraded Cornerstone Or Any Three White Inputs In A Strategic Performar		04/25/2002	04/26/2002	Supplemental Program
	7111107B - HEAT SINK		1			
2	IP 7111107B	Heat Sink Performance		04/15/2002	04/19/2002	Baseline Inspections
	71121 - OCC RAD SAFETY		1			
2	IP 7112101	Access Control to Radiologically Significant Areas		04/29/2002	05/03/2002	Baseline Inspections
2	IP 7112102	ALARA Planning and Controls		04/29/2002	05/03/2002	Baseline Inspections
2	IP 7112103	Radiation Monitoring Instrumentation		04/29/2002	05/03/2002	Baseline Inspections
2	IP 71151	Performance Indicator Verification		04/29/2002	05/03/2002	Baseline Inspections
	71130 - SECURITY		1			
2	IP 7113001	Access Authorization Program (Behavior Observation Only)		05/20/2002	05/24/2002	Baseline Inspections
2	IP 7113002	Access Control (Search of Personnel, Packages, and Vehicles: Identification and Authorizator		05/20/2002	05/24/2002	Baseline Inspections
	71152B - AUGMENTED PI&R, ENGR, HUMAN PERFORMANCE		5			
2	IP 71152	Identification and Resolution of Problems		06/24/2002	06/28/2002	Other Routine
2	IP 95002	Inspection For One Degraded Cornerstone Or Any Three White Inputs In A Strategic Performar		06/24/2002	06/28/2002	Supplemental Program
2	IP 71152	Identification and Resolution of Problems		07/08/2002	07/12/2002	Other Routine
2	IP 95002	Inspection For One Degraded Cornerstone Or Any Three White Inputs In A Strategic Performar		07/08/2002	07/12/2002	Supplemental Program

This report does not include INPO and OUTAGE activities.
This report shows only on-site and announced inspection procedures.

Indian Point
Inspection / Activity Plan
12/30/2001 - 03/31/2003

Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates		Inspection Type
				Start	End	
	7112203 - PUB RAD SAFETY - REMP		1			
2	IP 7112203	Radiological Environmental Monitoring Program		07/08/2002	07/12/2002	Baseline Inspections
	71121 - OCC RAD SAFETY		1			
2	IP 7112101	Access Control to Radiologically Significant Areas		07/29/2002	08/02/2002	Baseline Inspections
2	IP 7112102	ALARA Planning and Controls		07/29/2002	08/02/2002	Baseline Inspections
2	IP 7112103	Radiation Monitoring Instrumentation		07/29/2002	08/02/2002	Baseline Inspections
2	IP 71151	Performance Indicator Verification		07/29/2002	08/02/2002	Baseline Inspections
	71130 - SECURITY-RESPONSE ATT3		2			
2	IP 7113003	Response to Contingency Events (Protective Strategy and Implementation of Protective Strategy)		08/19/2002	08/23/2002	Baseline Inspections
	7111111B - U2 L.O.REQUALIFICATION PROGRAM		2			
2	IP 7111111B	Licensed Operator Requalification		09/16/2002	09/20/2002	Baseline Inspections
	7111401 - EP EXERCISE & EP PI VERIFICATION		4			
2	IP 7111401	Exercise Evaluation		09/23/2002	09/27/2002	Baseline Inspections
2	IP 71151	Performance Indicator Verification		09/23/2002	09/27/2002	Baseline Inspections
	7111108 - INSERVICE INSPECTION		2			
2	IP 2515/145	Circumferential Cracking of Reactor Pressure Vessel Head Penetration Nozzles (NRC Bulletin 2001-01)		11/04/2002	11/08/2002	Safety Issues
2	IP 7111108	Inservice Inspection Activities		11/04/2002	11/08/2002	Baseline Inspections
	71151 - PUB RAD SAFETY PI VERIFICATION		1			
2	IP 71151	Performance Indicator Verification		11/04/2002	11/08/2002	Baseline Inspections
	71121 - OCC RAD SAFETY		1			
2	IP 7112101	Access Control to Radiologically Significant Areas		11/11/2002	11/15/2002	Baseline Inspections
2	IP 7112102	ALARA Planning and Controls		11/11/2002	11/15/2002	Baseline Inspections
2	IP 7112103	Radiation Monitoring Instrumentation		11/11/2002	11/15/2002	Baseline Inspections
2	IP 71151	Performance Indicator Verification		11/11/2002	11/15/2002	Baseline Inspections
	71152B - PROBLEM IDENTIFICATION AND RESOLUTION		4			
2	IP 71152B	Identification and Resolution of Problems		12/09/2002	12/20/2002	Baseline Inspections
	SUPPLEME - SUPPLEMENTAL INSPECTION (IF NECESSARY)		1			
2	IP 95002	Inspection For One Degraded Cornerstone Or Any Three White Inputs In A Strategic Performance Area		12/09/2002	12/20/2002	Supplemental Program
	7112201 - PUB RAD SAFETY - RETS		1			
2	IP 7112201	Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems		01/13/2003	01/17/2003	Baseline Inspections
	71121 - OCC RAD SAFETY		1			
2	IP 7112101	Access Control to Radiologically Significant Areas		02/03/2003	02/07/2003	Baseline Inspections
2	IP 7112102	ALARA Planning and Controls		02/03/2003	02/07/2003	Baseline Inspections
2	IP 7112103	Radiation Monitoring Instrumentation		02/03/2003	02/07/2003	Baseline Inspections

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Unit Number	Inspection Activity	Title	No. of Staff on Site	Planned Dates		Inspection Type
				Start	End	
2	IP 71151	Performance Indicator Verification		02/03/2003	02/07/2003	Baseline Inspections
	7111121 - SSDI		5			
2	IP 7111121	Safety System Design and Performance Capability		02/10/2003	02/14/2003	Baseline Inspections
2	IP 7111121	Safety System Design and Performance Capability		02/24/2003	02/28/2003	Baseline Inspections
	3/10+EXM - U2 OPERATOR LICENSING INITIAL EXAMS		4			
2	U01495	INDIAN POINT 2 INITIAL EXAM (3/10/03)		02/09/2003	02/13/2003	Not Applicable
2	U01495	INDIAN POINT 2 INITIAL EXAM (3/10/03)		03/10/2003	03/21/2003	Not Applicable