February 4, 2004

Mr. Fred Dacimo
Site Vice President
Entergy Nuclear Northeast
Indian Point Energy Center
295 Broadway, Suite 1
P.O. Box 249
Buchanan, NY 10511-0249

SUBJECT: INDIAN POINT ENERGY CENTER UNIT 2 - NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000247/2004003

Dear Mr. Dacimo:

On December 11, 2003, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Indian Point Energy Center, Unit 2. The enclosed inspection report documents the inspection findings, which were discussed on January 27, 2004, with yourself, and members of your staff.

The inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspection efforts included examination of selected procedures and representative records, observation of activities, and interviews with personnel.

The team concluded that, in general, problems are being properly identified, evaluated, and corrected. However, the team identified two findings of very low safety significance (Green) involving test failures of a radiation monitor and of the technical support center battery cells. While the equipment was determined to be functional, the team concluded that your staff did not promptly identify and address the conditions or underlying causes for the specific test failures. We consider these findings to be additional examples of the substantive cross-cutting issue in the area of problem identification and resolution, which we identified in previous assessment periods, most recently in a letter to you dated August 27, 2003. We plan to conduct an additional follow-up inspection in this area.

The team also evaluated aspects of your Design Basis Initiative (DBI) program. In August 2003, the NRC completed the Supplemental Inspection for a White finding involving a degraded fire barrier between the control room and turbine building (Inspection Report 50-247/2003-010). At that time, the NRC concluded that Entergy's corrective actions and extent-of-condition review for the specific fire barrier deficiencies were acceptable. However, the NRC also determined that additional inspection was required to confirm the adequacy of Entergy's efforts to identify and correct broader issues associated with design control. As a result, the NRC maintained the White finding open beyond the normal four quarters required by the Reactor Oversight Process, in order to complete these additional inspections. This problem identification and resolution

inspection, therefore, included a review of Entergy's DBI and its associated design control program. The team determined that Entergy made sufficient progress in addressing the design control issues to close the White finding. Recognizing that several multi-year DBI tasks are still in progress, the NRC will continue to monitor Entergy's progress on these tasks through region-based specialists, supplemented by the strong complement of resident inspectors being maintained on-site.

In accordance with 10CFR2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any), will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Wayne D. Lanning, Director
Division of Reactor Safety

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

Enclosure: NRC Inspection Report 05000247/2004003
w/Attachment: Supplemental Information

cc w/encl:
G. J. Taylor, Chief Executive Officer, Entergy Operations
M. R. Kansler, President - Entergy Nuclear Operations, Inc.
J. Herron, Senior Vice President and Chief Operating Officer
C. Schwarz, General Manager - Plant Operations
D. Pace, Vice President, Engineering
R. Edington, Vice President, Operations Support
J. McCann, Director, Licensing
P. Conroy, Manager, Licensing
J. Comiotes, Director, Nuclear Safety Assurance
C. Faison, Manager, Licensing
H. Salmon, Jr., Director of Oversight
J. Fulton, Assistant General Counsel, Entergy Nuclear Operations, Inc.
P. R. Smith, Acting President, New York State Energy, Research
and Development Authority
J. Spath, Program Director, New York State Energy Research
and Development Authority
P. Eddy, Electric Division, New York State Department of Public Service
C. Donaldson, Esquire, Assistant Attorney General, New York Department
of Law
T. Walsh, Secretary, NFSC, Entergy Nuclear Operations, Inc.
D. O'Neill, Mayor, Village of Buchanan
J. G. Testa, Mayor, City of Peekskill
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
M. Slobodien, Director, Emergency Planning
B. Brandenburg, Assistant General Counsel
P. Rubin, Manager of Planning, Scheduling & Outage Services
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
T. Judson, Central NY Citizens Awareness Network
M. Elie, Citizens Awareness Network
D. Lochbaum, Nuclear Safety Engineer, Union of Concerned Scientists
Public Citizen's Critical Mass Energy Project
M. Mariotte, Nuclear Information & Resources Service
F. Zalcman, Pace Law School, Energy Project
L. Puglisi, Supervisor, Town of Cortlandt
Congresswoman Sue W. Kelly
Congresswoman Nita Lowey

cc w/encl: (Cont'd)

Senator Hillary Rodham Clinton
Senator Charles Schumer
J. Riccio, Greenpeace
A. Matthiessen, Executive Director, Riverkeepers, Inc.
M. Kapolwitz, Chairman of County Environment & Health Committee
A. Reynolds, Environmental Advocates
M. Jacobs, Director, Longview School
D. Katz, Executive Director, Citizens Awareness Network
P. Gunter, Nuclear Information & Resource Service
P. Leventhal, The Nuclear Control Institute
K. Coplan, Pace Environmental Litigation Clinic
R. Witherspoon, The Journal News
W. DiProfio, PWR SRC Consultant
W. Poole, PWR SRC Consultant
W. Russell, PWR SRC Consultant
W. Little, Associate Attorney, NYSDEC

Distribution w/encl: **(VIA EMAIL)**
H. Miller, RA/J. Wiggins, DRA
J. Jolicoeur, RI EDO Coordinator
B. McDermott, DRP
R. Laufer, NRR
P. Milano, PM, NRR
G. Vissing, PM, NRR (Backup)
W. Cook, DRP
T. Jackson, DRP
P. Habighorst, SRI - Indian Point 2
M. Cox, RI - Indian Point 2
R. Martin, DRP
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R. Crlenjak, DRS
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NAME	BNorris		RLorson		WSchmidt		BMcDermott		WLanning	
DATE	01/22/04		01/21/04		01/22/04		01/22/04		02/04/04	

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-247
License No:	DPR-26
Report No:	05000247/2004003
Licensee:	Entergy Nuclear Operations, Inc.
Facility:	Indian Point Energy Center, Unit 2
Location:	Buchanan, New York
Dates:	November 17-21 and December 8-11, 2003
Team Leader:	B. Norris, Senior Reactor Inspector
Inspectors:	J. Benjamin, Reactor Inspector R. Berryman, Resident Inspector, Indian Point 3 R. Bhatia, Reactor Inspector (in-office) G. Bowman, Reactor Inspector P. Habighorst, Senior Resident Inspector, Indian Point 2 T. Hipschman, Senior Reactor Inspector S. Iyer, Reactor Inspector T. Jackson, Project Inspector L. Scholl, Senior Reactor Inspector
Observer:	V. Ruuska, Observer, Finnish Radiation & Nuclear Safety Authority
Approved by:	Raymond K. Lorson, Chief Performance Evaluation Branch Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000247/2004003, 11/17 - 12/11/2003, Indian Point Energy Center, Unit 2; biennial baseline inspection of problem identification and resolution; problem identification and resolution.

The inspection was conducted by eight regional inspectors and two resident inspectors. Two Green findings of very low safety significance were identified. The findings were evaluated using Inspection Manual Chapter 0609, "Significance Determination Process." 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 inspection team determined that the licensee was generally effective at identifying problems and entering them into the corrective action program, evaluating and prioritizing issues, and implementing appropriate corrective actions. However, the inspectors identified two Green findings related to test failures of a radiation monitor and of the technical support center battery cells. While the equipment was determined to be functional, the team concluded that the IP2 staff did not promptly identify and address the conditions or underlying causes for the specific test failures. The inspectors considered these findings to be additional examples of the substantive cross-cutting issue in the area of problem identification and resolution identified during previous assessments. Based on interviews conducted during the inspection, station personnel felt free to identify safety issues and enter them into the corrective action program.

The team also evaluated aspects of the Design Basis Initiative (DBI) program. In August 2003, the NRC completed the Supplemental Inspection for a White finding involving a degraded fire barrier between the control room and turbine building (Inspection Report 50-247/2003-010). At that time, the NRC concluded that Entergy's corrective actions and extent-of-condition review for the specific fire barrier deficiencies were acceptable. However, the NRC also determined that additional inspection was required to confirm the adequacy of Entergy's efforts to identify and correct broader issues associated with design control. As a result, the NRC maintained the White finding open in order to complete the additional inspections. This problem identification and resolution inspection, therefore, included a review of Entergy's DBI and its associated design control program. The team determined that Entergy made sufficient progress in addressing the design control issues to close the White finding.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Emergency Preparedness

- Green. The team identified a finding of very low safety significance (Green) for the failure to properly address repetitive surveillance test failures of the R-27 plant vent noble gas effluent radiation monitor. The team determined that the licensee did not effectively identify and correct the underlying cause to preclude these repetitive test failures. After this issue was raised by the inspection team, the licensee determined that the cause of the test failures was degraded test equipment, and that the radiation monitor had been operable.

The performance deficiency associated with this finding was failure to identify and address the underlying causes of repetitive failures of a TS required surveillance. The performance deficiency contributed to the monitor's unavailability and subsequent test failures. The test failures of the R-27 radiation monitor adversely affected methods, systems, and equipment for assessment of radiological releases required by 10CFR50.47(b)(9). This finding was of more than minor significance because the R-27 radiation monitor was removed from service for troubleshooting periods in excess of twenty-four hours. The finding was evaluated using the Emergency Preparedness SDP, and was determined to be of very low safety significance (Green), because alternate monitoring methods were available during periods when the monitor was unavailable for troubleshooting and maintenance.

- Green. The team identified a finding of very low safety significance (Green) for the failure to take prompt action for out of specification indications for one cell in each of the two Technical Support Center (TSC) battery banks. While the battery banks were subsequently determined to be functional, the team concluded that the licensee did not take prompt action to either return the two battery cells to within specifications or to evaluate the acceptability of the as-found condition.

  The performance deficiency associated with this finding was failure to take timely action to evaluate the degraded condition of the TSC battery cells. The degraded cells had the potential to adversely affect the facilities and equipment required to support emergency response which are required to be maintained by 10CFR50.47(b)(8). This finding was of more than minor significance because the batteries were allowed to remain in an in-determinant condition in excess of 24 hours without adequate evaluation or compensatory measures. The finding was evaluated using the Emergency Preparedness SDP, and was determined to be of very low safety significance (Green), because the subsequent analysis indicated that the battery banks remained functional in this condition.

B. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Occupational Radiation Safety, Public Radiation Safety, Physical Protection.

4OA2 Identification and Resolution of Problems (IP 71152)

a. Effectiveness of Problem Identification

(1) Inspection Scope:

The team reviewed the procedures that described the corrective action process used by Entergy Nuclear Northeast personnel at Indian Point Unit 2 (IP2) of the Indian Point Energy Center (IPEC), and determined that problems were identified primarily through the initiation of condition reports (CRs). The team reviewed selected CRs, and attended daily management meetings where the CRs were screened for significance, to determine whether IPEC was identifying, accurately characterizing, and entering problems into the corrective action process at an appropriate threshold.

The CRs selected for review are listed in the Attachment to this report. The team chose the CRs to cover the seven cornerstones of safety identified in the NRC's Reactor Oversight Process (ROP). In addition, the team considered risk insights from IPEC's probabilistic safety assessment (PSA) to focus the CR sample selection on risk significant plant equipment. The team interviewed selected plant staff to determine their understanding of the process used to address problems. Also, the team conducted walkdowns of selected areas of the plant, to independently assess whether problems were properly identified and addressed.

In addition to CRs, the team selected items from IPEC's operations, maintenance, engineering, radiation protection, emergency preparedness, security, and oversight processes to verify that IPEC appropriately considered problems identified in these areas for entry into the corrective action program. Specifically, the team reviewed a sample of work orders, engineering change requests, operator log entries, control room deficiency and work-around lists, operability determinations, engineering system health reports, completed surveillance tests, installed temporary modification packages, quality assurance audit and surveillance reports, and departmental self-assessments. The documents were reviewed to ensure that underlying problems associated with each issue were appropriately considered for resolution via the corrective action process. The documents reviewed are listed in the Attachment.

(2) Observations and Findings

No findings of significance were identified.

The team concluded that IPEC personnel were generally identifying deficiencies at a low threshold, and documenting the problems on CRs, in accordance with procedure

ENN-LI-102, “Corrective Action Process.” The CRs described and characterized the problems accurately, and, as appropriate, identified prior similar occurrences. In addition, the team noted that personnel initiated CRs for problems identified in other processes (such as work orders, engineering requests, etc.) that met the CR threshold. The team concluded that quality assurance audits and surveillances, and department self-assessments were generally effective at identifying adverse conditions and trends.

Notwithstanding the above, during plant walkdowns, the team identified several minor equipment problems that were not entered into the corrective action process. These problems included: a small leak from the mechanical seal on #23 safety injection (SI) pump; a small oil leak from the #22 SI pump gear box; and evidence of packing leakage from a suction isolation valve (MOV-887A) for the #22 SI pump. The team discussed their findings with the system engineer and CR-IP2-2003-06956 was initiated to document these observations. The team determined that none of the above problems affected the operability of the SI system.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope:

The team reviewed the CRs listed in the Attachment to determine whether IPEC adequately evaluated and prioritized problems. The review included the appropriateness of the assigned significance, the timeliness of resolutions, and the scope and depth of the causal analysis. The CRs reviewed encompassed the full range of IPEC evaluations, including root cause analysis and apparent cause evaluations. The team selected the CRs to cover the seven cornerstones of safety identified in the ROP. The team also considered risk insights from the PSA to focus the CR sample.

The team reviewed the CRs associated with selected non-cited violations (NCVs) to determine whether IPEC properly evaluated and resolved these issues. The team reviewed IPEC’s evaluation of industry operating experience information for applicability to their facility. The team also reviewed equipment operability determinations, reportability assessments, and extent of condition reviews for selected problems. The team further reviewed equipment performance results and assessments documented in completed surveillance procedures, operator log entries, and trend data to determine whether IPEC’s equipment performance evaluations were technically adequate to identify degrading or non-conforming equipment.

(2) Observations and Findings

The team determined that generally the CRs reviewed were properly classified for significance. The team noted that significant conditions adverse to quality received a formal root cause analysis (RCA), and an extent-of-condition review. Less significant conditions adverse to quality typically received an apparent cause evaluation (ACE). The items in the engineering and maintenance backlogs had been evaluated for risk (individually and collectively). The majority (≈94%) of the CRs were for less significant issues. The level of detail provided in some of the CRs made it difficult for the inspectors to understand the issue or the resolution without additional information. The

team identified two examples of inadequate evaluations that were dispositioned as Green findings.

.1 Plant Effluent Radiation Monitor (R27) Surveillance Test Failures

Introduction: The team identified a finding of very low safety significance (Green) for the failure to properly address repetitive surveillance test failures of the R-27 plant vent noble gas effluent radiation monitor. The team determined that the licensee did not effectively identify and correct the underlying cause to preclude these repetitive test failures. After this issue was raised by the inspection team, the licensee determined that the cause of the test failures was degraded test equipment, and that the radiation monitor had been operable.

Description: The team identified that the R-27 radiation monitor had failed five of the six quarterly surveillance tests, since July 2002. The testing was performed to demonstrate the operability of the R-27 monitor as required by Technical Specification (TS) 3.5.6. The monitor is described in the Updated Final Safety Analysis Report (UFSAR) and is required to be maintained per NUREG-0737, "Clarification of TMI Action Plan Requirements."

The R-27 radiation monitor is a single channel monitor with three detectors, one for each range (low, medium, and high). The system contains two compressors, one for the low range and the other for the medium and high ranges, which supply air samples from the plant vent to the detectors. As the level of radioactivity increases above a set value, the medium/high range compressor is designed to automatically start, and the display to automatically shift to the medium or high range, as appropriate. Surveillance test procedure (PT-Q42, "Wide Range Noble Gas Monitor R-27 Functional Check") tested the response of the monitor to a simulated radiation signal. In the five surveillance test failures, the medium/high compressor did not automatically start as required.

Subsequent to each test failure, the R-27 monitor was declared inoperable and the licensee implemented the alternate sampling requirements specified in TS Table 3.5-5. The corrective actions to restore the monitor to service included removal, inspection, and reinstallation of circuit cards; or replacement of internal components. At the time, the licensee identified some possible causes, but did not identify the underlying cause for the test failures, and did not preclude additional surveillance test failures.

When this issue was raised by the inspection team, the licensee entered the issue into the corrective action program (CR-IP2-2003-07349) and subsequently determined that the test equipment was deficient; specifically, the output from the signal generator used to develop the test signals was erratic. The team concluded that the R-27 monitor was operable during the period of the repetitive test failures.

Analysis: The performance deficiency associated with this finding was failure to identify and address the underlying causes of repetitive failures of a TS required surveillance. The performance deficiency contributed to the monitor's unavailability and subsequent test failures. The test failures of the R-27 radiation monitor adversely affected methods,

systems, and equipment for assessment of radiological releases required by 10CFR50.47(b)(9), a Risk-Significant Planning Standard described in MC-0609, Appendix B, Emergency Preparedness SDP. This finding was of more than minor significance because the R-27 radiation monitor was removed from service for troubleshooting periods in excess of 24 hours.

The finding was evaluated using the Emergency Preparedness SDP, and was determined to be of very low safety significance (Green), because alternate monitoring methods were available during periods when the monitor was unavailable for troubleshooting and corrective maintenance.

Enforcement: The team reviewed the requirements of 10 CFR 50, Appendix B and 10 CFR 50.47 and determined that this finding did not involve a violation of NRC requirements since the R-27 monitor is not safety-related and since alternate monitoring methods were available to meet the emergency plan requirements. This finding was entered into the licensee's corrective action program as CR-IP2-2003-07349. **(FIN 05000247/2004003-01, Failure to Identify and Address Causes of Repetitive Surveillance Test Failures of the Plant Vent Noble Gas Effluent Monitor)**

.2 Degraded Technical Support Center Batteries

Introduction: The team identified a finding of very low safety significance (Green) for the failure to take prompt action for out of specification indications for one cell in each of the two Technical Support Center (TSC) battery banks. While the battery banks were subsequently determined to be functional, the team concluded that the licensee did not take prompt action to either return the two battery cells to within specifications or to evaluate the acceptability of the as-found condition.

Description: The TSC batteries are the second backup electrical supply to the plant computer and the safety parameter display system computer used in the TSC to assist the control room personnel during emergency situations. The normal electrical supply for the computers is from offsite, with the TSC diesel generator being the first backup in the event of a loss of offsite electrical power.

During review of CRs-IP2-2003-06422 and -06424, the inspectors noted that, during the quarterly surveillance tests performed on October 21, 2003, one cell in each of the two TSC battery banks did not meet the acceptance criteria specified in the test procedures (TST-PT-Q-19A and B). A cell in the east bank failed for individual cell voltage (minimum acceptable value was 2.07 vdc, as-found was 2.04 vdc), and a cell in the west bank failed for specific gravity (minimum acceptable value was 1.195 specific gravity, as-found was 1.186 specific gravity). While test parameters were marginally out of specification, the team determined that the licensee did not take prompt corrective actions to either return the two indications within specifications or to evaluate the impact of the out of specification indications for the two cells on the functionality of the battery banks. The team also noted that the same battery cell in the west bank had been identified as out of specification (as-found 1.190 specific gravity) in a previous surveillance test conducted on August 1, 2003. However, the TSC battery banks were able to perform their design function during the August 14th blackout.

After the issue was raised by the inspection team, the licensee performed an evaluation and determined that each battery bank was capable of performing its required function with a single cell in each bank not meeting the acceptance criteria specified in the surveillance test and issued CR-IP2-2003-07321 to document the non-timely actions for the battery cell test failures.

Analysis: The performance deficiency associated with this finding was failure to take timely action to evaluate the degraded condition of the TSC battery cells. The degraded cells had the potential to adversely affect the facilities and equipment required to support emergency response which are required to be maintained by 10CFR50.47(b)(8), a Non-Risk Significant Planning Standard described in MC-0609, Appendix B, Emergency Preparedness SDP. This finding was of more than minor significance because the batteries were allowed to remain in an in-determinant condition in excess of 24 hours without adequate measures to ensure that the TSC support function would be maintained.

The finding was evaluated using the Emergency Preparedness SDP, and was determined to be of very low safety significance (Green), because the subsequent analysis indicated that the battery banks remained functional in this condition.

Enforcement: The team reviewed the requirements of 10 CFR 50, Appendix B and 10 CFR 50.47 and determined that this finding did not involve a violation of NRC requirements since the TSC batteries are not safety-related and, since the batteries were functional, all emergency planning standards were satisfied.
(FIN 05000247/2004003-02, Failure to Evaluate the Degraded Condition of the TSC Batteries)

c. Effectiveness of Corrective Actions

(1) Inspection Scope:

The team reviewed the CRs listed in the Attachment to determine whether the actions addressed the identified causes of the problems. The team reviewed IPEC's timeliness in implementing corrective actions and their effectiveness in preventing recurrence of significant conditions adverse to quality.

(2) Assessment:

No significant findings were identified in this area.

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope:

Team members interviewed plant staff, observed various activities throughout the plant, and attended a cross section of meetings to determine if personnel were hesitant to raise safety concerns to their management and/or the NRC.

(2) Assessment:

No findings of significance were identified.

4OA5 Other Activities (IP 95001)

a. Review of Design Basis Initiative Projects

(1) Inspection Scope

The team reviewed the reconstituted design packages for three of the DBI projects against the guidelines of Entergy's DBI Project Plan: BR-2, Condition Reports; DB-3, Test Design Basis Review; and PI-4, Hydraulic Modeling. The team also reviewed the IP2 Electrical Distribution System Load Flow Analysis. In addition, the team reviewed the self-assessments of the completed DBI projects: BR-3, Work Orders on Engineering Hold; DB-5, Heatup and Cooldown Curves; PI-4, Hydraulic Modeling; PI-5, ISI/IST Quality Group Classification and Boundaries; WIRE-2, Gas Turbine Wiring Verification; and the High Energy Line Break (HELB) Basis Reconstitution.

(2) Observations and Findings

No findings of significance were identified relative to the quality of the reviewed DBI project packages or the status of the ongoing projects.

The BR-2 project was ongoing at the time of the inspection with 35 of the original 51 condition reports (CRs) remaining open. The CRs were to be maintained open until all of the associated corrective actions were completed. The DB-3 project was developed to ensure that procedural revisions resulting from the TS reviews were tracked through completion. The primary objective of the PI-4 project was completed, involving the development of hydraulic models for selected systems; however, a second objective on the PI-4 project plan, involving the development of a method to maintain the models current and to control their use, had not been completed. The inspectors verified that the electrical load flow analysis met the design basis requirements during normal and abnormal operating and shutdown conditions.

The licensee performed self-assessments of the completed individual DBI project packages. The team determined that the self-assessments were generally critical but identified one minor issue where a CR was not initiated for an observation related to the completion of the PI-4 project plan. Entergy subsequently initiated a CR for this oversight (CR-IP2-2003-06994). The team identified some minor observations related to updating of the DBI project plan. The team discussed these observations with the DBI Project Manager.

.1 (Closed) URI 05000247/2003004-02: Lack of Basis for Functionality of Backup CCW Water Sources

During an engineering design inspection (NRC IR 50-247/2003-004, March 2003), the inspectors identified a lack of an engineering calculation or testing to support that

primary water and city water were capable of providing backup cooling for CCW heat loads, as described in the UFSAR. The team reviewed an engineering analysis completed in May 2003, and discussed it with cognizant personnel. Using the existing CCW pipe flow model for the assessment, the licensee performed an analysis which demonstrated that makeup from city water and primary water could provide adequate backup cooling to the SI, residual heat removal, and charging pump coolers. The team determined that this assessment was reasonable and also reviewed the capacity of the existing floor drains in the SI, residual heat removal, and charging pump rooms to ensure that the discharged city water cooling flow could be evacuated from the rooms. The team confirmed that the floor drains could accommodate the flow rates from the coolers, as referenced by the internal flooding analysis.

The team determined that the failure to develop an adequate design calculation to support the UFSAR assumptions regarding the availability of backup cooling for the CCW heat loads was a violation of 10CFR50, Appendix B, Criterion III (Design Control). However, the team determined that this issue was of minor significance and not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy. This unresolved item is closed.

.2 (Closed) URI 05000247/2003004-03: Lack of Basis for CCW Flow Requirements for the Recirculation and Safety Injection Pumps

During an engineering design inspection (NRC IR 50-247/03-004, March 2003), the inspectors identified a lack of an engineering basis for minimum CCW flow for SI recirculating pump motor coolers and SI pump lube oil coolers during design basis conditions. The team reviewed and discussed with cognizant personnel the SI pump oil cooler design flow rates. Entergy engineering calculation PGI-0186-00 concluded that a design flow of 1.9 gallons per minute to the lube oil coolers was necessary during design basis conditions. At the time of the inspection, CR-IP2-2003-00912 contained an open corrective action to revise plant documents to reflect this design flowrate. Past surveillance test results provided adequate assurance that the revised design flow rates have been maintained.

The team determined that the failure to develop an adequate engineering basis for the minimum CCW flow to SI components during design basis conditions was a violation of 10CFR50, Appendix B, Criterion III (Design Control). However, the team determined that this issue was of minor significance and not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy. This unresolved item is closed.

.3 (Closed) URI 05000247/2003004-04: Lack of Calculation for Battery Sizing to Support the Alternate Offsite Power and ASSS Circuit Breaker Operation

During an engineering design inspection (NRC IR 50-247/03-004, March 2003), the inspectors identified a lack of a sizing and load calculation for the Unit 1 DC battery system. The Unit 1 batteries support the control and protection circuits for the 13.8 kV and 440 volt circuit breakers used to provide alternate power during various fire safe shutdown scenarios.

Entergy completed calculation FEX-00201-00, "IP1 Voltage Profiles for Battery 11 and 12 Demonstrated that Alternate Safe Shutdown Electrical Buses 12RW3, 12FD3, and 13.8 kV Lighting and Power Bus Section 3." The calculation concluded that adequate battery voltage existed to support breaker operation. The team reviewed the calculation and identified that the batteries provided the required voltage except for one minute on battery 11 (107 vdc) and one minute on battery 12 (110 vdc). The licensee did not provide a basis for why this was acceptable, however, following subsequent review, Entergy provided additional information related to design assumptions and the team concluded that the minimum terminal voltage would be satisfied.

The licensee's documented basis for this condition also included that breaker manipulations could be considered manual for fire scenarios involving safe shutdown. License condition 2.K states "... the alternate safe shutdown system components powered from Indian Point Unit 1 switchgear do not rely on component power or control power from any IP2 buses when transferred to IP1 power supply by transfer switches. The licensee will develop and implement written procedures for obtaining safe shutdown conditions given a fire event." The team reviewed Entergy's abnormal operating instruction (AOI) 27.1.9, "Control Room Inaccessibility Safe Shutdown Control," and determined that it did not provide guidance to the operators to manually close the 440 volt breakers or the 13.8 kV breakers. The inspector also confirmed through discussions with operators that routine training was not provided for manually closure of 440 volt or 13.8 kV breakers.

The team determined that the failure to develop adequate procedures for manual operation of the breakers was a violation of License Condition 2.K. However, the team determined that this issue was of minor significance and not subject to formal enforcement action in accordance with Section IV of the NRC's Enforcement Policy. This unresolved item is closed.

.4 <u>(Closed) VIO 50-247/02-010-001 (White): Violation of License Condition 2.K and the Approved Fire Protection Program Involving the Failure to Implement and Maintain a Rated Three-hour Fire Barrier Between the Control Room West Wall and the Turbine Building</u>.

The team reviewed elements of Entergy's ongoing DBI and associated design control program to confirm the adequacy of Entergy's efforts to identify and correct the broad issues which contributed to the White finding involving a degraded three-hour fire barrier between the control room and turbine building (NRC Inspection Report 50-247/2002-010, dated August 26, 2002). A previous supplemental inspection (Inspection Report 50-247/2003-010, dated August 4, 2003) determined that Entergy's corrective actions and extent-of-condition review for the specific fire barrier deficiencies were acceptable. However, the NRC determined that additional inspection was required to review progress of the DBI. The NRC determined that, while the DBI effort has additional multi-year tasks to complete, adequate progress has been made to allow continued NRC review of the design control program through the baseline inspection program focusing on engineering and corrective action effectiveness. Based upon the results of this inspection, and the supplemental inspection, the White finding is closed.

4OA6 Meetings, including Exit

On December 11, 2003, the team conducted a de-brief of the preliminary inspection with Mr. C. Schwarz, General Manager - Plant Operations, and other members of the IPEC staff. The inspectors confirmed that no proprietary information was being retained.

On January 27, 2004, the NRC conducted a telephone exit meeting with Mr. F. Dacimo, Site Vice President, and other members of the IPEC staff, at which time the final inspection results were presented.

ATTACHMENT: SUPPLEMENTAL INFORMATION

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel:

T. Barry	Superintendent, Plant Security
W. Blair	Manager, Licensing
C. Brown	Supervisor, Maintenance Testing
J. Comiotes	Director - Nuclear Safety Assurance
J. Deroy	General Manager - Engineering
J. Donnelly	Manager, Corrective Action
K. Finucan	Emergency Preparedness Engineer
D. Gately	Assistant Radiation Protection Supervisor
P. Gropp	Project Manager, Design Basis Initiative
J. Hill	Engineering Supervisor
J. Janicki	Supervisor, Operations Procedures
T. Jones	Licensing Engineer
F. Marcussen	Manager, Security Operations
T. McCaffrey	Manager, System Engineering
J. McCann	Manager, Corporate Licensing
J. Perotta	Manager, Quality Assurance
S. Petrosi	Manager, Design Engineering
J. Raffaele	Supervisor, Electrical Design Engineering
J. Reynolds	Supervisor, Corrective Action
C. Schawrz	General Manager - Plant Operations
B. Taggart	Employee Concerns Coordinator
J. Ventosa	Manager, Operations
A. Williams	Manager, Unit 2 Operations

ITEMS OPENED, CLOSED, AND UPDATED

Opened and Closed:

FIN	05000247/2004003-01	Failure to Identify and Address Causes of Repetitive Surveillance Test Failures of the Plant Vent Noble Gas Effluent Monitor (Section 4OA2.b(2).1)
FIN	05000247/2004003-02	Failure to Evaluate the Degraded Condition of the TSC Batteries (Section 4OA2.b(2).2)

Closed:

URI	05000247/2003004-02	Lack of Basis for Functionality of Backup CCW Water Sources (Section 4OA5.b(2).1)
URI	05000247/2003004-03	Lack of Basis for CCW Flow Requirements for the Recirculation and Safety Injection Pumps (Section 4OA5.b(2).2)
URI	05000247/2003004-04	Lack of Calculation for Battery Sizing to Support the Alternate Offsite Power and ASSS Circuit Breaker Operation (Section 4OA5.b(2).3)
VIO	05000247/2002010-01	Violation of License Condition 2.K and the Fire Protection Program Involving the Failure to Implement and Maintain a Three-hour Barrier Between the Control Room West Wall and the Turbine Building (Section 4OA5.b(2).4)

LIST OF DOCUMENTS REVIEWED

Procedures:

2-SOP-24.2.3	Support Facility Fresh Water Cooling Water System, Revision 4
A0I-27.1.9.2	Providing Appendix R Power from Unit 3, Revision 0
EDG-P-015-A	2 Year EDG Preventive Maintenance, Revision 0
EDG-P-017-A	6 Year EDG Preventive Maintenance, Revision 0
ENN-DC-121	Maintenance Rule, Revision 0
ENN-LI-102	Corrective Action Process, Revision 2
ENN-LI-104	Self-Assessment and Benchmark Process, Revision 4
ENN-OP-104	Operability Determinations, Revision 0
ENN-WM-100	Work Request Generation, Screening, and Classification, Revision 1
IP-EP-AD1	Emergency Plan Administrative Procedure, Revision 1
IP-SMM-LI-102	Corrective Action Review Board, Revision 1
PT-C2	External Recirc Running Total Leakage, Revision 0
PT-M30	Instrument Air System, Revision 16
PT-Q25A	21 Instrument Air Closed Cooling Water Pump, Revision 6
PT-Q42	Wide Range Noble Gas Monitor R-27 Functional Check, Revision 17 & 19

Non-Cited Violations:

NCV 2002005-01	Failure to use the appropriate tooling device for movement of fuel assembly
NCV 2002005-02	Unit 2 security response force member found inattentive to assigned duties
NCV 2002006-01	NCV of TS 6.8 involving deficient guidance in procedure AOI 27.1.1
NCV 2002007-01	Failure to identify the cause of #23 EDG output breaker failure to close
NCV 2002007-02	Operators deviate from plant operating procedures
NCV 2002007-03	Inadequate post work test on steam stop check valve
NCV 2002007-04	Inadequate configuration control for a safety related system
NCV 2002010-02	Turbine driven auxiliary feed pump oil issues
NCV 2002012-01	Failure to correct previously identified condition in the JNC regarding the timely and accurate dissemination of information
NCV 2003003-02	Ineffective corrective actions associated with the #23 EDG load swings between May 2000 & February 2003
NCV 2003003-03	Improper emergent work package instructions for #22 S/G level bistable

NCV 2003003-05	Post work test inadequate for #22 boric acid transfer pump
NCV 2003003-06	Failure to comply with packaging procedures
NCV 2003007-02	Ineffective corrective actions associated with an unauthorized modification to the #22 CCW pump

Quality Assurance Audits/Assessments:

00-AR-08-D	Design Control
02-AR-18-CA	Corrective Action
A-03-02-I	Corrective Action Program
A-03-05-I	IPEC Technical Specifications
A-03-10-I	Organizational Effectiveness
A-03-14-I	Offsite Dose Calculation Manual Gaseous Effluents, Process Control Program, and State Pollution Discharge Elimination System

Quality Assurance Surveillances:

02-S-02-CA	SAO-141, Station Observation Program
02-S-04-IO	Overtime
SR-03-01	Surveillance Test in Grace and Operations Procedures
SR-03-06	CCR Activities During Shutdown for 3RO12
SR-03-07	CCR Activities During Startup for 3RO12
SR-03-09	Risk Assessment

Self-Assessments:

LO-2003-00229	System Engineering Self-Assessment Report
LO-2003-00444	System Engineering Self-Assessment Report
SESA-02-005	Focused Self Assessment Report

Condition Reports (* denotes a CR generated as a result of this inspection):

1999-05517	2001-08208	2002-00326	2002-05209	2002-07714	2002-09642
1999-05576	2001-09445	2002-00788	2002-05593	2002-07724	2002-09689
2000-01226	2001-09750	2002-01034	2002-05796	2002-07810	2002-09774
2000-04312	2001-09839	2002-01476	2002-06599	2002-07860	2002-09775
2000-08332	2001-09887	2002-01666	2002-06635	2002-07944	2002-09776
2000-09894	2001-09905	2002-01997	2002-06823	2002-08199	2002-09801
2001-00327	2001-09942	2002-02392	2002-07020	2002-08429	2002-09816
2001-00566	2001-10168	2002-02758	2002-07043	2002-08585	2002-09822
2001-01220	2001-10289	2002-02848	2002-07123	2002-08784	2002-09927
2001-02724	2001-11011	2002-02922	2002-07126	2002-08922	2002-09969
2001-03638	2001-11133	2002-04058	2002-07253	2002-08929	2002-09981
2001-04705	2001-12017	2002-04177	2002-07333	2002-08995	2002-10000
2001-05105	2001-12570	2002-04260	2002-07370	2002-09022	2002-10018
2001-05561	2001-12878	2002-04831	2002-07426	2002-09028	2002-10067
2001-06769	2002-00313	2002-04916	2002-07596	2002-09250	2002-10137
2001-07349	2002-00314	2002-05103	2002-07611	2002-09280	2002-10353

2002-10417	2003-00590	2003-02089	2003-04255	2003-05572	2003-06344
2002-10552	2003-00625	2003-02098	2003-04288	2003-05593	2003-06383
2002-10638	2003-00758	2003-02132	2003-04383	2003-05634	2003-06422
2002-10657	2003-00765	2003-02218	2003-04390	2003-05638	2003-06424
2002-10709	2003-00771	2003-02220	2003-04425	2003-05696	2003-06471
2002-10824	2003-00788	2003-02392	2003-04500	2003-05704	2003-06523
2002-10849	2003-00852	2003-02470	2003-04675	2003-05705	2003-06596
2002-10899	2003-00860	2003-02471	2003-04680	2003-05714	2003-06617
2002-10901	2003-00872	2003-02644	2003-04692	2003-05795	2003-06791
2002-10908	2003-00887	2003-02661	2003-04717	2003-05796	2003-06798
2002-10914	2003-00910	2003-02767	2003-04898	2003-05803	2003-06833
2002-11003	2003-00911	2003-03208	2003-04910	2003-05805	2003-06846
2002-11155	2003-01022	2003-03277	2003-04952	2003-05886	2003-06893
2002-11172	2003-01083	2003-03281	2003-04972	2003-05915	2003-06899
2002-11307	2003-01107	2003-03294	2003-04973	2003-05942	2003-06900
2002-11538	2003-01121	2003-03312	2003-05093	2003-05968	2003-06903
2002-11670	2003-01125	2003-03400	2003-05128	2003-06021	2003-06905*
2002-12878	2003-01126	2003-03425	2003-05129	2003-06022	2003-06914
2003-00042	2003-01211	2003-03451	2003-05199	2003-06112	2003-06915
2003-00082	2003-01263	2003-03538	2003-05203	2003-06133	2003-06917
2003-00086	2003-01264	2003-03615	2003-05220	2003-06163	2003-06918
2003-00092	2003-01398	2003-03663	2003-05291	2003-06164	2003-06955*
2003-00108	2003-01470	2003-03713	2003-05294	2003-06207	2003-06956*
2003-00109	2003-01476	2003-03726	2003-05315	2003-06225	2003-06989*
2003-00157	2003-01508	2003-03734	2003-05330	2003-06229	2003-06994*
2003-00171	2003-01635	2003-03948	2003-05360	2003-06248	2003-06996
2003-00246	2003-01738	2003-04051	2003-05374	2003-06249	2003-07006
2003-00248	2003-01913	2003-04062	2003-05377	2003-06255	2003-07085
2003-00254	2003-01929	2003-04088	2003-05393	2003-06273	2003-07175
2003-00303	2003-01937	2003-04098	2003-05422	2003-06295	2003-07321*
2003-00333	2003-01965	2003-04131	2003-05475	2003-06319	2003-07322*
2003-00454	2003-02024	2003-04177	2003-05523	2003-06323	2003-07350*
2003-00542	2003-02061	2003-04207	2003-05530	2003-06337	2003-07351*
2003-00570					

Work Requests/Orders:

1999-10283	2002-00728	2002-25487	2002-53432	2003-04940	2003-07111
2001-19922	2002-01064	2002-25950	2002-53434	2003-05119	2003-07130
2001-20149	2002-01112	2002-33401	2002-53437	2003-05338	2003-07142
2001-21942	2002-01223	2002-34838	2002-53438	2003-05708	2003-07151
2001-23056	2002-01451	2002-48779	2002-56632	2003-06015	2003-07259
2001-23058	2002-02526	2002-49623	2002-58151	2003-06129	2003-11845
2001-24728	2002-02727	2002-49624	2002-64929	2003-06154	2003-14643
2001-24977	2002-03026	2002-53381	2002-66122	2003-06627	2003-15473
2002-00035	2002-03101	2002-53403	2003-00717	2003-06725	2003-16089
2002-00246	2002-20212	2002-53414	2003-04503	2003-07006	2003-16325
2002-00418	2002-21178	2002-53427	2003-04901	2003-07107	2003-16629

2003-16631	2003-17384	2003-18721	2003-20523	2003-24782	2003-30285
2003-17237	2003-18136	2003-19214	2003-20531	2003-29569	2003-30649
2003-17241	2003-18720	2003-19738	2003-24567		

Design Basis Improvement (DBI) Project Plans:
BR-2, Design Engineering CR Backlog Reduction Project Plan, Revision 0
DB-3, Test Design Basis Review Project, Revisions 0 and 1
PI-1, Fire Protection Improvement Plan, Revision 0
PI-4, Hydraulic Modeling Project, Revision 0

Completed Independent Reviews of DBI Project Completion:
BR-3, Work Orders on Engineering Hold, dated August 28, 2003
DB-5, HELB Basis Reconstitution, dated August 28, 2003
PI-4, Hydraulic Modeling, dated August 29, 2003
PI-5, ISI/IST Quality Group Classification and Boundaries, dated August 28, 2003
WIRE-2, Gas Turbine Wiring Verification, dated August 28, 2003

Miscellaneous Documents:
Calculation FEX-00143-01, IP2 Electrical Distribution System Load Flow Analysis, Revision 1
Combined Maintenance Rule Program
Drawing C235288-07, DC for Distribution Panels EPX3 and EPX5 and Transformers EBC1 and EBC2 (Radiation Monitoring System)
Drawing 400230, One-Line of Duraline Units Various Locations Unit 1 and 2
Drawing A244013-18,One-Line 440 VAC Switchgear Unit Substation 12SA2, MCCs 10B, 10E, 10F and 10H, 440/220V Distribution Panel #1 and Distribution Panel #10C
Drawing B207634, Oil Spray Deflector Shields for Diesel Generators
Effectiveness Review Strategy for the Design Basis Initiative Project
Entergy Root Cause Analysis Manual, Revision 1
Maintenance Rule Periodic Evaluation (June 2001 through April 2003)
Onsite Safety Review Committee Meeting Minutes 03-018 & 03-019
Safety Review Committee Meeting Minutes 2003-03 & 2003-04
UE&C Pipe Specification 9321-01-248-18

LIST OF ACRONYMS

ACE	Apparent Cause Evaluation
CFR	Code of Federal Regulations
CR	Condition Report
DBD	Design Basis Document
DBI	Design Basis Initiative
DRP	Division of Reactor Projects, NRC
DRS	Division of Reactor Safety, NRC
FIN	Finding
IP2	Indian Point Energy Center, Unit 2
IP3	Indian Point Energy Center, Unit 3
IPEC	Indian Point Energy Center
IR	Inspection Report
LOCA	Loss of Coolant Accident
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PI&R	Problem Identification and Resolution
RCA	Root Cause Analysis
ROP	Reactor Oversight Process
SDP	Significance Determination Process
SI	Safety Injection
TMI	Three Mile Island
TS	Technical Specifications
TSC	Technical Support Center
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
VIO	Violation
WO	Work Order