UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406-1415

July 24, 2008

Mr. Joseph E. Pollock
Site Vice President
Entergy Nuclear Operations, Inc.
Indian Point Energy Center
450 Broadway, GSB
Buchanan, NY 10511-0249

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT 2 - NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000247/2008010

Dear Mr. Pollock:

On June 6, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Indian Point Generating Unit 2. The enclosed report documents the inspection results, which were discussed on June 11, 2008, 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, and compliance with the Commission's rules and regulations and the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

There were no findings of significance identified during this inspection. On the basis of the samples selected for review, the inspectors determined that, in general, Entergy personnel identified problems and entered them into the corrective action program at a low threshold. The inspectors also determined that, in general, Entergy personnel prioritized and evaluated issues commensurate with the safety significance of the problems and implemented timely and effective corrective actions. Notwithstanding, the inspectors identified several examples of minor conditions involving identification of issues, prioritization and quality of evaluations, and implementation of corrective actions.

Additionally, the inspectors reviewed your corrective action activities to address substantive cross-cutting issues identified by the NRC in the areas of procedural adequacy and corrective action implementation. While the inspectors recognized that Entergy personnel had reassessed and revised your corrective action plans to address the substantive cross-cutting issue in the area of procedure adequacy, the inspectors concluded that Entergy made minimal progress in implementation of those planned actions. The inspectors further concluded that Entergy had identified corrective actions and were in the early stages of implementation of corrective action plans to resolve the substantive cross-cutting issue in corrective action implementation.

In accordance with Title 10 of the Code of Federal Regulations Part 2.390 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 the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Raymond J. Powell, Chief
Technical Support & Assessment Branch
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000247/2008010
w/ Attachment: Supplemental Information

cc w/encl:
Senior Vice President, Entergy Nuclear Operations
Vice President, Operations, Entergy Nuclear Operations
Vice President, Oversight, Entergy Nuclear Operations
Senior Manager, Nuclear Safety and Licensing, Entergy Nuclear Operations
Senior Vice President and COO, Entergy Nuclear Operations
Assistant General Counsel, Entergy Nuclear Operations
Manager, Licensing, Entergy Nuclear Operations
P. Tonko, President and CEO, New York State Energy Research and Development Authority
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
A. Donahue, Mayor, Village of Buchanan
J. G. Testa, Mayor, City of Peekskill
R. Albanese, Four County Coordinator
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
P. Eddy, NYS Department of Public Service
Assemblywoman Sandra Galef, NYS Assembly
T. Seckerson, County Clerk, Westchester County Board of Legislators
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

cc w/encl:
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
Congressman John Hall
Congresswoman Nita Lowey
Senator Hillary Rodham Clinton
Senator Charles Schumer
G. Shapiro, Senator Clinton's Staff
J. Riccio, Greenpeace
P. Musegaas, Riverkeeper, Inc.
M. Kaplowitz, Chairman of County Environment & Health Committee

cc w/encl:
A. Reynolds, Environmental Advocates
D. Katz, Executive Director, Citizens Awareness Network
K. Coplan, Pace Environmental Litigation Clinic
M. Jacobs, IPSEC
W. Little, Associate Attorney, NYSDEC
M. J. Greene, Clearwater, Inc.
R. Christman, Manager Training and Development
J. Spath, New York State Energy Research, SLO Designee

cc w/encl:
A. Reynolds, Environmental Advocates
D. Katz, Executive Director, Citizens Awareness Network
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W. Little, Associate Attorney, NYSDEC
M. J. Greene, Clearwater, Inc.
R. Christman, Manager Training and Development
J. Spath, New York State Energy Research, SLO Designee
A. J. Kremer, New York Affordable Reliable Electricity Alliance (NY AREA)

Distribution w/encl:
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S. Williams, RI OEDO
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T. Wingfield, DRP
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-247
License No.:	DPR-26
Report No.:	05000247/2008010
Licensee:	Entergy Nuclear Northeast (Entergy)
Facility:	Indian Point Nuclear Generating Unit 2 (IP2)
Location:	450 Broadway, GSB Buchanan, NY 10511-0249
Dates:	May 19 – June 6, 2008
Team Leader:	Marc S. Ferdas, Oyster Creek Senior Resident Inspector, DRP
Inspectors:	Tony Koonce, Indian Point Unit 3 Resident Inspector, DRP Dana Caron, Senior Security Specialist, DRS John Richmond, Senior Reactor Inspector, DRS Eugene Huang, Reactor Inspector, DRS Tracy Walker, Senior Project Engineer, DRP
Approved by:	Raymond J. Powell, Chief Technical Support & Assessment Branch Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000247/2008010; 05/19/2008 – 06/06/2008; Entergy Nuclear Northeast (Entergy); Indian Point Generating Unit 2; Biennial Baseline Inspection of the Identification and Resolution of Problems.

This team inspection was performed by one senior resident inspector, one resident inspector, and four NRC regional inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Identification and Resolution of Problems

The inspectors concluded that Entergy identified, evaluated, and resolved problems. The inspectors verified that Entergy had taken actions to address previous NRC findings. In general, Entergy personnel identified problems and entered them into the corrective action program (CAP) at a low threshold. The inspectors also determined that Entergy properly screened equipment issues for operability and reportability, as well as prioritized and evaluated them commensurate with their safety significance. Evaluations appropriately considered extent of condition, generic issues, and previous occurrences. However, broader issues involving evaluations into substantive cross-cutting issues were not appropriately prioritized and evaluated commensurate with the significance of the issues.

The inspectors determined that corrective actions addressed the identified causes and were generally implemented in a timely manner. Notwithstanding, the inspectors noted several examples of minor conditions involving identification of issues, prioritization and quality of evaluations, and implementation of corrective actions. Entergy's audits and self-assessments were thorough and probing. The inspectors concluded that Entergy identified, reviewed, and applied relevant industry operating experience (OE). Based on interviews, observations of plant activities, and reviews of the CAP and the Employees Concerns Program (ECP), the inspectors determined that site personnel were willing to raise safety issues and to document them in the CAP.

While the inspectors recognized Entergy has reassessed and revised their corrective action plans to address the substantive cross-cutting issue in the area of procedure adequacy, the inspectors concluded that minimal progress had been made in implementation of the planned actions. The inspectors also concluded that Entergy had identified corrective actions and were in the early stages of implementation of corrective action plans to resolve the substantive cross-cutting issue in corrective action implementation.

A. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution (Biennial - IP 71152B)

a. Assessment of the Corrective Action Program

1. Inspection Scope

The inspectors reviewed the procedures that describe Entergy Nuclear Northeast's (Entergy) corrective action program (CAP) at Indian Point Energy Center (IPEC). Entergy identified problems for evaluation and resolution by initiating condition reports (CRs) that were entered into Entergy's paperless condition reporting system (PCRS).

The inspectors evaluated the process for assigning and tracking issues to ensure that issues were screened for operability and reportability, prioritized for evaluation and resolution in a timely manner commensurate with their safety significance, and tracked to identify adverse trends and repetitive issues. Entergy staff and management at IPEC were interviewed by the inspectors to determine their understanding of and involvement with the CAP.

The inspectors reviewed CRs selected across the seven cornerstones of safety in the NRC's Reactor Oversight Process (ROP) to determine if Entergy properly identified, characterized, and entered problems into the CAP for evaluation and resolution. Items were selected for review from functional areas that included operations, maintenance, engineering, radiation protection, physical protection, emergency preparedness, and oversight programs to ensure that Entergy was appropriately addressing problems identified in each functional area. The inspectors selected a risk-informed sample of CRs that had been issued since the last NRC Problem Identification and Resolution (PI&R) inspection, which was conducted in October 2006. NRC Inspection Report 05000247/2006006, dated December 21, 2006 (ADAMS Ref. ML063560335) contains additional information.

The inspectors also considered risk insights from both the NRC's and Entergy's risk assessments for Indian Point Generating Unit 2 (IP2) to focus the sample selection and plant tours on risk-significant systems and components. The inspectors selected the following risk significant systems: emergency diesel generators (EDGs), auxiliary feedwater (AFW), component cooling water (CCW), service water, 480V AC, and service air/instrument air. The samples reviewed by the inspectors focused on, but were not limited to, these systems. The inspectors also expanded their review to include five years of evaluations involving maintenance activities associated with packing on safety related pumps.

In addition, the inspectors reviewed operator workarounds/burdens, operability determinations (ODs), procedure changes, completed work packages, operator and security logs, and system health reports to determine whether problems described in these documents were appropriately considered for entry into the CAP.

The inspectors reviewed CRs to assess whether Entergy personnel appropriately prioritized and evaluated identified problems. The inspectors reviewed a full range of evaluations, including root cause analysis (RCAs), apparent cause evaluations (ACE), and common cause analysis (CCAs). The review included the appropriateness of the assigned significance, the scope and depth of the casual analysis, and the timeliness of resolution. The inspectors observed meetings of the Condition Review Group (CRG), in which Entergy personnel reviewed new CRs for operability and reportability, prioritization, and assignment. The inspectors observed meetings of the Corrective Action Review Board (CARB) where Entergy personnel evaluated RCAs, as well as selected ACEs and CCAs. The inspectors also reviewed equipment operability and functionality reviews, reportability assessments, and extent-of-condition reviews for selected problems to determine whether Entergy appropriately performed these reviews.

The inspectors reviewed the corrective actions associated with selected CRs to determine whether the actions addressed the identified causes of the problems. CRs for repetitive problems were selected for review to determine whether previous corrective actions were effective. The inspectors reviewed Entergy's timeliness in implementing corrective actions and their effectiveness in precluding recurrence for significant conditions adverse to quality. CRs associated with selected NRC non-cited violations (NCVs) and findings were also reviewed to determine whether Entergy properly evaluated and resolved these issues.

The inspectors also reviewed Entergy's evaluations and corrective action plans associated with substantive cross-cutting issues in procedure adequacy and implementation of corrective actions that were previously identified by the NRC. See section 4OA.e and 4OA.f for additional details.

The documents reviewed, as well as key personnel contacted, are listed in the Attachment.

2. Assessment

Identification of Issues

The inspectors determined that, in general, Entergy personnel identified problems and entered them into the CAP at a low threshold. However, the inspectors did note, during plant tours and document reviews, a number of minor conditions that Entergy personnel had not previously identified. Specifically:

- A gasket that was staged in the plant for alternate filling of steam generators was degraded. The gasket is used in conjunction with a fire hose adaptor per abnormal procedure 2-SOP-ESP-001, "Local Equipment Operation and Compensatory Actions," to align the plant's fire header to the suction of the AFW pumps when other preferred sources of water are not available to fill the steam generators. This issue was determined to be minor because the condition would not significantly impact the ability of the operators to implement the procedure. The issue was documented in Entergy's corrective action program (CR-IP2-2008-02737).

- Three bolts/nuts on the 22 EDG jacket water heat exchanger end bell were not adequately engaged per maintenance procedure 0-MS-411, "Torquing of Mechanical Fasteners." This issue was determined to be minor because the three bolts were

spread throughout the other seventeen properly threaded bolts on the heat exchanger which ensured its physical integrity. The issue was documented in Entergy's corrective action program (CR-IP2-2008-02833).

- Risk management actions associated with maintenance on the 21 charging pump were not properly implemented. Specifically, a protected equipment sign barrier, which was established to restrict access to the 22 charging pump, was positioned in a fashion that would not have prevented personnel from entering the area prior to obtaining permission from operations personnel in the control room. This issue was determined to be minor because it is similar to example 7.g in NRC Inspection Manual Chapter (IMC) 0612, Appendix E, "Examples of Minor Issues," and the inspectors did not observe personnel or other work activities in the area that would have impacted the pump's availability. This issue was documented in Entergy's corrective action program (CR-IP2-2008-02746).

- The remote shutdown cabinet in the fan house did not contain the required number of copies of abnormal operating procedure (AOP) 2-AOP-SSD-1, "Control Room Inaccessibility," per requirements contained in surveillance procedure 0-PT-Q001, "Alternate Safe Shutdown Equipment Inventory and Inspection." This issue was determined to be minor because other copies of the procedure were available at different locations and there would not have been a significant impact on the operator's ability to successfully implement the required actions. This issue was documented in Entergy's corrective action program (CR-IP2-2008-02819 and CR-IP2-2008-02912).

- Heat trace on the service water pumps was not properly installed and insulation on the pumps was missing. This issue was determined to be minor because it did not impact the pumps' availability or reliability because at the time of identification the heat trace was not required; and there was no indication that the heat trace or insulation was not correctly installed during cold weather conditions when it is needed. This issue was documented in Entergy's CAP (CR-IP2-2008-02714, CR-IP2-2008-02716, and CR-IP2-2008-02717).

- Locking tabs for inlet air filters on the 21 and 23 EDG were not fully engaged. This issue was determined to be minor because it did not impact the EDG's availability and reliability. This issue was documented in Entergy's CAP (CR-IP2-2008-02705).

- Administrative reviews were not performed per the requirements of procedure IP-SMM-DC-904, "Surveillance Test Program," after completion of surveillance test 2-PT-M74, "R-47 Channel Operational Test," on April 25, 2008. Specifically, the reviews were not completed until June 4, 2008, after the inspectors requested the test data. The peer and final reviews should have been performed within eight hours of test completion. This issue was determined to be minor because the issue was administrative in nature and the test data met all acceptance criteria. This issue was documented in Entergy's CAP (CR-IP2-2008-02923).

- Deviation paperwork was not completed for a security officer who exceeded work hour limits. In addition, the inspectors identified two minor documentation issues on work hour deviation forms. These issues were determined to be minor because they were isolated events over a two year period of data reviewed. This issue was documented in Entergy's CAP (CR-IP2-2008-02764).

During plant tours, the inspectors noted a number of housekeeping and cleanliness issues within the plant. These issues were documented in Entergy's CAP (CR-IP2-2008-02705, CR-IP2-2008-02744, CR-IP2-2008-02756, and CR-IP2-2008-02913) and determined to be minor because they did not impact the availability, reliability, or capability of equipment in the plant. The inspectors noted that Entergy had identified housekeeping as an area of focus at IP2, independent of the inspectors' observations. Entergy was in the process of implementing corrective actions that are detailed in the "2008-2012 IPEC Business Plan" in the area of housekeeping.

The inspectors observed that Entergy trended equipment and programmatic issues and identified potential adverse trends. However, the inspectors did note a pattern which may warrant additional sampling by Entergy to confirm if a potential trend exists. The issue involved multiple (3) NRC inspection findings in 2007 that involved problem identification. This observation was documented during the inspection in Entergy's CAP (CR-IP2-2008-2907 and CR-IP2-2008-2908). Based on the observations by the inspectors Entergy initiated an ACE with a CCA (CR-IP2-2008-03144) to evaluate the issues identified during the inspection and other NRC identified items over the last two years.

Prioritization and Evaluation of Issues

CRs were screened for operability and reportability, categorized by significance, and assigned to a department for evaluation and resolution. The inspectors observed Entergy personnel at CRG and CARB meetings and concluded that personnel appropriately considered human performance issues, radiological safety concerns, repetitiveness, and adverse trends during the conduct of their reviews. Entergy's RCAs, ACEs, and CCAs for equipment issues were generally thorough, and corrective and preventive actions addressed the identified causes. Causal analyses, in most cases, considered extent of condition, generic issues, and previous occurrences.

The inspectors determined that, in general, Entergy appropriately prioritized and evaluated equipment issues commensurate with the safety significance of the problem. However, broader issues, such as the NRC substantive cross-cutting issues and repetitive NRC findings, were not appropriately prioritized and evaluated commensurate with the significance of the issue. See sections 4OA2.e and f for additional details.

Effectiveness of Corrective Actions

Based on issues reviewed during the inspection, the inspectors concluded that corrective actions for identified deficiencies were timely and appropriately implemented in most cases. Entergy was generally effective at self-identifying ineffective or improper closeout of corrective actions and re-entered issues into the CAP for further action. For significant conditions adverse to quality, the inspectors noted that Entergy's actions were comprehensive and thorough, and generally successful at preventing recurrence. However, the inspectors noted that Entergy has been ineffective in taking timely and appropriate corrective actions based on the existence of a substantive cross-cutting issue in the area of corrective action implementation. See section 4OA2.f for additional details.

During this inspection the inspectors identified several minor instances where corrective actions appeared untimely or were not fully effective in addressing the underlying deficiencies. Specifically:

- Corrective actions associated with an evaluation of a 2006 operating experience (OE) item involving maintenance of floor drains in safety related areas (CR-IP2-2006-05827) had not been implemented in a timely manner. Entergy had determined that preventive maintenance tasks for drains in safety related areas were needed to protect these areas from internal flood concerns. As of the end of this inspection, preventive maintenance tasks had not been entered into Entergy's work management process for scheduling. This issue was determined to be minor because the floor drains remained capable of processing water based on testing and cleaning that was performed in 2007 which revealed no system degradation. Entergy documented this issue in new corrective actions associated with CR-IP2-2006-05827.

- Corrective actions associated with NRC NCV 05000247/2007007-04, "Inadequate Design Control for Environmental Effects to Ensure the Availability of the Turbine Driven Auxiliary Feedwater Pump Operation," had not been timely. NRC inspection report 05000247/2007007 (dated March 30, 2007) contains additional information on the NCV. The inspectors noted that the due date for several corrective actions had been extended, including a revision to a temperature switch setpoint, to avoid an inadvertent isolation of the turbine AFW pump without relying on manual operator actions during a loss of feedwater event coincident with a loss of offsite power.

  The inspectors also identified that Entergy used a non-conservative design input of 93 degrees Fahrenheit (°F) for the maximum ambient air temperature in the room heat-up calculation. Actual peak summer temperatures were estimated to be close to 100 °F. The inspectors determined that if the calculation were adjusted for an ambient temperature of 100 °F, then the time available for the operators to open the AFW room door could be significantly reduced.

  In response to the inspectors concerns, Entergy added additional operator actions to monitor room temperature and to open the room's door when temperatures were greater than 95 F in order to maintain the availability of the steam driven AFW and not have to rely on manual actions during an event. Entergy also revised the due dates for the remaining corrective actions to revise the temperature switch setpoint prior to higher temperatures that could occur in summer.

  This issue was determined to be minor because Entergy demonstrated that operations personnel would be able to accomplish the required action of opening the room's door even though there was a reduction in the amount of time available for them to perform the manual action. Entergy documented this issue in new corrective actions associated with CR-IP2-2007-00659.

- The inspectors determined that Entergy did not identify all of the operations procedures that should have been included in the procedure adequacy cross-cutting issue resolution plan. See section 4OA2.e for additional details.

- Corrective actions associated with CR-IP2-2007-04885 which involved insufficient work instructions for service water radiation monitor testing did not address the

identified problem. Specifically, Entergy personnel identified that the work package for an activity that involved performing a portion of surveillance test 2PT-Q72, "Liquid Effluent Radiation Monitor Channel Operational Test," should include the specific steps to be performed rather than requiring the technicians to identify the appropriate procedure actions. A corrective action was assigned to submit a procedure feedback to revise the procedure. The inspectors noted that this action would not have resolved the identified issue, because the problem related to the work package, not the procedure. The inspectors also identified that, although the corrective action was closed indicating that a procedure feedback had been submitted, no procedure feedback was submitted for 2PT-Q72. This issue was determined to be minor since no errors occurred when the test was performed.

While the inspectors recognized that Entergy had recently reassessed and revised their corrective action plans to address the substantive cross-cutting issue in the area of procedure adequacy, the inspectors concluded that minimal progress had been made in implementation of the planned actions. See section 4OA2.e for additional details.

3. Findings

No findings of significance were identified in the area of assessment of the CAP.

b. Assessment of the Use of Operating Experience

1. Inspection Scope

The inspectors selected a sample of industry OE issues to confirm that Entergy had evaluated the OE information for applicability to IP2 and had taken appropriate actions when warranted. The inspectors reviewed OE documents to ensure that Entergy appropriately considered the underlying problems associated with the issues for resolution via the CAP. The inspectors also observed plant activities to determine if industry OE was considered during the performance of routine and infrequently performed activities. A list of the documents reviewed is included in the Attachment to this report.

2. Assessment

The inspectors determined that Entergy appropriately considered industry OE information for applicability, and used the information for corrective and preventive actions to identify and prevent similar issues. The inspectors determined that OE was applied and lessons learned were communicated and incorporated into plant operations. In particular, the inspectors noted that system engineers demonstrated an effective use and evaluation of industry OE in system health reports.

3. Findings

No findings of significance were identified in the area of OE.

c. Assessment of Self-Assessments and Audits

1. Inspection Scope

The inspectors reviewed a sample of self assessments and quality assurance (QA) audits, including the most recent audit of the CAP. These reviews were performed to determine if problems identified through these audits and assessments were entered into the CAP, when appropriate, and whether corrective actions were initiated to address identified deficiencies. The effectiveness of the audits and assessments were evaluated by comparing audit and assessment results against NRC-identified observations made during the inspection. A list of documents reviewed is included in the Attachment to this report.

During the previous biennial PI&R inspection, the inspectors identified that Entergy did not enter the results of the 2006 Nuclear Safety Culture Assessment into the CAP; and consequently adverse conditions identified in the assessment were not evaluated and appropriate corrective actions were not identified in a timely manner. During this inspection, the inspectors reviewed the actions taken to address a corporate safety culture assessment and a culture survey, conducted in 2007, to confirm that the results were evaluated and appropriate corrective actions were taken to address identified issues.

2. Assessment

The inspectors concluded that self-assessments and audits were critical, thorough, and effective in identifying issues. The inspectors noted that issues identified within the self-assessments and audits were appropriately entered into the CAP for evaluation; and in most cases corrective actions associated with the issues were properly implemented commensurate with their safety significance.

The inspectors also noted that Entergy's audits and self-assessments were consistent with the inspectors' observations.

3. Findings

No findings of significance were identified in the area of self-assessments and audits.

d. Assessment of Safety Conscious Work Environment

1. Inspection Scope

During interviews and discussions with Entergy personnel, the inspectors assessed whether there were issues that may represent impediments or a reluctance raise safety concerns. In support of this, the inspectors assessed whether Entergy personnel were willing to enter issues into the corrective action program (CAP) or raise safety concerns to their management and/or the NRC. The inspectors also interviewed the employee concerns program (ECP) coordinator and reviewed a sample of the ECP files to assess whether employees were willing to use the program as an alternate path for raising concerns and to ensure that issues were appropriately addressed.

On January 22, 2007, Entergy issued a letter (ADAMS Ref. ML070240242) with a plan to improve the safety conscious work environment (SCWE) at Indian Point Energy Center. The plan included actions to improve communications; identify and prevent retaliation, chilling effect, and the perception of retaliation; enhance the CAP and ECP; and improve the broader work environment at IPEC. During this inspection, the inspectors reviewed the status of Entergy's actions related to the SCWE. Specifically, the inspectors interviewed personnel from various departments, reviewed CRs, observed an Executive Protocol Group (EPG) meeting, and examined other supporting documentation of Entergy's actions to improve the SCWE. The inspectors also reviewed Entergy's effectiveness review and confirmatory assessment of actions taken to improve the SCWE at IPEC.

2. Assessment

Based on discussions with personnel, observations of plant activities, and reviews of the CAP and the ECP; the inspectors determined that site personnel were willing to raise safety issues and to document them in the CAP. Based on these limited observations, the inspectors did not identify impediments or a reluctance to raise safety issues.

The inspectors determined that Entergy continues to focus attention on improving the SCWE at IPEC. The inspectors noted that the EPG was monitoring SCWE indicators, and assigning and tracking actions to address identified issues that could impact the work environment in accordance with its charter.

3. Findings

No findings of significance were identified related to the SCWE at IPEC.

e. Substantive Cross-Cutting Issue - Procedure Adequacy

1. Inspection Scope

In the 2006 annual assessment for IPEC (NRC letter dated March 2, 2007 (ADAMS Ref: ML070610603), the NRC identified a substantive cross-cutting issue associated with procedure adequacy at IP2. In the 2007 mid-cycle performance review (NRC letter dated August 31, 2007 (ADAMS Ref. ML072430942)) and the 2007 annual assessment (NRC letter dated March 3, 2008 (ADAMS Ref. ML080610015)) the NRC concluded that Entergy had not met the criteria for clearing the substantive cross-cutting issue due to a lack of demonstrated sustainable performance improvement as evidenced by effective implementation of an appropriate corrective action plan. During inspections in June and December 2007, the NRC concluded that Entergy had not effectively implemented the operations portion of the procedure upgrade project and observed that projected completion dates for the instrumentation and controls (I&C) procedures appeared to be driven by available resources, rather than the potential impact the procedure issues could have on plant risk. NRC inspection reports 05000247/2007003 (dated August 2, 2007) and 05000247/2007005 (dated February 8, 2008) contain additional information.

During this inspection, the inspectors reviewed Entergy's evaluations, actions, and plans to assess the progress in addressing the substantive cross-cutting issue in procedure adequacy. Entergy performed a root cause analysis (RCA) under CR-IP2-2008-01056 to determine why they had not been able to resolve the substantive cross-cutting issue in procedure adequacy since it was identified in March 2007. The inspectors considered

whether the evaluation included appropriate information and detail to identify the reasons for Entergy's insufficient progress in addressing the substantive cross-cutting issue in procedure adequacy. Entergy also performed a CCA to determine the underlying themes in the procedure adequacy issues. Entergy used the results to refocus their cross-cutting issue resolution plan. The revised plan to resolve the procedure adequacy cross-cutting issue was described in a letter to the NRC dated May 16, 2008 (ADAMS, Ref. ML081490337).

The inspectors reviewed the scope of information considered in the CCA, the evaluation detail, and planned corrective actions to determine whether Entergy's revised plans addressed previously identified concerns related to procedure adequacy. These reviews included assessment of the scope and progress of Entergy's procedure improvement efforts in operations, maintenance and I&C.

2. Assessment

In March 2008, Entergy performed a RCA to determine why IPEC had not made sufficient progress in addressing the procedure adequacy substantive cross-cutting issue. The inspectors determined that the RCA was completed in appropriate scope and detail to reasonably identify causes of Entergy's insufficient progress in addressing the procedure adequacy issues. However, the inspectors concluded that the broader procedure adequacy issues had not been appropriately prioritized and evaluated commensurate with the significance of the issues when the NRC identified the substantive cross-cutting issue in March and August 2007. Specifically, the inspectors observed that, although CRs were initiated in response to the identification and continuation of the substantive cross-cutting issue in the 2006 annual assessment and the 2007 mid-cycle performance review letters, the CRs were inappropriately categorized as a significance level "Category C" ("review and correct") therefore, no causal evaluations were performed to help identify the reasons for insufficient progress. Entergy procedure EN-LI-102, "Corrective Action Process," provides guidance on the prioritization of issues and the type of evaluation that should be performed. The procedure states that human performance and process issues which are repetitive should be classified as a significance level "Category B" and should not be treated as a Category C "review and correct" condition. The inspectors' observations were similar to the results of Entergy's RCA, in that the inspectors determined that, following the initial evaluation of the procedure adequacy issues in 2006, Entergy did not evaluate subsequent NRC findings to validate and prioritize the scope of work needed to address the cross-cutting issue.

Based on the results of the RCA, Entergy concluded that their previous plan, prior to May 2008, for addressing the procedure adequacy issues was too broad and not focused on the specific procedures and actions that would resolve the cross-cutting issue and improve performance. To address the results of the RCA, Entergy conducted a CCA to determine the underlying themes for the procedure adequacy issues. As a result of the CCA Entergy identified the following common causes: (1) inconsistent usage of human performance error reduction tools; (2) technical inaccuracies and insufficient level of detail in procedures; (3) insufficient focus on the operations procedures in need of revision; and (4) inconsistent use of change management practices. Based on these results, Entergy focused their procedure adequacy cross-cutting issue resolution plan on the most risk significant, "higher tier" operations procedures (i.e., risk significant AOPs, plant operating procedures (POPs), and system operating procedures (SOPs)), and transferred responsibility for procedure improvement

initiatives for maintenance, I&C, and the remaining "lower tier" operations procedures (surveillance tests, alarm response, and other AOPs and SOPs) to the line organizations. The resolution plan also included enhancements to the revision criteria for procedure upgrades and the verification and validation processes, as well as actions to address human performance and change management methods.

The inspectors observed that the CCA was appropriately expanded to include the results of ACEs for other procedure issues. While this expanded review provided additional data to determine the common issues related to procedure adequacy, the scope included procedure usage and human performance issues that the inspectors concluded were not directly related to procedure quality. Additionally, the inspectors noted that Entergy did not consider additional information, such as self assessments or CAP trends, to provide further insight on the procedure adequacy issues. For example, a self assessment (LO-CR-IP3LO-2007-00172) on equipment reliability which concluded that inadequate maintenance procedures and work instructions had contributed to power reductions and equipment failures was not considered in the Common Cause Analysis (CCA). Entergy procedure EN-LI-122, "Common Cause Analysis (CCA) Process," states that the scope of a CCA should not be too narrow and data from other evaluation reports (i.e., RCA, ACE, CRs, self assessments, etc…) should be used as inputs for evaluation.

The inspectors determined that Entergy's plan to place additional focus on higher tier operations procedures was reasonable. However, based on their review of the issues evaluated in the CCA, as well as lower significance items in the CAP, assessments and audits, procedure feedback data and other information related to procedure quality, the inspectors concluded that efforts were also needed to address procedure adequacy issues in maintenance, I&C, and lower tier operations procedures. Based on their independent review, the inspectors determined that there has been a notable continuing trend in procedure adequacy issues involving technical inaccuracies and insufficient level of detail in maintenance and I&C procedures. Further, while the inspectors did not view inconsistent use of human performance error reduction tools and change management practices as causes of the procedure adequacy issues, they recognized Entergy's actions in these areas may mitigate potential procedure adequacy issues that may be encountered while the procedure reviews and upgrade process progresses.

Based on review of actions taken since January 2008 and established plans at the time of this inspection, the inspectors concluded that Entergy had made minimal progress in 2008 in implementing corrective actions intended to resolve the substantive cross-cutting issue in the area of procedure adequacy. Specifically:

- At the time of the inspection, Entergy's cross-cutting issue resolution plan involved upgrading approximately 20 operations procedures by the end of 2008; however, schedules had not yet been developed for upgrading the remaining 200 operations procedures within the scope of the substantive cross-cutting issue resolution plan. The inspectors noted that resources had been identified to support revision of the higher tier operations procedures; however, training for these individuals on the revised procedure upgrade criteria and expectations was not due to be completed until August 2008. As of the end of this inspection, Entergy had not revised or upgraded any of the procedures within the scope of the cross-cutting issue resolution plan.

- In early 2008, Entergy reprioritized the procedure upgrade project based on the probabilistic risk assessments (PRAs) for the units, and, based on the results of the RCA and CCA for the procedure adequacy issues, Entergy determined that maintenance, I&C, and lower tier operations procedures would be revised and upgraded through the "normal" procedure revision process under the responsibility of the line organizations. At the time of the inspection, Entergy was in the process of identifying and prioritizing the operations, maintenance and I&C procedures, and had not developed work schedules for revising the remaining procedures. The inspectors noted that Entergy personnel were recently identified to support the line organization procedure upgrade effort. In addition, staff training on the revised procedure upgrade criteria and expectations was not due to be completed until December 2008.
- At the time of the inspection, Entergy personnel had not identified specific actions to address the human performance and change management issues identified in their procedure adequacy causal analyses.

The inspectors further determined that Entergy did not completely identify the operations procedures that should have been included in the procedure adequacy cross-cutting issue resolution plan based on the significance of the procedures. Specifically, the inspectors determined that twelve (12) AOPs that met Entergy's criteria for revision had not been included in the scope of the resolution plan. Additionally, the inspectors questioned whether AOPs for external events, such as fire, flooding, earthquakes and adverse weather, should be included in the scope of the plan based on the potential significance of these events. This issue was documented in Entergy's CAP (CR-IP2-2008-02725).

3. Findings

No findings of significance were identified.

f. Substantive Cross-Cutting Issue – Implementation of Corrective Actions

1. Inspection Scope

The NRC also identified a substantive cross-cutting issue associated with implementation of corrective actions in the 2007 annual assessment for IP2. During the 2007 assessment period, four inspection findings attributed to ineffective implementation of corrective actions were identified. In the 2007 annual assessment letter, the NRC documented concerns with Entergy's scope of efforts and progress in addressing this issue. Specifically, the NRC concluded that Entergy had not demonstrated recognition that the cross-cutting theme affected other areas and had not initiated appropriate corrective actions to address it.

During this inspection, the inspectors reviewed Entergy's evaluations and corrective actions to address the substantive cross-cutting issue in implementation of corrective actions. Entergy performed an ACE with a CCA under CR-IP-2008-01057 in April 2008 to identify common themes and causes of the performance issues associated with corrective action implementation. The inspectors considered whether the ACE and CCA were completed in sufficient scope and detail to identify the causes of the substantive cross-cutting issue in corrective action implementation and provide for corrective actions to address the causes. The inspectors also evaluated Entergy's schedule and

prioritization of actions to determine Entergy's progress in completing their identified corrective actions and improving station performance in this area.

2. Assessment

In April 2008, Entergy performed an ACE with a CCA to evaluate the causes of the 2007 substantive cross-cutting issue in implementation of corrective actions. Based on the results of the ACE and CCA, Entergy concluded that the performance issues were due to inadequate communication between organizations. Entergy also determined that station personnel exhibited insufficient awareness of the impact of their actions; and that inadequate program monitoring was occurring in some areas.

The inspectors concluded that Entergy's evaluation of this issue was narrowly focused and inconsistent with Entergy procedure EN-LI-122 because the evaluations involved an analysis of a limited data set (i.e., four NRC findings cited in the IP2 2007 annual assessment letter) and did not include other relevant information contained in Entergy's CAP or self assessments in deriving its conclusions. The inspectors also noted that, while the ACE identified that the potential existed for multiple organizations to be affected, Entergy did not specifically identify the organizations which were impacted. As such, the inspectors identified a potential concern that Entergy's corrective actions may not be appropriately focused. In response to the inspectors concerns, Entergy re-opened the completed evaluation to further evaluate the issue utilizing other information in addition to the four NRC findings to fully evaluate the issue and ensure that the corrective actions currently developed were appropriate to improve performance in this area. The re-opened CCA had not been completed at the end of this inspection.

Entergy had identified corrective actions intended to resolve the cross-cutting issue in implementation of corrective actions in the "2008-2012 IPEC Business Plan" and the "CAP Excellence Plan." The corrective actions were also being tracked in Entergy's CAP (CR-IP2-2008-01057 and CR-IP2-2008-02765). The actions in these plans primarily involve: (1) improving oversight and monitoring of the CAP in each department by having station personnel (department performance improvement coordinators (DPIC)) who are assigned the function of monitoring CAP quality and timeliness; (2) increasing management reviews of corrective actions for RCAs, ACEs, and CCAs; and (3) improving how Entergy monitors overall station performance in the areas of CAP and work control.

Based on discussions with Entergy personnel the inspectors noted that key corrective actions were in the early stages of implementation. Specifically:

- All department DPICs had not completed initial training as of the end of the inspection.

- Increased CARB reviews of completed corrective actions for RCAs and selected ACEs were in the early stages of implementation.

- Entergy was not performing periodic monitoring and reporting on the status of work orders that have CAP corrective actions closed to them per Entergy procedure EN-LI-102, "Corrective Action Process." The inspectors noted that Entergy had previously identified this issue, independent of the inspectors' observations, and had corrective action initiatives within the CAP and the "2008-2012 IPEC Business Plan" to implement this requirement by July 2008.

In addition, the inspectors observed that Entergy's CAP Index performance indicator did not indicate improved performance from November 2007 thru May 2008. The inspectors also noted that Entergy's reevaluation of this issue was not complete as of the end of the inspection and additional corrective actions may be identified.

3. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit:

Exit Meeting Summary. On June 11, 2008, the inspectors presented the inspection results to Mr. J. Pollock, Site Vice President, and other members of the IP2 staff. The inspectors verified that no proprietary information reviewed during the inspection was retained.

ATTACHMENT: Supplemental Information

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel
R. Beckman, Director – Maintenance
J. Bencivenga, Design Engineering
C. Bristol, Maintenance
P. Conroy, Director - Nuclear Safety Assurance
K. Curley, Engineering
G. Dahl, Licensing
G. Dean, Assistant Operations Manager
J. Donnelly, Manager - Corrective Action & Assessment
D. Gagnon, Manager - Security
M. Johnson, System Engineer
J. Lijoi, Superintendent - I&C
T. McCaffrey, Manager – Design Engineering
T. Morzello, Supervisor - I&C
T. Orlando, Director - Engineering
J. Pollock, Site Vice-President
N. Papaiya, QA Specialist
J. Reynolds, Corrective Action & Assessment
A. Small, Procedure Improvement Project
B. Taggart, ECP Coordinator
A. Vitale, General Manager Plant Operations
R. Walpole, Manager – Licensing

NRC
M. Gray, Branch Chief, DRP
M. Marshfield, Senior Resident Inspector – IP2 (Acting)
P. Cataldo, Senior Resident Inspector – IP3

Other
C. Thebaud, Independent Safety Culture Assessment Team

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

None.

LIST OF DOCUMENTS REVIEWED

Audits and Self-Assessments

Quarterly Department Trend Analysis, IPEC Security Department, Fourth Quarter 2007
Quarterly Department Trend Analysis, IPEC Security Department, First Quarter 2008
LO-IP3LO-2007-00144 CA3, "Maintenance work practices and fundamentals"
LO-IP3LO-2007-00061 CA1, "Benchmark and I&C department work process"
LO-IP3LO-2006-00331, "Development and Implementation of Action Plans to Improve the Safety Culture at IPEC"
LO-IP3LO-2006-00045, "System Engineering Application of Rigor"
LO-IP3LO-2008-0031, "Pre-2008 NRC PI&R Snap-Shot Assessment"
LO-IP3LO-2006-00331, "2006 Safety Culture Assessment Department Action Plans"
LO-IP3LO-2007-00069, "Procedure Upgrade Project"
LO-IP3LO-2007-00172, "IPEC Equipment Reliability Assessment"
LO-IP3LO-2007-00216, "Learning Programs"
LO-IP3LO-2007-00221, "Emergency Response Organization (ERO) Readiness"
LO-IP3LO-2007-00277, "Corporate Safety Culture Assessment"
LO-IP3LO-2007-00278, "2007 Culture Survey"
LO-IP3LO-2007-00285, "Ongoing Assessment of Executive Protocol Group Activities"
LO-IP3LO-2007-00329, "Licensing Department Safety Culture"
LO-IP3LO-2008-00126, "Maintenance Safety Culture"
LO-IP3LO-2008-00144, "CA&A Six-Month Ongoing Assessment of Condition Reports (September 2007 to February 2008)
LO-IP3LO-2006-00069, "Procedure Upgrade Project"
LO-IP3LO-2007-00069-46, "Procedure Upgrade Project"
QA-08-2007-IP-1, "IPEC Engineering programs"
QA-12-2007-IP-1, "IPEC Operations Program"
QA-14-2007-IP-1, "IPEC Radiation Protection"
QA-07-2007-IP-1, "IPEC Emergency Plan"
QS-2007-IP-21, "Procedure Upgrade Project – Project Upgrade Project Status"

Calculations

FCX-00086-00, "Auxiliary Feedwater Pump Room Temperature Rise"
IP2-CALC-07-00143, "Auxiliary Feedwater Pump Room Temperature Rise"
IP2-CALC-07-00159, "Auxiliary Feedwater Pump Room Temperature Switches"
IP2-CALC-07-00213, "Pressure and Temperature Response from High Energy Line Break in the AFW Pump Room"
IP2-CALC-06-00329, "EDG Air Receiver Pressure"
IP2-CALC-06-00351, "Pipe Wall Thinning in City Water, Fire Protection, and Fuel Oil, in the Utility Tunnel"
IP3-CALC-07-00193, "Auxiliary Feedwater Pump Room Temperature Rise"
IP3-CALC-07-00210, "Pressure and Temperature Response from High Energy Line Break in the AFW Pump Room"
IP3-TS-160, "AFW Pump Room Environmental"
MMS-00088, "Analysis of Thrust and Torque Limits for MOV 747"
PGI-00059, "MOV 746 and 747 Differential Pressure Calculation"

Condition Reports (CR)

IP2-2008-02764*	IP3-2006-03488	IP2-2006-06198	IP2-2006-06201
IP2-2006-06875	IP2-2006-06957	IP2-2006-07334	IP2-2007-00269
IP2-2007-00275	IP2-2007-00464	IP2-2007-00668	IP2-2007-00682
IP2-2007-01030	IP2-2007-01031	IP2-2007-01040	IP2-2007-01191
IP2-2007-01302	IP2-2007-01334	IP2-2007-01445	IP2-2007-01512
IP2-2007-02211	IP2-2007-02331	IP2-2007-02686	IP2-2007-02822
IP2-2007-03397	IP2-2007-03844	IP2-2007-04037	IP2-2007-04094
IP2-2007-04817	IP2-2007-05090	IP2-2007-05244	IP2-2007-05287
IP2-2008-00178	IP2-2008-00276	IP2-2008-00288	IP3-2008-00692
IP2-2008-00720	IP2-2008-00989	IP2-2008-01003	IP2-2008-01018
IP2-2008-01347	IP2-2008-01914	IP2-2008-02395	IP2-2001-00363
IP2-2003-06974	IP2-2006-02256	IP2-2006-03396	IP2-2006-05827
IP2-2006-06414	IP2-2006-06865	IP2-2006-06884	IP2-2006-07033
IP2-2007-00193	IP2-2007-00306	IP2-2007-00309	IP2-2007-00539
IP2-2007-00842	IP2-2007-01046	IP2-2007-01514	IP2-2007-01779
IP2-2007-03706	IP2-2007-04853	IP2-2007-04921	IP2-2008-00414
IP2-2008-00664	IP2-2008-00665	IP2-2008-00884	IP2-2008-01188
IP2-2008-01349	IP2-2008-01379	IP2-2008-01414	IP2-2008-01527
IP2-2008-01568	IP2-2008-01937	IP2-2008-02002	IP2-2008-02091
IP2-2008-02103	IP2-2008-02184	IP2-2008-02250	IP2-2008-02251
IP2-2008-02252	IP2-2008-02339	IP2-2008-02350	IP2-2008-02662
IP2-2008-02923*	IP3-2006-03789	IP3-2007-03230	IP3-2007-01775
IP3-2007-01846	IP3-2008-00147	IP2-2003-00675	IP2-2003-00905
IP2-2003-01717	IP2-2004-00961	IP2-2004-04401	IP2-2005-03472
IP2-2005-04269	IP2-2006-02635	IP2-2006-05803	IP2-2006-05854
IP2-2006-06078	IP2-2006-06184	IP2-2006-06322	IP2-2006-06694
IP2-2006-07329	IP2-2007-00100	IP2-2007-00170	IP2-2007-00182
IP2-2007-00205	IP2-2007-00296	IP2-2007-01630	IP2-2007-01669
IP2-2007-01700	IP2-2007-01712	IP2-2007-02138	IP2-2007-02367
IP2-2007-02401	IP2-2007-02959	IP2-2007-03184	IP2-2007-03529
IP2-2007-05268	IP2-2008-00800	IP2-2008-01835	IP2-2008-01836
IP2-2008-01627	IP2-2008-02159	IP2-2008-02162	IP2-2008-02163
IP2-2008-02240	IP2-2008-02442	IP2-2008-02459	IP2-2008-02737*
IP2-2008-02746*	IP2-2008-02774	IP2-2008-02833*	IP2-2008-02866
IP2-2002-02039	IP2-2007-02007	IP2-2008-01421	IP2-2008-01489
IP2-2002-02039	IP2-2007-03561	IP2-2007-03651	IP2-2008-02693
IP2-2008-02680	IP2-2007-01519	IP2-2007-03001	IP2-2007-03706
IP2-2008-00464	IP2-2008-02680	IP2-2008-02872	IP2-2008-02855
IP2-2008-02853	IP2-2008-02854	IP2-2008-02855	IP2-2008-02856
IP2-2008-02857	IP2-2008-02858	IP2-2008-02859	IP2-2008-02860
IP2-2008-02861	IP2-2008-02862	IP2-2008-02863	IP2-2008-02864
IP2-2008-02865	IP2-2008-02866	IP2-2008-02867	IP2-2008-02868
IP2-2008-02869	IP2-2008-02870	IP2-2008-02871	IP2-2008-02872
IP2-2008-02873	IP2-2008-02874	IP3-2007-04379	IP3-2007-04683
IP3-2008-00232	IP2-2008-02305	IP2-2008-02307	IP2-2008-02334
IP2-2008-01482	IP2-2008-01537	IP2-2007-02208	IP2-2008-02725*

IP2-2006-05065	IP2-2006-05066	IP2-2006-05071	IP2-2006-06951
IP2-2006-05081	IP2-2006-06953	IP2-2006-06670	IP2-2006-06272
IP2-2006-06694	IP2-2007-00587	IP2-2007-00745	IP2-2007-02004
IP2-2007-01011	IP2-2007-03032	IP3-2007-04411	IP3-2008-00367
IP2-2007-04905	IP2-2008-00013	IP3-2007-00821	IP3-2007-01184
IP3-2007-02304	IP3-2007-01691	IP3-2007-02303	IP3-2008-00410
IP3-2008-00777	IP3-2008-00399	IP3-2008-00778	IP3-2007-01059
IP3-2007-02299	IP2-2006-07083	IP2-2006-07084	IP2-2008-02047
IP3-2008-00908	IP2-2007-04932	IP2-2007-04955	IP2-2006-07018
IP2-2006-07035	IP2-2006-06636	IP2-2008-00607	IP3-2008-00510
IP2-2007-03586	IP2-2007-00803	IP2-2007-00130	IP3-2007-01706
IP2-2007-03462	IP2-2007-00975	IP2-2006-06470	IP2-2006-05098
IP2-2006-05177	IP3-2006-03422	IP3-2007-03639	IP3-2007-03019
IP2-2008-02047	IP3-2008-00908	IP2-2006-07083	IP2-2006-07084
IP2-2007-02635	IP2-2007-02150	IP2-2007-02179	IP2-2007-02863
IP2-2003-02485	IP2-2007-02109	IP2-2007-02112	IP2-2007-02142
IP2-2007-04076	IP2-2007-01364	IP2-2007-02114	IP2-2006-06105
IP2-2007-00021	IP3-2007-00024	IP2-2008-00275	IP2-2008-00819
IP2-2008-00734	IP3-2008-00505	IP3-2008-00412	IP2-2008-00925
IP2-2008-02645	IP2-2007-00029	IP2-2008-01430	IP2-2008-02591
IP2-2008-01623	IP2-2008-02967*	IP2-2008-02971*	IP2-2007-03619
IP2-2007-01147	IP2-2007-04932	IP2-2007-04955	IP2-2008-01056
IP2-2000-07889	IP2-2004-00893	IP2-2006-00082	IP2-2006-03342
IP2-2006-06178	IP2-2006-06229	IP2-2006-06361	IP2-2006-06807
IP2-2006-06850	IP2-2006-06883	IP2-2006-06912	IP2-2006-07329
IP2-2007-00462	IP2-2007-00463	IP2-2007-00488	IP2-2007-00505
IP2-2007-00656	IP2-2007-00659	IP2-2007-00662	IP2-2007-01771
IP2-2007-02155	IP2-2007-02189	IP2-2006-06842	IP2-2006-02627
IP2-2008-02650	IP3-2007-03130	IP3-2007-03820	IP2-2007-04885
IP3-2008-00409	IP2-2006-02156	IP2-2006-03691	IP2-2006-03820
IP2-2007-02015	IP2-2007-02899	IP2-2007-03853	IP2-2007-04219
IP2-2008-00690	IP2-2008-01787	IP3-2006-01245	IP3-2007-00018
IP3-2007-00394	IP3-2007-00753	IP3-2007-01049	IP3-2007-01389
IP3-2007-01464	IP3-2007-02734	IP3-2007-04363	IP3-2008-00509
IP2-2008-07705*	IP2-2008-02714*	IP2-20080-2716*	IP2-2008-02717*
IP2-2008-02718*	IP2-2008-02724*	IP2-2008-02725*	IP2-2008-02743*
IP2-2008-02744*	IP2-2008-02747*	IP2-2008-02756*	IP2-2008-02765*
IP2-2008-02771*	IP2-2008-02771*	IP2-2008-02819*	IP2-2008-02820*
IP2-2008-02823*	IP2-2008-02907*	IP2-2008-02908*	IP2-2008-02912*
IP2-2008-02913*	IP2-2008-02928*		

* Identified During Inspection

Miscellaneous

NRC Risk-Informed Inspection Notebook for Indian Point Unit 2, Rev. 2.1a
Job Familiarization guide for department performance improvement coordinator (DPIC)
Operator logs
Work week critique for week 0819

T+1 Schedule performance review for week 0648
A/R (action request) #00034996*
EN-DC-115, "Engineering Change" EC#5000034211
Maintenance rule scoping review for IPEC floor drains
DCP-02-2-026, "Design change package"
IP-RPT-04-00230, "Internal flooding analysis notebook"
Final safety analysis review
Technical specifications
Corrective and elective maintenance backlogs
Operation Standing Order 06-04
Operation Standing Order 07-08
Operation Standing Order 07-09
21 Component Cooling Water Pump IST Data, April 2004 through April 2008
Safety Evaluation 94-250-MD, "Removal of Retired Gross Failed Fuel Detector"
Safety Evaluation NS-2-88-077, "Removal of Gross Failed Fuel Detector"
Corrective Action and Assessment Excellence Plan, dated January 1, 2008 (Updated May 14, 2008)
2008-2012 Indian Point Energy Center Business Plan
Vendor Manual 1658-1.1, "IO&S Manual – Self Cleaning Strainer Instruction 596 Series"
IPEC Department Evaluation of New EN CAP Performance Index April 2008 Monthly On-Going Assessment
IPEC Department Evaluation of New EN CAP Performance Index March 2008 Monthly On-Going Assessment
IP2 Control Room Narrative Log, dated April 12, 2008
Indian Point Unit 2 Nuclear Power Plant Probabilistic Safety Assessment – Internal Flooding Analysis Notebook (IP-RPT-04-00230)
IPEC-ADM-08-015, Memo to Indian Point Entergy Center from J. Pollock, Site Vice President Subject: Safety Conscious Work Environment (SCWE) Confirmatory Assessment
Safety Conscious Work Environment Confirmatory Assessment – March 2008
IPEC-ADM-08-006, Memo to Indian Point Entergy Center from J. Pollock, Site Vice President Subject: Safety Conscious Work Environment Evaluation
Indian Point Energy Center Safety Conscious Work Environment Effectiveness Review (January 2008)
Executive Protocol Group Meeting Minutes – January through May 2008
Engineering Change Request 5000033282, "DC Backup Lights in the Unit 2 Control Room Do Not Energize on Loss of Normal Power Panel"
Engineering Change 2871, Rev 3, Utility Tunnel Upgrade
LO-LAR-2007-00062, License Amendment Request for Technical Specification Change
NRC Safety Evaluation Report 1.4, Rev 0, IP-2 Power Up-rate
Operations Standing Order 06-04, Emergency Diesel Generator Air Receiver Pressure
Indian Point Energy Center Procedure Adequacy Cross-Cutting Issue Resolution Plan
NL-08-082, "Revised Action Plan to Address the Procedure Adequacy Substantive Cross-Cutting Issue for Indian Point Units 2 and 3," dated May 16, 2008

<u>NRC Non-Cited Violations & Findings</u>
05000247/2007007-09, "Untimely Corrective Actions for Decrease in Battery Margin"
05000247/2007005-02, "Failure to Implement Corrective Actions to Prevent Exceeding Preventive Maintenance Frequency for 25 Containment Fan Cooler Unit"

05000247/2007005-03, “Failure to Implement Corrective Actions for Degraded Containment Fan Cooler Unit Service Water Flow”
05000247/2008002-01, “Failure of 21 SWP Due to Inadequate Maintenance Procedure”
05000247/2007007-07, “Inadequate Station Battery Capacity Testing for Degradation Monitoring”
05000247/2006006-03, “Failure to Enter Safety Culture Assessment Results into CAP”
05000247/2006004-01, “Inadequate Operating Procedure for Loss of Both Heater Drain Tank Pumps”
05000247/2006004-02, “Inadequate Procedure for Calibrating Steam Dump Loss of Load Controller”
05000247/2006005-04, “Inadequate Risk Assessment for 21 MBFP Steam Inlet Valve”
05000247/2007002-01, “Failure to Incorporate Design Basis Info into Procedures to Assure Adequate Cooling Water flow to RCP Thermal Barriers”
05000247/2007004-03, “Procedure Inadequate to Ensure Operability of SI Pumps During Venting”
05000247/2007004-01, “Degraded 12 Fire Main Booster Pump Cell Fire Door”
05000247/2007002-03, “Inadequate Corrective Actions for Failure to Appropriately Monitor Service Water Intake Bay Level”
05000247/2007007-02, “Inadequate Differential Pressure Value Used for MOV 746 and MOV 747 to Ensure Valve Capability”
05000247/2007007-04, “Inadequate Design Control for Environmental Effects to Ensure the Availability of the Turbine Driven Auxiliary Feedwater Pump Operation”
**05000286/2007002-02, “Inadequate Procedure for Recirculation Sump Interference Removal”
**05000286/2007002-04, “Inadequate Procedure for Conduct of RTD Cross Calibrations”
**05000286/2007002-05, “Inadequate Procedure for Control of Temporary Modification”
**05000286/2007005-01, “Failure to Provide an Adequate EDG Maintenance Procedure”
**05000286/2008007-01, “Inadequate Procedure to Ensure RCP Seal Cooling Flow During Alternate Safe Shutdown Conditions”
**05000286/2008007-02, “Inadequate Procedure to Provide Timely SGBD Isolation”

** Reviewed for assessment of site-wide procedure adequacy issues

Operating Experience
LO-ELO-2007-00116 CA-8
CR-HQN-2007-00438 CA-00005
LO-OEN-2005-00482 CA#9
Industry OE - “Evaluation of ultra low sulfur diesel fuel for use in EDGs”
NRC Information Notice 2006-022, “New ultra-low-sulfur diesel fuel oil could adversely impact diesel engine”
NRC Information Notice 2006-017, “Recent Operating Experience of Service Water Systems due to External Conditions”
Industry OE – Maintenance of Non Safety Related Systems (Floor Drains) In Safety Related Area, dated April 2006 (CR-IP2 2006-05827)
10CFR Part 21 2006-13-00, “Barton Pressure Transmitter -- Exposed Wiring”

Procedures
EN-WM-105, “Planning”
EN-MA-118, “Foreign Material Exclusion”
EN-MA-123, “Identification and Trending of Rework”

EN-LI-118, “Root Cause Analysis Process”
EN-LI-119, “Apparent Cause Evaluation (ACE) Process”
EN-LI-100, “Process Applicability Determination”
EN-LI-102, “Corrective Action Process”
EN-LI-121, “Entergy Trending Process”
EN-LI-122, “Common Cause Analysis (CCA) Process”
EN-LI-104, “Self Assessment and Benchmark Process”
EN-LI-114, “Performance Indicator Process”
EN-RP-105, “Radiation Work Permits”
EN-OE-100, “Operating Experience Program”
EN-OP-104, “Operability Determinations”
EN-WM-100, “Work Request Generation, Screening and Classification”
2PT-M74, “Process Radiation Monitor R-47 Channel Operational Test”
2-PT-A035A, “21 Station Battery Intercell Resistance Check”
2-PT-Q33C, “23 Charging Pump”
2-PT-R026A, “Local IVSWS test (water)”
2-PT-R016, “Recirculation Pumps”
2-BAT-001-ELC, “Replacement of Battery Cells”
OAP-008, “Severe Weather Preparations”
2-PT-R076A, “Station Battery 21 Load Test”
2-PT-R076B, “Station Battery 22 Load Test”
2-PT-R076C, “Station Battery 23 Load Test”
2-PT-R076D, “Station Battery 24 Load Test”
2-PT-R084A, “21 EDG 8 Hour Load Test”
0-VLV-420-GEN, “Inspection and Repair of Conval Clampseal Piston Check Valves”
SAO-703, “Fire Protection Impairment Criteria and Surveillance”
0-AOP-SEISMIC-1, “Seismic Event”
0-AOP-SEC-1, “Response to Security Compromise”
2-AOP-FLOOD-1, “Flooding”
2-AOI-28.0.8, “Earthquake Emergency”
2-ARP-004, “Waste Disposal Panel (far left side)”
0-GNR-406-ELC, “Emergency Diesel Generator 6-year Inspection”
COL 27.1.5, “480V AC Distribution”
2-SOP-ESP-001, “Local Equipment Operation and Compensatory Actions”
0-MS-411, “Torquing of Mechanical Fasteners”
0-HTX-405-EDG, “EDG Lube Oil and Jacket Water Heat Exchanger Maintenance”
2-POP-2.1, “Operation at Greater Than 45% Power”
0-PT-Q001, “Alternate Safe Shutdown Equipment Inventory and Inspection”
2-ES-0.1, “Reactor Trip Response”
2-ES-1.1, “SI Termination”
IP-SMM-WM-101, “On-Line Risk Assessment”
IP-SMM-AD-102, “IPEC Implementing Procedure Preparation, Review and Approval”
IP-SMM-OP-106, “Procedure Use and Adherence”
2-TAP-002-EDG, “Removal and Installation of Service Water Drain Line on Emergency Diesel Generator Heat Exchangers”
0-STR-401-SWS, “Service Water Pump Strainers inspection & Overhaul”
2-ECA-0.0, “Loss of All AC Power”
2-ECA-0.1, “Loss of All AC Power Recovery without Safety Injection Required”

2-ES-0.1, “Reactor Trip Response”
2-PT-M106, “Fuel Oil Storage Tank Fill valve Pits Water Level Check”
3-ES-0.1, “Reactor Trip Response”
SEP-SW-001, “Generic Letter 89-13 Service Water Program”

System Health Reports and Trending Data
1Q08 System Health Report Unit 2 – 118V Instrument Bus
1Q08 System Health Report Unit 2 – 13.8 KV
1Q08 System Health Report Unit 2 – 138 KV
1Q08 System Health Report Unit 2 – CCW
1Q08 System Health Report Unit 2 – RHR
1Q08 System Health Report Unit 2 – FP
1Q08 System Health Report Unit 2 – AFW
1Q08 System Health Report Unit 2 – HVAC/EDG
1Q08 System Health Report Unit 2 – CVCS
1Q08 System Health Report Unit 2 – EDG
1Q08 System Health Report Unit 2 – SW
1Q08 System Health Report Unit 2 – SIS
1Q08 System Health Report Unit 2 – CSS
1Q08 System Health Report Unit 2 – DC Power
4th Quarter 2006 IPEC Quarterly Trend Report
1st Quarter 2007 IPEC Quarterly Trend Report
2nd Quarter 2007 IPEC Quarterly Trend Report
3rd Quarter 2007 IPEC Quarterly Trend Report
4th Quarter 2007 IPEC Quarterly Trend Report
1st Quarter 2008 IPEC Oversight Report
4th Quarter 2007 IPEC Oversight Report
3rd Quarter 2007 IPEC Oversight Report

Work Orders/Requests

5130268	513111292	51321920	51323442
51647316	51657787	00117959	00127152
00129525	00147247	00147314	00152837
00197335	00149266	00152837	00132503
00106944	51320348	00116882	00118322
00118474	00120392	00123147	00123626
00125238	00125866	IP2-02-38765	IP2-03-18686
IP2-07-15387	IP2-06-22760	IP3-0719607	IP3-07-17310
IP2-02-05370	IP2-06-30864	IP2-02-38765	Passport 51320632
Passport 137576			

LIST OF ACRONYMS

ACE	Apparent Cause Evaluation
ADAMS	Agencywide Documents Access and Management System
AFW	Auxiliary Feedwater
AOP	Abnormal Operating Procedure
CAP	Corrective Action Program
CARB	Corrective Action Review Group
CCA	Common Cause Analysis
CCW	Component Cooling Water
CR	Condition Report
CRG	Condition Review Group
DPIC	Department Performance Improvement Coordinators
ECP	Employee Concerns Program
EDG	Emergency Diesel Generator
EPG	Executive Protocol Group
Entergy	Entergy Nuclear Northeast
I&C	Instrument and Controls
IMC	Inspection Manual Chapter
IPEC	Indian Point Energy Center
IP2	Indian Point Nuclear Generating Unit 2
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OD	Operability Determination
OE	Operating Experience
PARS	Publicly Available Records System
PI&R	Problem Identification and Resolution
POP	Plant Operating Procedures
RCA	Root Cause Analysis
RCP	Reactor Coolant Pump
ROP	Reactor Oversight Program
SCWE	Safety Conscious Work Environment
SGBD	Steam Generator Blowdown
SOP	Standard Operating Procedure
QA	Quality Assurance