December 21, 2006

EA-06-311

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

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNITS 2 AND 3 PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT NOS. 05000247/2006006 AND 05000286/2006006 AND NRC REQUEST FOR RESPONSE

Dear Mr. Dacimo:

On October 6, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed concurrent biennial problem identification and resolution team inspections at the Indian Point Nuclear Generating Units 2 and 3. The enclosed inspection reports document the inspection observations and findings which were discussed with Entergy management during an exit meeting onsite on December 5, 2006, and during a teleconference meeting on December 14, 2006.

The inspections were examinations of activities conducted under your licenses as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and the conditions of your licenses. Within these areas, the inspections involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

The inspection teams concluded that Entergy's implementation of the corrective action program at the Indian Point Nuclear Generating Units 2 and 3 was consistent across both units and generally effective. The teams determined that Entergy staff had a low threshold for identifying problems, and issues were prioritized and evaluated commensurate with their safety significance. Corrective actions were typically implemented in a timely manner and addressed the identified causes of the problems. Lessons learned from industry operating experience were reviewed and applied when appropriate, and audits and assessments were critical with appropriate actions taken to address identified issues in most cases.

During the inspection, the team conducted interviews and reviewed specific concerns to understand the application and effectiveness of the corrective action program in support of ensuring an environment where employees feel free to raise concerns. In the context of the safety conscious work environment onsite, the inspection teams observed that most workers

indicated that they would raise issues that they recognized as nuclear safety issues. The NRC has become aware of incidents through insights gained during these inspections and from the allegation program where workers perceived that individuals were treated negatively by management for raising issues. As a result of these incidents, some workers expressed reluctance to raise issues under certain circumstances. While most workers made a distinction between nuclear safety issues and other concerns, the teams noted that some of the illustrative examples provided by plant workers could have nuclear safety implications. However, the teams did not identify any more than minor issues, which had not been raised.

Additionally, in June 2006, the NRC referred concerns to you for your information and action involving an alleged potential chilling effect in the Maintenance department. This referral specifically referenced issues identified in a teamwork assessment of the Instrumentation and Controls department, conducted in 2005, as well as the preliminary results of an independent safety culture assessment sponsored by Entergy in early 2006. Our followup during these inspections found that you had deferred action on the referred concerns pending evaluation of the Entergy contracted safety culture assessment, and as a result, you had not taken substantive action at the time of the inspection. Therefore, the team was unable to review or evaluate your actions to address the potential adverse impact on the safety conscious work environment within the Maintenance department.

We recognize that the information that we received and developed during the inspections regarding the willingness of workers to raise issues is generally consistent with the results of the independent safety culture assessment conducted for Entergy at Indian Point in 2006. We understand you have taken actions to improve the general plant culture at Indian Point and there are ongoing initiatives at the site dealing with expectations for workforce performance. However, we are concerned that at the conclusion of the inspection you had not fully evaluated the results of the Entergy contracted safety culture assessment to understand the causes of the negative responses and declining trends related to the safety conscious work environment onsite. As a result, the NRC requests that Entergy provide its plan for evaluating the potential chilling effect onsite and its plan of action for addressing this matter to the NRC. Based on our discussions of December 14, 2006, it is our understanding that Entergy agrees to provide this information within 30 days of the date of this letter. Following receipt and review of the Entergy response, we will determine if a meeting is needed to discuss your approach, schedule, and NRC oversight. This issue will be included as an input to our assessment of plant performance as described in Inspection Manual Chapter 0305, "Operating Reactor Assessment Program."

In addition to the above observations, there were three Green findings identified by the inspectors during these inspections: two findings at Unit 2 and one finding common to both units. Two of the findings were determined to be violations of NRC requirements. However, because of their very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as Non-Cited Violations (NCVs), in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny any of these NCVs, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the U.S. Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC, 20555-0001, with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC, 20555-0001; and the NRC Resident Inspector at the Indian Point facility.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and your response will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the PARS component of ADAMS, to the extent possible it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your withholding claim (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

If you have any questions regarding these matters, please contact Eugene Cobey at (610) 337-5171.

Sincerely,

/RA/

David C. Lew, Director
Division of Reactor Projects
Region I

Docket Nos. 50-247 and 50-286
License Nos. DPR-26 and DPR-64

Enclosures: Inspection Report Nos. 05000247/2006006 and 05000286/2006006
w/Attachments: Supplemental Information

cc w/encl:
G. J. Taylor, Chief Executive Officer, Entergy Operations
M. R. Kansler, President, Entergy Nuclear Operations Inc. (ENO)
J. T. Herron, Senior Vice President and Chief Operations Officer (ENO)
C. Schwarz, Vice President, Operations Support (ENO)
P. Rubin, General Manager Operations (ENO)
O. Limpias, Vice President, Engineering (ENO)
J. McCann, Director, Licensing (ENO)
C. D. Faison, Manager, Licensing (ENO)

M. J. Colomb, Director of Oversight (ENO)
J. Comiotes, Director, Nuclear Safety Assurance (ENO)
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P. Eddy, Electric Division, New York State Department of Public Service
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
D. O'Neill, 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
B. Brandenburg, Assistant General Counsel
Assemblywoman Sandra Galef, NYS Assembly
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
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Congresswoman Nita Lowey
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If you have any questions regarding these matters, please contact Eugene Cobey at (610) 337-5171.

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David C. Lew, Director
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Region I

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-247
License No:	DPR-26
Report No:	05000247/2006006
Licensee:	Entergy Nuclear Northeast (Entergy)
Facility:	Indian Point Nuclear Generating Unit 2
Location:	295 Broadway, Suite 3 Buchanan, NY 10511-0308
Dates:	September 18 through October 6, 2006
Team Leader:	T. Walker, Senior Project Engineer, Division of Reactor Projects (DRP)
Inspectors:	M. Cox, Senior Resident Inspector, DRP S. McCarver, Project Engineer, DRP J. Benjamin, Resident Inspector, DRP C. Long, Project Engineer, DRP
Observer:	S. Smith, Reactor Engineer, DRP
Approved by:	Eugene W. Cobey, Chief Projects Branch 2 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000247/2006-006; 09/18/2006 - 10/06/2006; Indian Point Nuclear Generating Unit 2; Problem Identification and Resolution.

This team inspection was performed by three regional inspectors and two resident inspectors. Three findings of very low safety significance (Green) were identified, two of which were also non-cited violations (NCVs). The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. 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 inspectors concluded that the implementation of the corrective action program at Indian Point Unit 2 was generally effective. The inspectors noted that Entergy staff had a low threshold for identifying problems and entering them in the corrective action program. The inspectors also noted that once entered into the system, items were screened, prioritized, and evaluated commensurate with their significance using established criteria. The inspectors determined that corrective actions addressed the identified causes and were typically implemented in a timely manner. In addition, the team noted that Entergy was generally effective in reviewing and applying lessons learned from industry operating experience. The inspectors found that audits and assessments were critical and, in most cases, appropriate actions were taken to address identified issues. However, the inspectors also found that the results of an independent safety culture assessment were not entered into the corrective action program for timely evaluation and appropriate action.

The inspectors found that most workers indicated that they would raise issues that they recognized as nuclear safety issues. However, the inspectors also found that a number of workers interviewed indicated that they were aware of individuals they perceived as having been treated negatively by management for raising issues; most of these workers were in the Instrumentation and Controls (I&C) department. Some workers expressed reluctance to raise issues under certain circumstances due to a number of reasons, including fear of disciplinary action and concerns with the efficacy of the corrective action program. While most workers made a distinction between nuclear safety issues and other concerns, the inspectors noted that some of the illustrative examples provided by plant workers could have nuclear safety implications. However, the inspectors did not identify any more than minor issues, which had not been raised.

There were two Green NCVs and one Green finding identified by the inspectors during this inspection. One of the NCVs was associated with a failure to identify a condition adverse to quality associated with the auxiliary feedwater (AFW) system. The second NCV was associated with a failure to fully evaluate leakage into a steam generator. The finding was associated with the failure to enter adverse conditions into the corrective action program for evaluation and appropriate action.

a. NRC Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Action,” in that, Entergy failed to identify a condition adverse to quality associated with improper internal clearances on BFD-68, an auxiliary feedwater check valve, in the corrective action program. Specifically, upon inspection in September 2006, the gasket between the valve's body to bonnet seal was found over-crushed causing the gasket to partially unwind, potentially impacting valve operation. Gasket damage was noted in work orders during internal valve inspections of BFD-68 performed in 1997 and 2002; however, the deficiencies were not identified in the corrective action program. Consequently, the problem was not evaluated and corrected prior to reassembly of the valve. Entergy entered this issue into the corrective action program, evaluated the condition, and conducted repairs to the valve to ensure the proper gasket crush was obtained.

The inspectors determined that this finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone; and, it affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the significance of this finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined that the finding was of very low safety significance because it was not a design or qualification deficiency; it did not result in the loss of a system safety function or a train safety function for greater than the Technical Specification Allowed Outage Time; and it did not screen as potentially risk significant due to external events. (Section 4OA2a(3)(a))

Green. A self-revealing, non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, “Corrective Action,” was identified, in that, Entergy failed to adequately evaluate leakage into the 22 steam generator. During the Indian Point Unit 2 reactor trip on August 23, 2006, main feedwater low flow bypass valve FCV-427L leaked excessively and resulted in an uncontrolled rise in 22 steam generator level; operator response to isolate feedwater to the steam generator in accordance with emergency operating procedures; and automatic actuation of the feedwater isolation system. The excessive leakage condition into the 22 steam generator was identified on April 4, 2006, prior to Indian Point Unit 2 refueling outage 2R17, but was not fully evaluated or corrected prior to the reactor trip on August 23, 2006. This issue was entered into the corrective action program, and FCV-427L was repaired and retested satisfactorily.

The inspectors determined that this finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone; and, it affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The inspectors evaluated the significance of the finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined that the finding was of very low safety significance because it was not a design or qualification deficiency; it did not

result in the loss of a system safety function or a train safety function for greater than the Technical Specification Allowed Outage Time; and it did not screen as potentially risk significant due to external events.

The inspectors determined that the finding had a cross-cutting aspect in the area of problem identification and resolution because Entergy did not thoroughly evaluate the cause of excessive leakage into the 22 steam generator such that the resolutions addressed the causes and extent of condition of the problem. (Section 4OA2a(3)(b))

Cornerstone: Not Applicable

Green. The NRC inspectors identified a finding when Entergy failed to initiate condition reports in accordance with EN-LI-102, "Corrective Action Process," for the adverse conditions identified in the 2006 Safety Culture Assessment. Consequently, the adverse conditions were not evaluated and appropriate corrective actions were not identified in a timely manner. The contractor who performed the independent safety culture assessment presented the site specific results to Entergy management in June 2006. The negative responses and declining trends identified in the assessment constituted adverse conditions that should have been entered into the corrective action program. At the time of the inspection, Entergy had not initiated condition reports for the assessment results. Consequently, the results had not been fully evaluated to understand the causes and identify appropriate actions to address the identified issues. Additionally, organizations identified by the contractor as needing management attention had not developed departmental action plans at the time of the inspection. Entergy entered this issue into the corrective action program and initiated a learning organization condition report to track development and implementation of action plans to address the assessment results.

The inspectors determined that the finding was more than minor because if left uncorrected it would become a more significant safety concern. Without appropriate action, the weaknesses in the safety culture onsite would continue, increasing the potential that safety issues would not receive the attention warranted by their significance. The finding was not suitable for SDP evaluation, but has been reviewed by NRC management and has been determined to be a finding of very low safety significance. The finding was not greater than very low safety significance because the inspectors did not identify any issues that were not raised which had an actual impact on plant safety or were of more than minor safety significance.

The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because Entergy did not identify issues with the potential to impact nuclear safety in the corrective action process for evaluation and resolution in a timely manner. (Section 4OA2c(3))

b. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

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

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspection team reviewed the procedures describing the Entergy corrective action program (CAP). Indian Point Unit 2 identified problems for evaluation and resolution by initiating condition reports (CRs) in the Paperless Condition Reporting System (PCRS). The team evaluated the methods for assigning and tracking issues to assure 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. In addition, the team interviewed plant staff and management to determine their understanding of and involvement with the corrective action program. The condition reports and other documents reviewed, as well as key personnel contacted, are listed in the Attachment to this report.

The team reviewed condition reports selected across the seven cornerstones of safety in the NRC's Reactor Oversight Program (ROP) to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The team selected items from the maintenance, operations, engineering, emergency preparedness, physical security, radiation protection, and oversight programs to ensure that Entergy was appropriately addressing problems identified in each functional area. The team selected a risk-informed sample of condition reports that had been issued since the last NRC problem identification and resolution inspection, which was conducted in June 2005.

The team selected items from other processes at Indian Point to verify that they were appropriately considered for entry into the corrective action program. Specifically, the team reviewed a sample of engineering requests (ERs), operability determinations, maintenance work orders (WOs), engineering system health reports, and completed surveillance tests. The team also reviewed completed work packages to determine if issues identified during the performance of preventive maintenance were entered into the corrective action program. In addition, the team attended operations shift turnover meetings and accompanied auxiliary operators during rounds in the plant.

The team considered risk insights from both the NRC's and Entergy's risk assessments for Indian Point Unit 2 to focus the sample selection and plant tours on risk-significant components. The team determined that the systems with the highest risk significance were 480V AC, 125V DC, component cooling water, service water, reactor protection, emergency core cooling system recirculation, safety injection accumulators, and auxiliary feedwater (AFW). Inspector samples focused on these systems, but were not limited to them. The review was expanded to five years for evaluation of selected check valves in the auxiliary feedwater, safety injection and residual heat removal systems.

The inspection team reviewed condition reports to assess whether Entergy adequately evaluated and prioritized identified problems. The issues reviewed encompassed the full range of evaluations, including root cause analyses, apparent cause evaluations, and common cause analyses. The review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of resolution. The team observed meetings of the Condition Review Group (CRG), in which Entergy personnel reviewed new condition reports for prioritization and assignment, and the Corrective Action Review Board (CARB) where Entergy personnel evaluated root cause evaluations, as well as selected apparent cause evaluations and corrective action assignments. The team also reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected problems.

The team reviewed the corrective actions associated with selected condition reports to determine whether the actions addressed the identified causes of the problems. The team reviewed condition reports for repetitive problems to determine whether previous corrective actions were effective. The inspectors also reviewed Entergy's timeliness in implementing corrective actions and their effectiveness in precluding recurrence for significant conditions adverse to quality. The team also reviewed condition reports associated with selected NCVs and findings to determine whether Entergy properly evaluated and resolved the issues.

(2) Assessment

Identification of Issues

One Green NCV was identified in the area of identification of issues for failure to identify improper internal valve clearances on an auxiliary feedwater check valve in the corrective action program for evaluation and resolution.

In general, the team considered the identification of problems at Indian Point to be appropriate. The computer-based condition reporting process, PCRS, facilitates the initiation, tracking and trending of condition reports. Approximately 6,500 condition reports were written each year. There was a low threshold for the identification of issues and, in most cases, problems identified during plant activities were entered into PCRS when appropriate. However, the team found that problems identified in 1997 and 2002 during internal inspections of an auxiliary feedwater check valve were not entered into the corrective action program for evaluation and resolution. As a result, upon inspection in September 2006, the gasket between the valve's body to bonnet seal was found over-crushed causing the gasket to partially unwind, potentially impacting valve operation. This finding is discussed in detail in Section 4OA2a(3)(a).

Prioritization and Evaluation of Issues

One Green NCV was identified in the area of prioritization and evaluation of issues for an inadequate evaluation of leakage into the 22 steam generator.

The team determined that, in general, Entergy appropriately prioritized and evaluated issues commensurate with the safety significance of the issue. Condition reports were screened for operability and reportability, categorized by significance (A through D), and assigned to a department for evaluation and resolution. The Condition Review Group appropriately considered human performance issues, radiological safety concerns, repetitiveness, and adverse trends in their reviews. There were no operability or reportability determinations with which the team disagreed. However, the team did identify a condition report that was improperly categorized which led to insufficient evaluation of the issue. Specifically, the inspectors identified that a condition report which documented a concern regarding security guard readiness was categorized as a 'D' track and trend CR and closed without evaluation. Following discussions with the inspectors, Entergy wrote a new condition report to evaluate and address the issue. Although the failure to evaluate the condition when it was first raised in 2003 does not comply with NRC requirements, the inspectors determined that due to the nature of the issue it constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

The inspectors found that causal analyses were thorough and appropriately considered extent of condition, generic issues, and previous occurrences. The Corrective Action Review Board reviews were detailed and ensured that corrective actions addressed the identified causes. For significant conditions adverse to quality, corrective actions were identified to prevent recurrence. However, in one case, the inspectors found that Entergy did not thoroughly evaluate the cause of excessive leakage into the 22 steam generator such that the resolution addressed the causes and extent of condition of the problem which adversely impacted the operators ability to control steam generator water level following a reactor trip on August 23, 2006. This finding is discussed in detail in Section 4OA2a(3)(b).

Entergy reviews condition reports site-wide and at the department level to identify adverse conditions occurring at an unacceptable rate or changes in the frequency or severity of events or precursors. The team determined that the monthly reviews and quarterly trend reports provided an effective method for identifying adverse or emerging trends so that actions could be taken in a timely manner to address the issues. However, the team identified that some departments did not include 'D' condition reports in the trending process. Although the 'D' condition reports were included in the site-wide reviews performed by the Corrective Action and Assessment (CA&A) department, and system engineers tracked all CRs for their assigned systems, adverse or emerging trends within a department could have been missed without trending the 'D' condition reports. Failure to track 'D' condition reports does not comply with Entergy procedure EN-LI-121, "Entergy Trending Process," but the inspectors did not identify any adverse or emerging trends that were not identified. Therefore, the inspectors determined that the issue constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

Although the evaluation of issues and determination of required corrective actions was generally good, the team identified examples of condition descriptions, dispositions (causal evaluations), and corrective action responses that did not provide clear and

complete documentation of the issues and actions taken. This issue had also been identified by Entergy and they were taking corrective actions to improve the “stand alone” quality of CRs. In the identified cases, the inspectors were able to gather additional information to support the CR packages or the licensee had self-identified the specific issues in the CAP for resolution.

Effectiveness of Corrective Actions

No findings of significance were identified in the area of effectiveness of corrective actions.

The team concluded that identified corrective actions were generally appropriate to resolve identified issues, and were typically completed in a timely manner. The inspectors also noted a decreasing trend in the number of items in the backlog of actions to be completed by engineering. However, the inspectors identified a few instances of incomplete or inadequate corrective actions. For example, on October 5, 2006, NRC inspectors noted that the positioner feedback arm for Indian Point Unit 2 high pressure steam dump valve PCV-1121 was not attached to the valve. Industry operating experience information from 1993 and 1997 identified the need to incorporate the verification of tightness of valve positioner feedback arms in preventive maintenance programs due to several incidents caused by feedback arms falling off. The Indian Point Unit 2 condition report response to this operating experience indicated that planned maintenance was performed to verify tightness and that mechanisms were "double nutted" to ensure tightness. NRC inspectors identified that planned maintenance was not accomplished to verify tightness of positioner feedback arms and that many of the positioner arms on similar valves were not double nutted. A condition report was written to address the incomplete corrective actions in response to this operating experience information. Because the failure of PCV-1121 would not be risk significant, this issue was determined to be of minor significance.

In the second quarter 2006, the NRC identified several procedure adequacy findings as documented in IR 50-247/2006-003. In partial response to these findings, Entergy issued CR IP2-2006-3930 to evaluate the concern and determine appropriate corrective actions. Entergy efforts to fully scope, prioritize, establish a timeline and take actions to improve the bulk of operations procedures do not appear to be timely. At the time of this inspection, Entergy's plan for standardizing operations procedures between the two units had not been finalized. The completion dates for standardization of the plant operating procedures appeared to be reasonable; however, the scope and timeline for the bulk of operations procedures (system operating procedures (SOPs), alarm response procedures (ARPs), etc.) were not yet defined and preliminarily were targeted to be completed in calendar year 2010 if the upgrades to SOPs, abnormal operating procedures, and ARPs were performed in series.

The NRC continued to identify procedure adequacy issues such as incorrect acceptance criteria in the surveillance procedure for the 22 auxiliary boiler feed pump overspeed trip test. Specifically, following failure of the auxiliary boiler feed pump during an overspeed trip test conducted in 2002, the licensee conducted an operability evaluation and

determined that the pump was operable and the surveillance acceptance criteria should be changed. The pump failed the test again in 2006, because timely corrective action was not taken to revise the surveillance criteria. This issue was of minor significance because it did not impact the ability of the auxiliary boiler feed pump to perform its safety function.

The team also identified instances of improper closure of corrective actions to other processes. Condition reports IP2-2006-0876, IP2-2006-1134, and IP2-2006-2120 were written to document radiation monitor calibration procedure deficiencies. Corrective actions for these deficiencies were improperly characterized as enhancements and were closed out to the procedure feedback process. Closure to this process is not allowed per EN-LI-102, "Corrective Action Program," unless the change is an enhancement. Some of the changes to the procedures were required to complete the calibrations; therefore, the team did not consider the changes to be enhancements. When the procedures were performed, the procedure deficiencies were handled in accordance with site administrative procedures; therefore, this issue constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy. Entergy initiated a condition report to address this issue.

(3) Findings

(a) Failure to Identify a Degraded Condition of an Auxiliary Feed Water Check Valve in the Corrective Action Program

Introduction: The inspectors identified a Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," in that, Entergy failed to identify a condition adverse to quality associated with improper internal clearances on BFD-68, an auxiliary feedwater check valve, in the corrective action program.

Description: On September 1, 2006, Entergy conducted a quarterly test of the 22 auxiliary boiler feed pump (ABFP). During the test, operators observed that an ultrasonic flow meter indicated no cooling water flow to the pump bearing. The cooling water flow indication ramped to a normal reading of approximately 32 gallons per minute after lift check valve BFD-68 was mechanically agitated by the operator. Following the test, Entergy conducted an internal inspection of the check valve and found that the spiral-wound gasket for the valve's body to bonnet seal had been over-crushed. This resulted in the gasket becoming partially unwound with a portion of the gasket material inside the valve cage area, potentially impacting valve operation. It was identified that the clearance between the valve body and bonnet sealing area was not sufficient to allow proper gasket crush. Entergy corrected the condition by machining the valve bonnet to ensure the clearance was appropriate to allow proper gasket crush.

The inspectors observed the field work and reviewed the apparent cause analysis conducted by Entergy. This evaluation determined the gasket material which intruded into the valve cage would not likely have prevented valve operation based on the internal clearances between the valve piston and cage. In addition, no marks were identified on the internal components which would be indicative of valve misalignment. Based on

this, Entergy concluded that the most likely cause of the no flow indication was an intermittent failure of the ultrasonic flow meter.

The inspectors reviewed the work history associated with BFD-68 and noted that gasket damage was identified during internal valve inspections performed in 1997 and 2002. In addition, measurements were taken on the valve body and bonnet during the work in 1997 which indicated the internal clearances were not acceptable. Notes were placed in the work order packages identifying the gasket damage; however, these deficiencies were not entered into the licensee's corrective action program. Consequently, the condition was not evaluated and corrected prior to September 2006.

Analysis: The inspectors determined that Entergy's failure to identify this degraded condition and place it in their corrective action program was a performance deficiency, in that, the improper clearance was a condition adverse to quality that had the potential to impact operation of a safety-related component. It was reasonable that Entergy should have identified this deficiency in the corrective action program since the degraded condition was found during work on the valve and noted in the associated work packages. Traditional enforcement did not apply since there were no actual safety consequences or potential for impacting the NRC's regulatory function, and the finding was not the result of any willful violation of NRC requirements or Entergy's procedures.

The inspectors determined that this finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone; and, it affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, the 22 ABFP required approximately three hours of unplanned unavailability time to conduct repairs to ensure the correct gasket crush when the valve was reassembled. The inspectors evaluated the significance of this finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined that the finding was of very low safety significance (Green) because it was not a design or qualification deficiency; it did not result in the loss of a system safety function or a train safety function greater than the Technical Specification Allowed Outage Time; and it did not screen as potentially risk significant due to external events.

Enforcement: 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," states, in part, that "measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment and nonconformances are promptly identified and corrected." Contrary to this, in 1997 and 2002, Entergy failed to identify the improper internal clearances on valve BFD-68 in their corrective action program. Consequently, the condition was not evaluated and corrected prior to reassembly of the valve following maintenance in 1997 and 2002. Entergy subsequently entered this issue into the CAP (CR-IP2-2006-05241), evaluated the condition, and conducted repairs to the valve to ensure the proper gasket crush was obtained. Because this issue was of very low safety significance and was entered into the licensee's corrective action program, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000247/2006006-

02, Failure to Identify a Degraded Condition of an Auxiliary Feed Water Check Valve in the Corrective Action Program.

(b) Inadequate Evaluation of Leaking 22 Steam Generator Low Flow Bypass Valve FCV-427L

Introduction: A Green, self-revealing, non-cited violation of 10 CFR 50 Appendix B, Criterion XVI, "Corrective Action," was identified when Entergy failed to adequately evaluate leakage into the 22 steam generator. The potential that main feedwater low flow bypass valve FCV-427L was leaking was identified on April 4, 2006, prior to the Indian Point Unit 2 refueling outage, but was not fully evaluated or corrected prior to a reactor trip on August 23, 2006. During the reactor trip on August 23, 2006, FCV-427L leaked excessively and resulted in actuation of the feedwater isolation system on high water level in the 22 steam generator.

Description: On April 4, 2006, Entergy identified that steam generator level traces during several reactor trips dating back to November 2004 showed level increasing at a rate much faster in 22 steam generator than the other steam generators. Because the auxiliary feedwater flow and generator steaming rates were identical, it was concluded the main feedwater regulating valve (FCV-427) and/or low flow bypass valve (FCV-427L) were leaking at greater than their design leakage rates. Entergy decided to address potential leakage across FCV-427 during the refueling outage in April and May 2006, since the valve was already planned for overhaul at that time, and to further evaluate FCV-427L with diagnostic testing in the normal work schedule with the plant on-line following the refueling outage.

During shutdown on April 19, 2006, for the refueling outage, a large level perturbation was again noted on the 22 steam generator. Inspection of valve FCV-427 during the overhaul identified galling, and a blue check revealed that the valve was not seating properly. Leakage past FCV-427L was not evaluated further at this time and diagnostic testing of the valve was planned for November 2006, in conjunction with planned maintenance.

On August 23, 2006, the Indian Point Unit 2 reactor was manually tripped during a plant transient. Approximately ten minutes after the reactor trip, 22 steam generator level was noted to be rising rapidly. Operators evaluated the condition, isolated the main and bypass feedwater valves due to apparent leak-by, and entered Technical Specification 3.7.3 Conditions A.1 and B.1, for FCV-427 and FCV-427L being inoperable. Due to the rapid increase in steam generator level, a "high-high steam generator level" signal was received for the 22 steam generator, resulting in an automatic main feedwater isolation. An 8-Hour non-emergency event notification report was made per 10 CFR 50.72(b)(3)(iv)(A).

FCV-427 and FCV-427L were inspected during the forced outage and it was identified that the leakage was from the low flow bypass valve (FCV-427L). The valve stem stroke was adjusted for FCV-427L and the valve was checked for seat leakage satisfactorily during the subsequent startup.

Analysis: The inspectors determined that Entergy's failure to fully evaluate and correct the excessive leakage into the 22 steam generator was a performance deficiency, in that, the leakage past the main feedwater low flow bypass valve FCV-427L was a condition adverse to quality that impacted the ability of the operators to maintain steam generator water level. It was reasonable that Entergy should have fully evaluated the source of the leakage during the refueling outage in April and May 2006 prior to the plant trip in August 2006. Traditional enforcement did not apply since there were no actual safety consequences or potential for impacting the NRC's regulatory function, and the finding was not the result of any willful violation of NRC requirements or Entergy's procedures.

The inspectors determined that this finding was more than minor because it was associated with the Equipment Performance attribute of the Mitigating Systems cornerstone; and, it affected the cornerstone objective of ensuring the availability, reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The leaking low flow bypass valve forced operators to evaluate and respond to the rapidly rising 22 steam generator level by taking actions to isolate feed streams to the steam generator during a reactor trip response, and culminated in an automatic actuation of the feedwater isolation system. The inspectors evaluated the significance of this finding using Phase 1 of IMC 0609, Appendix A, "Significance Determination of Reactor Inspection Findings for At-Power Situations," and determined that the finding was of very low safety significance (Green) because it was not a design or qualification deficiency; it did not result in the loss of a system safety function or a train safety function greater than the Technical Specification Allowed Outage Time; and it did not screen as potentially risk significant due to external events.

The inspectors determined that the finding had a cross-cutting aspect in the area of problem identification and resolution because Entergy did not thoroughly evaluate the cause of excessive leakage into the 22 steam generator such that the resolution addressed the causes and extent of condition of the problem.

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," states, in part, that "measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected." Contrary to the above, Entergy did not fully evaluate and correct the cause of excessive leakage into the 22 steam generator in a timely manner which complicated the response to a plant transient. The valve stem stroke was adjusted for FCV-427L and the valve was checked for seat leakage satisfactorily during the subsequent startup. Because this issue was of very low safety significance (Green) and was entered into the licensee's corrective action program (CR-IP2-2006-05082), this violation is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000247/2006006-03, Inadequate Evaluation of Leaking 22 Steam Generator Low Flow Bypass Valve FCV-427L.

b. Assessment of the Use of Operating Experience

(1) Inspection Scope

The team selected a sample of operating experience issues to confirm that Entergy had evaluated the operating experience information for applicability to Indian Point Unit 2 and had taken appropriate actions, when warranted. Operating experience (OE) documents were reviewed to ensure that underlying problems associated with the issues were appropriately considered for resolution via the corrective action process. A list of the specific documents reviewed is included in the Attachment to this report.

(2) Assessment

No findings of significance were identified in the area of operating experience.

The inspectors found that operating experience information was appropriately considered for applicability, and corrective and preventive actions were taken as needed. Site OE coordinators screened issues from various sources for applicability to Indian Point Unit 2 and wrote CRs for additional reviews and corrective actions as necessary. Operating experience information has been integrated into routine activities, such as pre-job briefs, procedures, and training material. The inspectors noted several positive examples in which plant personnel considered operating experience information in addition to material provided by the Operating Experience Program. In a few cases, the inspectors found that OE-related CRs had been closed without a closure review by the site OE coordinator.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The team reviewed a sample of CA&A audits, including the most recent audit of the corrective action program, CAP trend reports, Quality Assurance (QA) audits, departmental self-assessments, and assessments conducted by independent organizations. A specific list of documents reviewed is included in the attachment to this report. These reviews were performed to determine if problems identified through these 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 was evaluated by comparing audit and assessment results against self-revealing and NRC-identified findings and observations made during the inspection.

The team also reviewed the 2006 Nuclear Safety Culture Assessment, dated March 2006. This was a fleet-wide assessment, conducted by an independent contractor in early 2006. The inspectors reviewed the assessment report and discussed actions taken and planned with managers and staff. The inspectors also reviewed corporate assessments and a departmental teamwork assessment that evaluated similar areas in order to determine if appropriate action had been taken to address identified issues.

(2) Assessment

One Green finding was identified for failure to enter adverse conditions, which were identified in an independent safety culture assessment, into the corrective action program for evaluation and appropriate action.

The team observed that, overall, audits and assessments were critical and, in most cases, appropriate actions were taken to address identified issues. The inspectors noted that thorough follow-up reviews were conducted by CA&A, the Self Assessment Review Board (SARB) and corporate offices. In a few cases, the inspectors found that appropriate corrective actions were not taken for issues identified during assessments. For example, an area for improvement (AFI) identified during a self-assessment of lubrication programs was not captured in a CR for evaluation and tracking. Condition reports for two other AFIs from the lubrication program assessment were closed without taking the indicated action. In another case, a corrective action for a radiation protection QA audit finding related to survey results from personnel contamination events was closed without addressing the issue. In these cases, the inspectors determined that the failure to complete these corrective actions were of minor significance due to the nature of the issues. The inspectors also determined that the results of the 2006 Nuclear Safety Culture Assessment were not entered into the corrective action program; and as a result, timely action was not taken to evaluate the results and identify appropriate corrective actions. This finding is discussed in detail in Section 4OA2c(3).

(3) Findings

Introduction: A Green finding was identified by the NRC inspectors for failure to initiate condition reports in accordance with EN-LI-102, "Corrective Action Process," for adverse conditions identified by the 2006 Nuclear Safety Culture Assessment. Consequently, the adverse conditions were not evaluated and appropriate corrective actions were not identified in a timely manner.

Description: An independent contractor provided the preliminary results of the 2006 Nuclear Safety Culture Assessment to Entergy in April 2006 and presented the site-specific results to Entergy management in June. In the assessment report, the contractor made recommendations to address the negative responses and declining trends, some of which included management attention to reinforce safety conscious work environment expectations and behaviors site-wide and in a number of specific organizations at Indian Point. The contractor also recommended actions to assure the corrective action program was effective, and immediate action for some organizations based on comparison of the Indian Point results with industry-wide results.

The General Manager of Plant Operations held a meeting with site managers in July to discuss the results for Indian Point and actions needed. Managers were directed to discuss the results of the assessment with their staffs, but the results of the assessment were not entered into the CAP and no specific followup actions were assigned at that time.

At the time of the inspection, an action plan was being developed at the corporate level which would be customized by each site based on the site specific results and identified areas for improvement. The draft action plan for the site indicated that an assessment of safety culture performance indicators from across various disciplines should be done at Indian Point to understand the causes for the identified issues so that effective corrective actions could be taken. Entergy management planned to perform another independent assessment in early 2007 to complete this action. The inspectors considered this assessment to be untimely, in that, it would not provide insight into the causes of the issues identified by the 2006 assessment since the data would be collected more than a year after the original assessment was performed.

The inspectors found that specific actions to address the organizations identified by the contractor as needing management attention were not initiated until mid-September. The draft corporate action plan also indicated that departmental action plans would be developed for these organizations based on review of the department-specific safety culture assessment results in conjunction with an assessment of the department's safety culture performance indicators. At the time of the inspection, most of these organizations had only recently reviewed the department-specific safety culture assessment results and were in the early stages of developing department action plans.

Entergy Procedure EN-LI-102, “Corrective Action Program,” requires the initiation of condition reports for adverse conditions, which are defined as conditions that detract from safe nuclear plant operation or that could credibly impact nuclear safety. The inspectors concluded that the negative responses and declining trends identified by the safety culture assessment could impact nuclear safety because the assessment results were precursors and indicators of a possible reluctance to raise safety issues by site employees, particularly in certain organizations. Therefore, these results should have been considered adverse conditions that warranted initiation of a condition report. Failure to enter the assessment results into the corrective action program resulted in a delay in evaluating the results to understand the causes and identify appropriate corrective or mitigative actions.

Analysis: The inspectors determined that Entergy's failure to enter the adverse conditions identified during the 2006 Nuclear Safety Culture Assessment into the corrective action program and evaluate the results and identify appropriate corrective actions in a timely manner was a performance deficiency that was reasonably within Entergy's ability to foresee and correct. Traditional enforcement did not apply since there were no actual safety consequences or potential for impacting the NRC's regulatory function, and the finding was not the result of any willful violation of NRC requirements or Entergy's procedures.

The inspectors determined that this finding was more than minor because if left uncorrected it would become a more significant safety concern. Without appropriate action, the weaknesses in the safety culture onsite would continue, increasing the potential that safety issues would not receive the attention warranted by their significance. The finding was not suitable for SDP evaluation, but has been reviewed by NRC management and has been determined to be a finding of very low safety

significance (Green). The finding was not greater than very low safety significance because the inspectors did not identify any issues that were not raised which had an actual impact on plant safety or were of more than minor safety significance.

The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because Entergy did not identify adverse conditions with the potential to impact nuclear safety in the corrective action process for evaluation and resolution in a timely manner.

Enforcement: No violation of NRC regulatory requirements was identified. Although Entergy did not initiate condition reports for the adverse conditions identified by the safety culture survey, application of EN-LI-102 for these conditions does not fall under NRC regulatory requirements. After identification by the team, Entergy entered this issue into the CAP (CR IP2-2006-06105) and initiated a Learning Organization (LO) condition report to track development and implementation of site and department action plans to address the assessment results. Because this finding does not involve a violation of regulatory requirements and has very low safety significance, it is identified as FIN 05000247/2006006-01, Failure to Enter Safety Culture Assessment Results into Corrective Action Program.

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

During interviews and discussions with station personnel, the team assessed the safety conscious work environment (SCWE) at Indian Point. Specifically, the inspectors assessed whether workers were willing to enter issues into the corrective action program or raise safety concerns to their management and/or the NRC. The inspectors conducted individual interviews and held discussions with staff and supervisors regarding use of the corrective action program, work processes, and other problem identification and resolution activities. The team reviewed the Indian Point Employee Concerns Program (ECP) to assess whether employees were willing to use the program as an alternate path for raising concerns. The team also reviewed a sample of the ECP files to ensure that issues were appropriately addressed.

(2) Assessment

No findings of significance were identified.

The team found that most workers indicated that they would raise issues that they recognized as nuclear safety issues. However, the inspectors also found that a number of workers interviewed indicated that they were aware of individuals they perceived as having been treated negatively by management for raising issues; most of these workers were in the Instrumentation and Controls (I&C) department. Some workers expressed reluctance to raise issues under certain circumstances due to a number of reasons, including fear of disciplinary action and concerns with the efficacy of the corrective action program. While most workers made a distinction between nuclear safety issues

and other concerns, the inspectors noted that some of the illustrative examples provided by plant workers could have nuclear safety implications (i.e., procedure quality and staff qualification issues). In one case, a worker indicated that he/she would not raise issues under any circumstances. In another case, a worker indicated that he/she had not raised a specific nuclear safety issue. The inspectors determined that although the issue was a nuclear safety issue, it did not have an actual impact on safe plant operation in this particular instance due to the specific circumstances surrounding the issue.

The team determined that the reluctance to raise issues expressed by the I&C staff was the result of several factors, primarily the fear of disciplinary action compounded by unclear expectations and standards, and to some extent a lack of confidence in the corrective action program. The majority of the I&C staff interviewed described instances which they perceived to be either a negative reaction from management or employee discipline for raising issues. The inspectors observed that expectations for writing CRs were not clearly understood within the I&C department which may have contributed to the perception that individuals were disciplined for raising issues. The inspectors also found that expectations and standards in other areas, such as qualification and procedure requirements, were also unclear and contributed to the negative views expressed by some of the individuals. A number of interviewees also believed that issues that did not directly impact plant operations, such as personnel or industrial safety issues, would not be resolved or corrected by the corrective action program.

The team also determined that negative perceptions similar to those in the I&C department existed in other site organizations. For example, within the Operations department there was some apprehension about the perceived increase in disciplinary actions within the department. Additionally, a number of individuals did not have confidence that the corrective action program would resolve issues of lesser significance, particularly repeat issues. Based on a limited review, the team found similar issues, but to a lesser extent, in other departments. Consequently, the team was concerned that the lack of confidence in the corrective action program and the apprehension about disciplinary action could challenge the free flow of information and result in reluctance to raise issues in other departments.

Entergy has self-identified areas for improvement intended to enhance employee confidence in the corrective action program and the ECP, and has taken actions to address negative employee perceptions. However, the team determined that these efforts have not been fully effective in establishing employee confidence in these programs. For example, the Corrective Action and Assessment department has taken actions to improve the quality of feedback to employees, but the inspectors found several examples of corrective action responses that did not provide appropriate documentation of how the issue was resolved. As described above, the team found that many employees still have the perception that lower level issues will not be resolved by the corrective action program. In addition, during interviews, very few workers identified the ECP as an alternate path for raising issues, and most of those that referenced the ECP did not view the program as a viable path for raising issues primarily due to concerns about confidentiality of the program.

4OA6 Meetings, including Exit

On December 5, 2006, the team presented the inspection results to Mr. F. Dacimo and and other Entergy personnel, who acknowledged the findings. The inspection findings and observations were also discussed with Entergy management during a teleconference on December 14, 2006. The inspectors confirmed that proprietary information reviewed during the inspection would be handled in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Request for Withholding."

ATTACHMENT: Supplemental Information

In addition to the documentation that the inspectors reviewed (listed in the attachment), copies of information requests given to the licensee are in ADAMS, under accession number ML063490222.

ATTACHMENT - SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

V. Andreozzi, Electrical Systems Manager
J. Balla, Employee Concerns Program Manager
R. Buckley, Corrective Actions Self Assessment Coordinator
R. Burroni, Assistant Operations Manager - Operations Support
V. Cambigianis, Mechanical Design Manager
S. Carpenter, Maintenance Department Corrective Actions Coordinator
J. Comiotes, Director of Nuclear Safety Assurance
J. Conforti, Maintenance Procedure Coordinator
F. Dacimo, Site Vice President
A. Deland, QA Self Assessment & Corrective Actions Coordinator
J. Donnelly, Director of Maintenance
R. Hansler, Reactor Engineering Manager
M. Hornyak, Project Manager, Operations Support ENN, Operating Experience Department
L. Kelly, Planning, Scheduling & Outage Corrective Actions Coordinator
D. Loope, Radiation Protection Manager
S. Meighan, Radiation Protection CA&A Supervisor
E. O'Donnell, Manager - Unit 2 Operations
D. Parker, Maintenance Superintendent
J. Perotta, Quality Assurance Manager
B. Ray, Assistant Superintendent - I&C
P. Rubin, General Manager Plant Operations
A. Small, Manager - Planning, Scheduling and Outage
B. Taggert, Employee Concerns Program Coordinator
M. Tumicki, CA Corrective Actions Coordinator
S. Verrocki, Systems Manager
T. Vitale, Operations Manager
R. Walpole, Corrective Actions Manager

Contractor Personnel

H. Levin, Synergy Consulting Services Corporation

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000247/2006006-01	FIN	Failure to Enter Safety Culture Assessment Results into Corrective Action Program (Section 4OA2c(3))
05000247/2006006-02	NCV	Failure to Identify a Degraded Condition of an Auxiliary Feed Water Check Valve in the Corrective Action Program (Section 4OA2.a(3)(a))
05000247/2006006-03	NCV	Inadequate Evaluation of Leaking 22 Steam Generator Low Flow Bypass Valve FCV-427L (Section 4OA2.a(3)(b))

LIST OF DOCUMENTS REVIEWED

Procedures and Instructions

0-LUB-401-GEN, "Lubrication of Plant Equipment," Rev 2
0-MD-401, "Management Control of Maintenance Training," Rev 1
0-MD-402, "Maintenance Procedure Development and Feedback Administrative Directive," Rev 1
0-VLV-413-MOV, "Motor Operated Valve Minor Preventative Maintenance," Rev 1
2-VLV-012-VCK, "Velan Swing Check Valves," Rev 0
AOV-B-027-A, "Generic Procedure for Testing AOVs Using the MOVATS Diagnostic Test System," Rev 5
E-0, "Reactor Trip or Safety Injection," Rev 47
E-0, "Reactor Trip or Safety Injection Background Document," Rev 46
E-2, "Faulted Steam Generator Isolation," Rev 39
E-3, "Steam Generator Tube Rupture," Rev 45
ECA-2.1, "Uncontrolled Depressurization of All Steam Generators," Rev 43
EN-DC-118, "Engineering Change Closure," Rev 0
EN-DC-119, "Equipment Database (EDB) Process and Controls," Rev 0
EN-DC-134, "Design Verification," Rev 0
EN-EC-100, "Guidelines for Implementation of the Employee Concerns Program," Rev 1
EN-LI-102, "Corrective Action Process," Rev 7
EN-LI-104, "Self-Assessment and Benchmark Process," Rev 2
EN-LI-118, "Root Cause Analysis Process," Rev 4
EN-LI-119, "Apparent Cause Evaluations (ACE) Process," Rev 3
EN-LI-121, "Entergy Trending Process," Rev 3
EN-MA-123, "Identification and Trending of Rework," Rev 0
EN-OE-100, "Operating Experience Program," Rev 2
EN-PL-190, "Maintaining a Strong Safety Culture," Rev 0
EN-PL-187, "Safety Conscious Work Environment Policy," Rev 0
EN-QV-109, "Audit Process"
EN-RP-104, "Personnel Contamination Events," Rev 1
EN-WM-100, "Work Request (WR) Generation, Screening and Classification," Rev 0
EN-WM-105, "Planning," Rev 0
ENN-DC-112, "Engineering Request and Project Initiation Process," Rev 7
ENN-DC-128, "Calculations," Rev 6
ES-0.1, "Reactor Trip Response," Rev 43
I&C Preventive Maintenance Package No. 1587, "MS/HP Steam Dump Valves," Rev 1
IP-SMM-AD-102, "IPEC Implementing Procedure, Preparation, Review, and Approval"
IP-SMM-OP-106, "Procedure Use and Adherence"
IP-SMM-WM-100, "Work Management Process," Rev 4
PT-R99, "HP Steam Dump Stroke Test," Rev 3
VCK-B-021-A, "Generic Procedure for Testing Check Valves Using the MOVATS Diagnostic Test System," Rev 1

Procedure Feedback Forms

IP3-1320, dated April 26, 2006

IP3-1321, dated April 26, 2006
IP3-1322, dated April 26, 2006
IP3-1355, dated May 8, 2006
IP3-1364, dated June 1, 2006
IP3-1371, dated June 28, 2006
IP3-1383, dated July 5, 2006

Audits and Assessment Reports

QA Audits

QA-03-2005-IP-1, "IPEC Corrective Action Program," May 2005
QA-08-2005-IP-1, "IPEC Unit 3 Engineering Programs"
QA-04-2006-IP-1, "Design Control"
QA-07-2006-IP-1, "IPEC Emergency Planning Audit," May 2006
QA-10-2005-IP-1, "IPEC Maintenance Program," June 2006
QA-12-2005-IP-1, "IPEC Operations Program"
QA-14-2006-IP-1, “IPEC Radiation Protection Program,” April 2006
QA-16-2005-IP-1, "IPEC Security Audit," March 2006

QA Surveillances

QS-2006-IP-05, "Initial Licensed Operator (ILO) Training Program"
QS-2006-IP-10, "Followup Assessment on Corrective Actions from Security Audit"
QS-2006-IP-15, "Refueling - Fuel Receipt, Core Unload, Core Reload"

Oversight Observation Checklists

O2C-IPEC-2005-0097, "Use of Operating Experience throughout the IPEC Station"
O2C-IPEC-2005-0188, "Inquiry by QA Manager as to how manual CRs and Operability reviews are being handled by Operations"
O2C-IPEC-2006-0477, "Control Room Observation and AOT Entry"
O2C-IPEC-2006-0685, "Conduct of Operations"
O2C-IPEC-2006-0691, "Control Room Observation and Startup"
O2C-IPEC-2006-0844, "Operations Procedures and Documentation"
O2C-IPEC-2006-0873, "July/August 2006 Monthly SCWE Summary for Site Meeting Attendance"

Assessments (Learning Organization Condition Reports)

IP3LO-2005-00075, "Conduct of I&C -I&C Department Assessment of Teamwork and Trust (Snapshot)"
IP3LO-2005-00102, "Compliance with Gun Room Procedures (Snapshot)"
IP3LO-2005-00108, "Line Ownership of CR Trending (Snapshot)"
IP3LO-2005-00119, "Security Officers Knowledge of Human Performance Error Prevention Tools & Error Traps (Snapshot)"
IP3LO-2005-00147, "Human Performance Self Assessment"
IP3LO-2005-00168, "Fourth Quarter 2005 CA&A Self-Assessment (Ongoing)"

IP3LO-2005-00207, "Problem Identification and Resolution"
IP3LO-2005-00216, "Lubrication/Predictive Maintenance Program (Focused)"
IP3LO-2005-00219, "Human Performance Self Assessment"
IP3LO-2005-00222, "EP Non-siren Equipment Self Assessment (Focused)"
IP3LO-2005-00224, "Performance of Supplemental Personnel"
IP3LO-2005-00298, "Effectiveness of Corrective Action Closures to Lower Tier Monitored Processes (Snapshot)"
IP3LO-2005-00307, "IPEC Safety Culture Corporate Assessment"
IP3LO-2005-00314, "Anonymous Condition Reports (Ongoing)"
IP3LO-2006-00003, "Conservative Decision Making"
IP3LO-2006-00014, "Cross-cutting Root Cause Issues (Snapshot)"
IP3LO-2006-00016, "Work Package Generation and Distribution"
IP3LO-2006-00038, "Compliance with Gun Room Procedures (Snapshot)"
IP3LO-2006-00072, "Second Quarter 2006 CA&A Self-Assessment (Ongoing)"
IP3LO-2006-00138, "Operations Training Accreditation"
IP3LO-2006-00140, "PI&R Self Assessment (Focused)"
IP3LO-2006-00158, "Corrective Actions, OE, and Human Performance in Emergency Planning Department (Focused)"
IP3LO-2006-00166, "Periodic Review of RP Standing Orders and RP Standards (Snapshot)"
IP3LO-2006-00206, "Common Cause of Emergent Work in 2005 (Snapshot)"
IP3LO-2006-00331*, "Track Development and Implementation of Action Plans to Improve Safety Culture in Various IPEC Departments"
"IPEC 2004 Operating Experience Program Self Assessment"
"Indian Point Nuclear Station's Corporate Follow-up Assessment"
"2006 Nuclear Safety Culture Assessment" (Proprietary)

Trend Reports

IPEC Quarterly Trend Report -Third Quarter 2005
IPEC Quarterly Trend Report -Fourth Quarter 2005
IPEC Quarterly Trend Report -First Quarter 2006
IPEC Quarterly Trend Report -Second Quarter 2006

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

Common Issues

IP2-2004-04099	IP2-2005-04290	IP2-2005-04412	IP2-2005-04475
IP2-2005-04727	IP2-2005-05095	IP2-2005-05138	IP2-2006-00208
IP2-2006-00648	IP2-2006-00676	IP2-2006-00722	IP2-2006-00876
IP2-2006-00903	IP2-2006-01134	IP2-2006-01199	IP2-2006-01200
IP2-2006-01202	IP2-2006-01350	IP2-2006-02120	IP2-2006-02144
IP2-2006-02156	IP2-2006-02462	IP2-2006-02747	IP2-2006-02750
IP2-2006-02796	IP2-2006-03483	IP2-2006-03704	IP2-2006-03880
IP2-2006-03881	IP2-2006-04031	IP2-2006-04158	IP2-2006-04308
IP2-2006-04311	IP2-2006-05097	IP2-2006-05105	IP2-2006-05106
IP2-2006-05109	IP2-2006-05551	IP2-2006-05553	IP2-2006-05968*

IP3-2004-03071	IP3-2004-03072	IP3-2004-03303	IP3-2004-03774
IP3-2004-03925	IP3-2005-00330	IP3-2005-00462	IP3-2005-00603
IP3-2005-00605	IP3-2005-00627	IP3-2005-00723	IP3-2005-00890
IP3-2005-01346	IP3-2005-01909	IP3-2005-01912	IP3-2005-02492
IP3-2005-02624	IP3-2005-02982	IP3-2005-03125	IP3-2005-03530
IP3-2005-03697	IP3-2005-03880	IP3-2005-03881	IP3-2005-03885
IP3-2005-04303	IP3-2005-04304	IP3-2005-04305	IP3-2005-04306
IP3-2005-04307	IP3-2005-04566	IP3-2005-04654	IP3-2005-05092
IP3-2005-05724	IP3-2005-05818	IP3-2006-00006	IP3-2006-00288
IP3-2006-00338	IP3-2006-00509	IP3-2006-00547	IP3-2006-00664
IP3-2006-01131	IP3-2006-02112	IP3-2006-02113	IP3-2006-02191
IP3-2006-02193	IP3-2006-02831	IP3-2006-02833	IP3-2006-03099*
IP3-2006-03150*			

ECH-2005-00080

Unit 2

IP2-1997-05052	IP2-1998-05365	IP2-2002-02959	IP2-2002-04096
IP2-2002-04215	IP2-2002-08794	IP2-2002-09471	IP2-2002-09821
IP2-2002-10565	IP2-2002-10997	IP2-2002-11029	IP2-2002-11379
IP2-2003-00111	IP2-2003-00711	IP2-2003-01415	IP2-2003-01588
IP2-2003-05219	IP2-2003-05451	IP2-2003-05608	IP2-2003-07154
IP2-2004-00090	IP2-2004-00311	IP2-2004-00099	IP2-2004-01746
IP2-2004-02447	IP2-2004-03792	IP2-2004-04129	IP2-2004-04380
IP2-2004-04624	IP2-2004-06448	IP2-2004-06526	IP2-2004-06535
IP2-2005-00252	IP2-2005-01814	IP2-2005-01846	IP2-2005-01952
IP2-2005-01975	IP2-2005-02432	IP2-2005-02557	IP2-2005-03181
IP2-2005-03183	IP2-2005-03214	IP2-2005-03245	IP2-2005-03268
IP2-2005-03288	IP2-2005-03309	IP2-2005-03516	IP2-2005-03554
IP2-2005-03555	IP2-2005-03613	IP2-2005-03898	IP2-2005-04069
IP2-2005-04124	IP2-2005-04161	IP2-2005-04178	IP2-2005-04231
IP2-2005-04309	IP2-2005-04310	IP2-2005-04311	IP2-2005-04312
IP2-2005-04412	IP2-2005-04556	IP2-2005-04570	IP2-2005-04601
IP2-2005-04655	IP2-2005-04741	IP2-2005-04926	IP2-2005-05245
IP2-2005-05258	IP2-2005-05339	IP2-2006-00045	IP2-2006-00097
IP2-2006-00111	IP2-2006-00119	IP2-2006-00167	IP2-2006-00201
IP2-2006-00203	IP2-2006-00341	IP2-2006-00421	IP2-2006-00489
IP2-2006-00551	IP2-2006-00552	IP2-2006-00553	IP2-2006-00641
IP2-2006-00647	IP2-2006-00650	IP2-2006-00732	IP2-2006-00876
IP2-2006-01011	IP2-2006-01012	IP2-2006-01033	IP2-2006-01042
IP2-2006-01134	IP2-2006-01219	IP2-2006-01537	IP2-2006-01544
IP2-2006-01664	IP2-2006-01796	IP2-2006-01834	IP2-2006-01866
IP2-2006-01868	IP2-2006-01891	IP2-2006-01897	IP2-2006-01951
IP2-2006-01967	IP2-2006-01984	IP2-2006-01988	IP2-2006-02017
IP2-2006-02023	IP2-2006-02024	IP2-2006-02025	IP2-2006-02026
IP2-2006-02055	IP2-2006-02058	IP2-2006-02065	IP2-2006-02081
IP2-2006-02109	IP2-2006-02132	IP2-2006-02133	IP2-2006-02136
IP2-2006-02156	IP2-2006-02168	IP2-2006-02174	IP2-2006-02175

IP2-2006-02176	IP2-2006-02185	IP2-2006-02193	IP2-2006-02210
IP2-2006-02217	IP2-2006-02220	IP2-2006-02221	IP2-2006-02222
IP2-2006-02233	IP2-2006-02256	IP2-2006-02259	IP2-2006-02298
IP2-2006-02313	IP2-2006-02473	IP2-2006-02474	IP2-2006-02496
IP2-2006-02587	IP2-2006-02596	IP2-2006-02778	IP2-2006-02818
IP2-2006-02834	IP2-2006-02917	IP2-2006-02979	IP2-2006-03055
IP2-2006-03085	IP2-2006-03122	IP2-2006-03171	IP2-2006-03199
IP2-2006-03231	IP2-2006-03242	IP2-2006-03252	IP2-2006-03260
IP2-2006-03286	IP2-2006-03354	IP2-2006-03414	IP2-2006-03415
IP2-2006-03429	IP2-2006-03486	IP2-2006-03502	IP2-2006-03578
IP2-2006-03621	IP2-2006-03681	IP2-2006-03704	IP2-2006-03707
IP2-2006-03782	IP2-2006-03818	IP2-2006-03837	IP2-2006-03885
IP2-2006-03903	IP2-2006-03930	IP2-2006-03931	IP2-2006-03934
IP2-2006-04014	IP2-2006-04017	IP2-2006-04080	IP2-2006-04081
IP2-2006-04189	IP2-2006-04270	IP2-2006-04280	IP2-2006-04282
IP2-2006-04285	IP2-2006-04295	IP2-2006-04311	IP2-2006-04361
IP2-2006-04391	IP2-2006-04412	IP2-2006-04432	IP2-2006-04552
IP2-2006-04553	IP2-2006-04644	IP2-2006-04672	IP2-2006-04689
IP2-2006-04731	IP2-2006-04802	IP2-2006-04855	IP2-2006-04858
IP2-2006-04860	IP2-2006-04862	IP2-2006-04864	IP2-2006-05013
IP2-2006-05014	IP2-2006-05036	IP2-2006-05066	IP2-2006-05082
IP2-2006-05087	IP2-2006-05114	IP2-2006-05120	IP2-2006-05201
IP2-2006-05208	IP2-2006-05241	IP2-2006-05430	IP2-2006-05453
IP2-2006-05530*	IP2-2006-05532*	IP2-2006-05568*	IP2-2006-05701
IP2-2006-05872*	IP2-2006-05897*	IP2-2006-05901*	IP2-2006-05925
IP2-2006-06114*			

Operating Experience Reviews

EA 03-09, "Head and nozzle inspection"
IN 1998-018, "Recent Contamination Incidences Resulting from Failure to Perform Adequate Surveys"
IN 2004-019, "Problems Associated with Back-up Power Supplies to Emergency Response Facilities and Equipment"
IN 2005-006, "Failure to Maintain Alert and Notification System Alert Radio Capability"
IN 2005-015, "PVNGS 3 Unit Trip"
IN 2005-024, "RCS Leak Detection"
IN 2005-030, "Safe Shutdown Potentially Challenged by Unanalyzed Internal Flooding Events and Inadequate Design"
IN 2006-009, "Performance of NRC-Licensed Individuals While on Duty with Respect to Control Room Attentiveness"
LO-OEN-2003-0364, "Reactor trip due to decreasing vacuum"
OE 2378, "MOV Motor Bolting Failure"
OE 15162, "Containment Spray (CS) Valve 1CS001A Failed to Open During Quarterly

Maintenance Work Orders

00-18584	03-03458	05-12019	06-00079	06-27635
01-19922	03-19925	05-19804	06-21098	06-27637
02-31553	04-19881	05-23762	06-27618	06-28849
02-64068	05-12018			

Work Requests

IP2-03-21053
IP2-04-33937

Non-Cited Violations and Findings Reviewed

FIN 50-247/2005-03-02	Inadequate corrective actions associated with training, procedural adequacy and operator knowledge on methods to address degraded grid
NCV 50-247/2005-05-04	Inadequate procedure from control of work on safety-related components
NCV 50-247/2005-05-05	Inadequate equipment to assess threshold for EAL 8.4.3
FIN 50-247/2005-05-06	Inadequate Corrective Actions for Frame Relay System Problems
NCV 50-247/2005-05-07	Failure to make 10 CFR 50.72 notification for siren problems
FIN 50-247/2005-08-01	Inadequate surveillance testing of TSC diesel generator
NCV 50-247/2006-02-02	Failure to effectively control the performance of the rod position indication system
NCV 50-247/2006-02-04	Scaffolding control issue results in reactor trip
NCV 50-247/2006-03-01	Inadequate procedure for placing RHR pump suction gauges in service
NCV 50-247/2006-03-05	Inadequate post-work test on 21 EDG
NCV 50-247/2006-03-06	Inadequate procedure for venting the reactor vessel head while shut down
NCV 50-247/2006-03-07	Failure to assess the risk of maintenance activities on valve SI-869A
NCV 50-247/2006-03-09	Failure to implement procedure requirements associated with core support barrel replacement
NCV 50-247/2006-03-10	Failure to perform adequate surveys to evaluate radiation levels during core support barrel replacement
FIN 50-247/2006-03-11	Inadequate procedure for placing standby main lube oil cooler in service

System Health Reports

2nd Quarter 2006 Auxiliary Feed Water System

Miscellaneous

Entergy memorandum dated June 3, 2006, "Expectations for Condition Report Initiation," from F. Dacimo, Site Vice President, to IPEC Managers
Entergy memorandum IPEC-ADM-06-008, dated February 8, 2006, "Expectations," from P. Rubin, General Manager Plant Operations, to Managers and Supervisors
Entergy Nuclear Northeast Operating Experience Program Monthly Reports for July and August 2006
Indian Point Energy Center 2006 Second Quarter Report
IPEC Maintenance Rule Basis Document, Main Feedwater System, Units 2&3, Rev 0
IPEC Project/Team Lead Job Familiarization & Professional Development Guide, Rev 1
Inside Entergy Tailgate Edition dated September 21, 2006
Inside Entergy dated April 24, 2006, "Preliminary Results of the Synergy Nuclear Safety Culture Assessment (NSCA)"
Inside Entergy dated August 6, 2006, "Heron, Campbell Address Nuclear Safety Culture Results"
Morale Committee Newsletters dated September 2005, March 2006 and July 2006
Root Cause Analysis: "Worker Exceeded Radiological Administrative Setpoint During Lower Internals Move," dated June 1, 2006
Tailgate article dated August 17, 2006, "PCRS Operability and Immediate Reportability Screening"
Tailgate article dated August 17, 2006, "The Condition Reporting Process"
Tailgate article dated August 24, 2006, "The Importance of Stand-Alone Quality"
Tailgate article dated August 31, 2006, "Condition Report Initiation"
Tailgate article dated September 7, 2006, "What Makes a Good Condition Report?"
Talking Points for GMPO Web Page, dated October 4, 2006
Ultrasonic Testing Plan, IPEC Utility Tunnel, Rev 0
Westinghouse Technical Bulletin TB-04-22, “Reactor Coolant Pump Seal Performance - Appendix R Compliance and Loss of All Seal Cooling,” Rev 1

LIST OF ACRONYMS

ABFP	Auxiliary Boiler Feed Pump
ACE	Apparent Cause Evaluation
ADAMS	Agency Document Administrative Management System
AFI	Area for Improvement
AFW	Auxiliary Feedwater System
ARP	Alarm Response Procedure
CA&A	Corrective Action and Assessment
CAP	Corrective Action Program
CARB	Corrective Action Review Board
CFR	Code of Federal Regulations
CR	Condition Report
CRG	Condition Review Group
DC	Direct Current
DRP	Division of Reactor Projects
ECP	Employee Concerns Program
ER	Engineering Request
FCV	Flow Control Valve
FIN	Finding
I&C	Instrumentation and Controls
IMC	NRC Inspection Manual Chapter
IN	NRC Information Notice
IP	NRC Inspection Procedure
IPEC	Indian Point Energy Center
IR	NRC Inspection Report
LCO	Limiting Condition for Operation
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OE	Operating Experience
PARS	Publicly Available Records
PCRS	Paperless Condition Reporting System
PI&R	Problem Identification & Resolution
QA	Quality Assurance
RHR	Residual Heat Removal System
ROP	Reactor Oversight Program
SARB	Self-Assessment Review Board
SCWE	Safety Conscious Work Environment
SDP	Significance Determination Process
SOP	System Operating Procedure
WO	Work Order

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-286
License No.:	DPR-64
Report No.:	05000286/2006006
Licensee:	Entergy Nuclear Northeast (Entergy)
Facility:	Indian Point Nuclear Generating Unit 3
Location:	295 Broadway, Suite 3 Buchanan, NY 10511-0308
Dates:	September 18 through October 6, 2006
Team Leader:	B. Sienel, Resident Inspector, DRP
Inspectors:	B. Wittick, Resident Inspector, DRP E. Knutson, Resident Inspector, DRP
Observer:	S. Smith, Reactor Engineer, DRP
Approved by:	Eugene W. Cobey, Chief Projects Branch 2 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000286/2006-006; 09/18/2006 - 10/06/2006; Indian Point Nuclear Generating Unit 3; Problem Identification and Resolution.

This team inspection was performed by three resident inspectors. One finding of very low safety significance (Green) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. 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 inspectors concluded that the implementation of the corrective action program at Indian Point Unit 3 was generally effective. The inspectors noted that Entergy staff had a low threshold for identifying problems and entering them in the corrective action program. The inspectors also noted that once entered into the system, items were screened, prioritized, and evaluated commensurate with their significance using established criteria. The inspectors determined that corrective actions addressed the identified causes and were typically implemented in a timely manner. In addition, the team noted that Entergy was generally effective in reviewing and applying lessons learned from industry operating experience. The inspectors found that audits and assessments were critical and, in most cases, appropriate actions were taken to address identified issues. However, the inspectors also found that the results of an independent safety culture assessment were not entered into the corrective action program for timely evaluation and appropriate action.

The inspectors found that most workers indicated that they would raise issues that they recognized as nuclear safety issues. However, the inspectors also found that a number of workers interviewed indicated that they were aware of individuals they perceived as having been treated negatively by management for raising issues; most of these workers were in the Instrumentation and Controls (I&C) department. Some workers expressed reluctance to raise issues under certain circumstances due to a number of reasons, including fear of disciplinary action and concerns with the efficacy of the corrective action program. While most workers made a distinction between nuclear safety issues and other concerns, the inspectors noted that some of the illustrative examples provided by plant workers could have nuclear safety implications. However, the inspectors did not identify any more than minor issues, which had not been raised.

One Green finding was identified by the inspectors during this inspection involving the failure to enter adverse conditions into the corrective action program for evaluation and appropriate action.

a. NRC Identified and Self-Revealing Findings

Cornerstone: Not Applicable

Green. The NRC inspectors identified a finding when Entergy failed to initiate condition reports in accordance with EN-LI-102, "Corrective Action Process," for the adverse conditions identified in the 2006 Safety Culture Assessment. Consequently, the adverse conditions were not evaluated and appropriate corrective actions were not identified in a timely manner. The contractor who performed the independent safety culture assessment presented the site specific results to Entergy management in June 2006. The negative responses and declining trends identified in the assessment constituted adverse conditions that should have been entered into the corrective action program. At the time of the inspection, Entergy had not initiated condition reports for the assessment results. Consequently, the results had not been fully evaluated to understand the causes and identify appropriate actions to address the identified issues. Additionally, organizations identified by the contractor as needing management attention had not developed departmental action plans at the time of the inspection. Entergy entered this issue into the corrective action program and initiated a learning organization condition report to track development and implementation of action plans to address the assessment results.

The inspectors determined that the finding was more than minor because if left uncorrected it would become a more significant safety concern. Without appropriate action, the weaknesses in the safety culture onsite would continue, increasing the potential that safety issues would not receive the attention warranted by their significance. The finding was not suitable for SDP evaluation, but has been reviewed by NRC management and has been determined to be a finding of very low safety significance. The finding was not greater than very low safety significance because the inspectors did not identify any issues that were not raised which had an actual impact on plant safety or were of more than minor safety significance.

The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because Entergy did not identify issues with the potential to impact nuclear safety in the corrective action process for evaluation and resolution in a timely manner. (Section 4OA2c(3))

b. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

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

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspection team reviewed the procedures describing the Entergy corrective action program (CAP). Indian Point Unit 3 identified problems for evaluation and resolution by initiating condition reports (CRs) in the Paperless Condition Reporting System (PCRS). The team evaluated the methods for assigning and tracking issues to assure 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. In addition, the team interviewed plant staff and management to determine their understanding of and involvement with the corrective action program. The condition reports and other documents reviewed, as well as key personnel contacted are listed in the Attachment to this report.

The team reviewed condition reports selected across the seven cornerstones of safety in the NRC's Reactor Oversight Program (ROP) to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. The team selected items from the maintenance, operations, engineering, emergency preparedness, physical security, radiation protection, and oversight programs to ensure that Entergy was appropriately addressing problems identified in each functional area. The team selected a risk-informed sample of condition reports that had been issued since the last NRC problem identification and resolution inspection, which was conducted in September 2004.

The team selected items from other processes at Indian Point to verify that they were appropriately considered for entry into the corrective action program. Specifically, the team reviewed a sample of engineering requests (ERs), operability determinations, maintenance work orders (WOs), engineering system health reports, and completed surveillance tests. The team also reviewed completed work packages to determine if issues identified during the performance of preventive maintenance were entered into the corrective action program. In addition, the team attended operations shift turnover meetings and accompanied auxiliary operators during rounds in the plant.

The team considered risk insights from both the NRC's and Entergy's risk assessments for Indian Point Unit 3 to focus the sample selection and plant tours on risk-significant components. The team determined that the systems with the highest risk significance were auxiliary feedwater (AFW), 125V DC, emergency diesel generators, primary pressure relief, reactor protection, 480V AC, main steam, auxiliary boiler feed pump (ABFP) room heating, ventilation, and air conditioning (HVAC), control building HVAC, and service water. Inspector samples focused on these systems, but were not limited to them. The review was expanded to five years for evaluation of selected check valves in

the auxiliary feedwater, safety injection, residual heat removal, and the control building HVAC systems.

The inspection team reviewed condition reports to assess whether Entergy adequately evaluated and prioritized identified problems. The issues reviewed encompassed the full range of evaluations, including root cause analyses, apparent cause evaluations, and common cause analyses. The review included the appropriateness of the assigned significance, the scope and depth of the causal analysis, and the timeliness of resolution. The team observed meetings of the Condition Review Group (CRG), in which Entergy personnel reviewed new condition reports for prioritization and assignment, and the Corrective Action Review Board (CARB) where Entergy personnel evaluated root cause evaluations, as well as selected apparent cause evaluations and corrective action assignments. The team also reviewed equipment operability determinations, reportability assessments, and extent-of-condition reviews for selected problems.

The team reviewed the corrective actions associated with selected condition reports to determine whether the actions addressed the identified causes of the problems. The team reviewed condition reports for repetitive problems to determine whether previous corrective actions were effective. The inspectors also reviewed Entergy's timeliness in implementing corrective actions and their effectiveness in precluding recurrence for significant conditions adverse to quality. The team also reviewed condition reports associated with selected NCVs and findings to determine whether Entergy properly evaluated and resolved the issues.

(2) Assessment

Identification of Issues

No findings of significance were identified in the area of identification of issues.

In general, the team considered the identification of problems at Indian Point to be appropriate. The computer-based condition reporting process, PCRS, facilitates the initiation, tracking and trending of condition reports. Approximately 5,000 condition reports were written each year. There was a low threshold for the identification of issues and, in most cases, problems identified during plant activities were entered into PCRS when appropriate. However, the team found that problems identified in August 2005 while conducting replacement of failed bearings on a primary auxiliary building exhaust fan were not entered into the corrective action program for evaluation and resolution. Specifically, maintenance workers found evidence of hardened grease which blocked new grease from entering the bearing rollers. The failure to enter this issue into the CAP does not comply with NRC requirements, but it constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC’s Enforcement Policy, because, although the primary auxiliary building exhaust fan bearings failed again in March 2006, the blocked grease line did not contribute to the bearing failure.

Prioritization and Evaluation of Issues

No findings of significance were identified in the area of prioritization and evaluation of issues.

The team determined that, in general, Entergy appropriately prioritized and evaluated issues commensurate with the safety significance of the issue. Condition reports were screened for operability and reportability, categorized by significance (A through D), and assigned to a department for evaluation and resolution. The Condition Review Group appropriately considered human performance issues, radiological safety concerns, repetitiveness, and adverse trends in their reviews. There were no operability or reportability determinations with which the team disagreed. However, the team did identify a CR that was improperly categorized which led to insufficient evaluation of the issue. Specifically, the inspectors identified that a condition report which documented a concern regarding security guard readiness was categorized as a 'D' track and trend CR and closed without evaluation. Following discussions with the inspectors, Entergy wrote a new condition report to evaluate and address the issue. Although the failure to evaluate the condition when it was first raised in 2003 does not comply with NRC requirements, the inspectors determined that due to the nature of the issue it constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

The inspectors found that cause analyses were thorough and appropriately considered extent of condition, generic issues, and previous occurrences. The Corrective Action Review Board reviews were detailed and ensured that corrective actions addressed the identified causes. For significant conditions adverse to quality, corrective actions were identified to prevent recurrence.

Entergy reviews condition reports site-wide and at the department level to identify adverse conditions occurring at an unacceptable rate or changes in the frequency or severity of events or precursors. The team determined that the monthly reviews and quarterly trend reports provided an effective method for identifying adverse or emerging trends so that actions could be taken in a timely manner to address the issues. However, the team identified that some departments did not include 'D' condition reports in the trending process. Although the 'D' condition reports were included in the site-wide reviews performed by the Corrective Action and Assessment (CA&A) department, and system engineers tracked all CRs for their assigned systems, adverse or emerging trends within a department could have been missed without trending the 'D' condition reports. Failure to track 'D' condition reports does not comply with Entergy procedure EN-LI-121, "Entergy Trending Process," but the inspectors did not identify any adverse or emerging trends that were not identified. Therefore, the inspectors determined that the issue constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

Although the evaluation of issues and determination of required corrective actions was generally good, the team identified examples of condition descriptions, dispositions

(causal evaluations), and corrective action responses that did not provide clear and complete documentation of the issues or actions taken. This issue had also been identified by Entergy and they were taking corrective actions to improve the "stand alone" quality of CRs. In the identified cases, the inspectors were able to gather additional information to support the CR packages or the licensee had self-identified the specific issues in the CAP for resolution.

Effectiveness of Corrective Actions

No findings of significance were identified in the area of effectiveness of corrective actions.

The team concluded that identified corrective actions were generally appropriate to resolve identified issues, and were typically completed in a timely manner. The inspectors also noted a decreasing trend in the number of items in the backlog of actions to be completed by engineering. However, the inspectors identified a few instances of incomplete or inadequate corrective actions. For example**,** on October 5, 2006, NRC inspectors noted that the positioner feedback arm for Indian Point Unit 2 high pressure steam dump valve PCV-1121 was not attached to the valve. Industry operating experience information from 1993 and 1997 identified the need to incorporate the verification of tightness of valve positioner feedback arms in preventive maintenance programs due to several incidents caused by feedback arms falling off. Records identifying the Indian Point Unit 3 response to the operating experience notifications were not available. NRC inspectors identified that planned maintenance was not accomplished on either unit to verify tightness of positioner feedback arms and that many of the positioner arms on similar valves were not double nutted. A condition report was written to address the incomplete corrective actions in response to this operating experience information. Because the failure of PCV-1121 would not be risk significant, this issue was determined to be of minor significance.

Additionally, the inspectors found that corrective actions for deficiencies identified in a design change package for an instrument bus transformer replacement were not completed. Specifically, an engineering change control form was initiated to incorporate changes to voltage calculations for instrument bus 34 to correct output voltage requirements. The voltage calculations and operability evaluation for the instrument bus were subsequently revised as a result of NRC inspector questions. However, the revised information was not incorporated into the engineering change control form. A condition report was written to correct the deficiency and the engineering change control form was revised to include the correct voltage calculations. This issue was of minor significance because it did not impact the operability of the instrument bus and it was not a programmatic concern.

Further, the inspectors identified that corrective actions to evaluate improper sequencing of the control building exhaust fans were not completed. Specifically, NCV 50-286/2005-005-01 was issued in 2005 for inadequate corrective actions to preclude repetitive failure of control building exhaust fan 33. Entergy's condition report to evaluate and correct this deficiency focused on two likely causes for the repetitive failures. The first, undersized

fuses, was fully addressed in both design configuration and process. The corrective action to evaluate the second potential cause, improper sequencing of the 33 and 34 control building exhaust fans, was closed to a work order, which was subsequently cancelled without any actions taken. In response to the team's questions, a new condition report and work order were written to further evaluate and correct control building fan sequencing. This issue was of minor significance because the improper sequencing of the fans did not impact the operability of the system.

In the second quarter 2006, the NRC identified several procedure adequacy findings as documented in IR 50-247/2006-003. In partial response to these findings, Entergy issued CR IP2-2006-3930 to evaluate the concern and determine appropriate corrective actions site-wide. Entergy efforts to fully scope, prioritize, establish a timeline and take actions to improve the bulk of operations procedures do not appear to be timely. At the time of this inspection, Entergy's plan for standardizing operations procedures between the two units had not been finalized. The completion dates for standardization of the plant operating procedures appeared to be reasonable; however, the scope and timeline for the bulk of operations procedures (system operating procedures (SOPs), alarm response procedures (ARPs), etc.) were not yet defined and preliminarily were targeted to be completed in calendar year 2010 if the upgrades to SOPs, abnormal operating procedures, and ARPs were performed in series.

b. Assessment of the Use of Operating Experience

(1) Inspection Scope

The team selected a sample of operating experience issues to confirm that Entergy had evaluated the operating experience information for applicability to Indian Point Unit 3 and had taken appropriate actions, when warranted. Operating experience (OE) documents were reviewed to ensure that underlying problems associated with the issues were appropriately considered for resolution via the corrective action process. A list of the specific documents reviewed is included in the Attachment to this report.

(2) Assessment

No findings of significance were identified in the area of operating experience.

The inspectors found that operating experience information was appropriately considered for applicability, and corrective and preventive actions were taken as needed. Site OE coordinators screened issues from various sources for applicability to Indian Point Unit 3 and wrote CRs for additional reviews and corrective actions as necessary. Operating experience information has been integrated into routine activities, such as pre-job briefs, procedures, and training material. The inspectors noted several positive examples in which plant personnel considered operating experience information in addition to material provided by the Operating Experience Program. In a few cases, the inspectors found that OE-related CRs had been closed without a closure review by the site OE coordinator.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The team reviewed a sample of CA&A audits, including the most recent audit of the corrective action program, CAP trend reports, Quality Assurance (QA) audits, departmental self-assessments, and assessments conducted by independent organizations. A specific list of documents reviewed is included in the attachment to this report. These reviews were performed to determine if problems identified through these 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 was evaluated by comparing audit and assessment results against self-revealing and NRC-identified findings and observations made during the inspection.

The team also reviewed the 2006 Nuclear Safety Culture Assessment, dated March 2006. This was a fleet-wide assessment, conducted by an independent contractor in early 2006. The inspectors reviewed the assessment report and discussed actions taken and planned with managers and staff. The inspectors also reviewed corporate assessments and a departmental teamwork assessment that evaluated similar areas in order to determine if appropriate action had been taken to address identified issues.

(2) Assessment

One Green finding was identified for failure to enter adverse conditions, which were identified in an independent safety culture assessment, into the corrective action program for evaluation and appropriate action.

The team observed that, overall, audits and assessments were critical and, in most cases, appropriate actions were taken to address identified issues. The inspectors noted that thorough follow-up reviews were conducted by CA&A, the Self Assessment Review Board (SARB) and corporate offices. In a few cases, the inspectors found that appropriate corrective actions were not taken for issues identified during assessments. For example, an area for improvement (AFI) identified during a self-assessment of lubrication programs was not captured in a CR for evaluation and tracking. Condition reports for two other AFIs from the lubrication program assessment were closed without taking the indicated action. In another case, a corrective action for a radiation protection QA audit finding related to survey results from personnel contamination events was closed without addressing the issue. In these cases, the inspectors determined that the failure to complete these corrective actions were of minor significance due to the nature of the issues. The inspectors also determined that the results of the 2006 Nuclear Safety Culture Assessment were not entered into the corrective action program; and as a result, timely action was not taken to evaluate the results and identify appropriate corrective actions. This finding is discussed in detail in Section 4OA2c(3).

(3) Findings

Introduction: A Green finding was identified by the NRC inspectors for failure to initiate condition reports in accordance with EN-LI-102, "Corrective Action Process," for adverse conditions identified by the 2006 Nuclear Safety Culture Assessment. Consequently, the adverse conditions were not evaluated and appropriate corrective actions were not identified in a timely manner.

Description: An independent contractor provided the preliminary results of the 2006 Nuclear Safety Culture Assessment to Entergy in April 2006 and presented the site-specific results to Entergy management in June. In the assessment report, the contractor made recommendations to address the negative responses and declining trends, some of which included management attention to reinforce safety conscious work environment expectations and behaviors site-wide and in a number of specific organizations at Indian Point. The contractor also recommended actions to assure the corrective action program was effective, and immediate action for some organizations based on comparison of the Indian Point results with industry-wide results.

The General Manager of Plant Operations held a meeting with site managers in July to discuss the results for Indian Point and actions needed. Managers were directed to discuss the results of the assessment with their staffs, but the results of the assessment were not entered into the CAP and no specific followup actions were assigned at that time.

At the time of the inspection, an action plan was being developed at the corporate level which would be customized by each site based on the site specific results and identified areas for improvement. The draft action plan for the site indicated that an assessment of safety culture performance indicators from across various disciplines should be done at Indian Point to understand the causes for the identified issues so that effective corrective actions could be taken. Entergy management planned to perform another independent assessment in early 2007 to complete this action. The inspectors considered this assessment to be untimely, in that, it would not provide insight into the causes of the issues identified by the 2006 assessment since the data would be collected more than a year after the original assessment was performed.

The inspectors found that specific actions to address the organizations identified by the contractor as needing management attention were not initiated until mid-September. The draft corporate action plan also indicated that departmental action plans would be developed for these organizations based on review of the department-specific safety culture assessment results in conjunction with an assessment of the department's safety culture performance indicators. At the time of the inspection, most of these organizations had only recently reviewed the department-specific safety culture assessment results and were in the early stages of developing department action plans.

Entergy Procedure EN-LI-102, "Corrective Action Program," requires the initiation of condition reports for adverse conditions, which are defined as conditions that detract from safe nuclear plant operation or that could credibly impact nuclear safety. The

inspectors concluded that the negative responses and declining trends identified by the safety culture assessment could impact nuclear safety because the assessment results were precursors and indicators of a possible reluctance to raise safety issues by site employees, particularly in certain organizations. Therefore, these results should have been considered adverse conditions that warranted initiation of a condition report. Failure to enter the assessment results into the corrective action program resulted in a delay in evaluating the results to understand the causes and identify appropriate corrective or mitigative actions.

Analysis: The inspectors determined that Entergy's failure to enter the adverse conditions identified during the 2006 Nuclear Safety Culture Assessment into the corrective action program and evaluate the results and identify appropriate corrective actions in a timely manner was a performance deficiency that was reasonably within Entergy's ability to foresee and prevent. Traditional enforcement did not apply since there were no actual safety consequences or potential for impacting the NRC's regulatory function, and the finding was not the result of any willful violation of NRC requirements or Entergy's procedures.

The inspectors determined that this finding was more than minor because if left uncorrected it would become a more significant safety concern. Without appropriate action, the weaknesses in the safety culture onsite would continue, increasing the potential that safety issues would not receive the attention warranted by their significance. The finding was not suitable for SDP evaluation, but has been reviewed by NRC management and has been determined to be a finding of very low safety significance (Green). The finding was not greater than very low safety significance because the inspectors did not identify any issues that were not raised which had an actual impact on plant safety or were of more than minor safety significance.

The inspectors determined that this finding had a cross-cutting aspect in the area of problem identification and resolution because Entergy did not identify adverse conditions with the potential to impact nuclear safety in the corrective action process for evaluation and resolution in a timely manner.

Enforcement: No violation of NRC regulatory requirements was identified. Although Entergy did not initiate condition reports for the adverse conditions identified by the safety culture survey, application of EN-LI-102 for these conditions does not fall under NRC regulatory requirements. After identification by the team, Entergy entered this issue into the CAP (CR IP2-2006-06105) and initiated a Learning Organization (LO) condition report to track development and implementation of site and department action plans to address the assessment results. Because this finding does not involve a violation of regulatory requirements and has very low safety significance, it is identified as FIN 05000247/2006006-01, Failure to Enter Safety Culture Assessment Results into Corrective Action Program.

d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

During interviews and discussions with station personnel, the team assessed the safety conscious work environment (SCWE) at Indian Point. Specifically, the inspectors assessed whether workers were willing to enter issues into the corrective action program or raise safety concerns to their management and/or the NRC. The inspectors conducted individual interviews and held discussions with staff and supervisors regarding use of the corrective action program, work processes, and other problem identification and resolution activities. The team reviewed the Indian Point Employee Concerns Program (ECP) to assess whether employees were willing to use the program as an alternate path for raising concerns. The team also reviewed a sample of the ECP files to ensure that issues were appropriately addressed.

(2) Assessment

No findings of significance were identified.

The team found that most workers indicated that they would raise issues that they recognized as nuclear safety issues. However, the inspectors also found that a number of workers interviewed indicated that they were aware of individuals they perceived as having been treated negatively by management for raising issues; most of these workers were in the Instrumentation and Controls (I&C) department. Some workers expressed reluctance to raise issues under certain circumstances due to a number of reasons, including fear of disciplinary action and concerns with the efficacy of the corrective action program. While most workers made a distinction between nuclear safety issues and other concerns, the inspectors noted that some of the illustrative examples provided by plant workers could have nuclear safety implications (i.e., procedure quality and staff qualification issues). In one case, a worker indicated that he/she would not raise issues under any circumstances. In another case, a worker indicated that he/she had not raised a specific nuclear safety issue. The inspectors determined that although the issue was a nuclear safety issue, it did not have an actual impact on safe plant operation in this particular instance due to the specific circumstances surrounding the issue.

The team determined that the reluctance to raise issues expressed by the I&C staff was the result of several factors, primarily the fear of disciplinary action compounded by unclear expectations and standards, and to some extent a lack of confidence in the corrective action program. The majority of the I&C staff interviewed described instances which they perceived to be either a negative reaction from management or employee discipline for raising issues. The inspectors observed that expectations for writing CRs were not clearly understood within the I&C department which may have contributed to the perception that individuals were disciplined for raising issues. The inspectors also found that expectations and standards in other areas, such as qualification and procedure requirements, were also unclear and contributed to the negative views expressed by some of the individuals. A number of interviewees also believed that

issues that did not directly impact plant operations, such as personnel or industrial safety issues, would not be resolved or corrected by the corrective action program.

The team also determined that negative perceptions similar to those in the I&C department existed in other site organizations. For example, within the Operations department there was some apprehension about the perceived increase in disciplinary actions within the department. Additionally, a number of individuals did not have confidence that the corrective action program would resolve issues of lesser significance, particularly repeat issues. Based on a limited review, the team found similar issues, but to a lesser extent, in other departments. Consequently, the team was concerned that the lack of confidence in the corrective action program and the apprehension about disciplinary action could challenge the free flow of information and result in reluctance to raise issues in other departments.

Entergy has self-identified areas for improvement intended to enhance employee confidence in the corrective action program and the ECP, and has taken actions to address negative employee perceptions. However, the team determined that these efforts have not been fully effective in establishing employee confidence in these programs. For example, the Corrective Action and Assessment department has taken actions to improve the quality of feedback to employees, but the inspectors found several examples of corrective action responses that did not provide appropriate documentation of how the issue was resolved. As described above, the team found that many employees still have the perception that lower level issues will not be resolved by the corrective action program. In addition, during interviews, very few workers identified the ECP as an alternate path for raising issues, and most of those that referenced the ECP did not view the program as a viable path for raising issues primarily due to concerns about confidentiality of the program.

4OA6 Meetings, including Exit

On December 5, 2006, the team presented the inspection results to Mr. F. Dacimo and and other Entergy personnel, who acknowledged the findings. The inspection findings and observations were also discussed with Entergy management during a teleconference on December 14, 2006. The inspectors confirmed that proprietary information reviewed during the inspection would be handled in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Request for Withholding."

ATTACHMENT: Supplemental Information

In addition to the documentation that the inspectors reviewed (listed in the attachment), copies of information requests given to the licensee are in ADAMS, under accession number ML063490222.

ATTACHMENT - SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

V. Andreozzi, Electrical Systems Manager
J. Balla, Employee Concerns Program Manager
R. Buckley, Corrective Actions Self Assessment Coordinator
R. Burroni, Assistant Operations Manager - Operations Support
V. Cambigianis, Mechanical Design Manager
S. Carpenter, Maintenance Department Corrective Actions Coordinator
J. Comiotes, Director of Nuclear Safety Assurance
J. Conforti, Maintenance Procedure Coordinator
F. Dacimo, Site Vice President
A. Deland, QA Self Assessment & Corrective Actions Coordinator
J. Donnelly, Director of Maintenance
R. Hansler, Reactor Engineering Manager
M. Hornyak, Project Manager, Operations Support ENN, Operating Experience Department
L. Kelly, Planning, Scheduling & Outage Corrective Actions Coordinator
D. Loope, Radiation Protection Manager
S. Meighan, Radiation Protection CA&A Supervisor
E. O'Donnell, Manager - Unit 2 Operations
D. Parker, Maintenance Superintendent
J. Perotta, Quality Assurance Manager
B. Ray, Assistant Superintendent - I&C
P. Rubin, General Manager Plant Operations
A. Small, Manager - Planning, Scheduling and Outage
B. Taggert, Employee Concerns Program Coordinator
M. Tumicki, CA Corrective Actions Coordinator
S. Verrocki, Systems Manager
T. Vitale, Operations Manager
R. Walpole, Corrective Actions Manager

Contractor Personnel

H. Levin, Synergy Consulting Services Corporation

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000286/2006006-01	FIN	Failure to Enter Safety Culture Assessment Results into Corrective Action Program (Section 4OA2c(3))

LIST OF DOCUMENTS REVIEWED

Procedures and Instructions

0-LUB-401-GEN, "Lubrication of Plant Equipment," Rev 2
0-MD-401, "Management Control of Maintenance Training," Rev 1
0-MD-402, "Maintenance Procedure Development and Feedback Administrative Directive," Rev 1
0-VLV-413-MOV, "Motor Operated Valve Minor Preventative Maintenance," Rev 1
0-VLV-423-VCK, "The Inspection and Repair of Velan Swing Check Valves," Rev 1
3-AOP-SSD-1, "Control Room Inaccessibility Safe Shutdown Control," Rev 5
3-MOV-023-ELC, "Motor Operated Valve Minor Preventative Maintenance," Rev 0
3 PT-SA 70, "Fire Door Inspection," Rev 0
3-SOP-V-001, "Primary Auxiliary Building Heating and Ventilation System Operation," Rev 14
EN-DC-118, "Engineering Change Closure," Rev 0
EN-DC-119, "Equipment Database (EDB) Process and Controls," Rev 0
EN-DC-134, "Design Verification," Rev 0
EN-EC-100, “Guidelines for Implementation of the Employee Concerns Program,” Rev 1
EN-LI-102, “Corrective Action Process,” Rev 7
EN-LI-104, “Self-Assessment and Benchmark Process,” Rev 2
EN-LI-118, “Root Cause Analysis Process,” Rev 4
EN-LI-119, “Apparent Cause Evaluations (ACE) Process,” Rev 3
EN-LI-121, “Entergy Trending Process,” Rev 3
EN-MA-123, “Identification and Trending of Rework,” Rev 0
EN-OE-100, "Operating Experience Program," Rev 2
EN-PL-190, “Maintaining a Strong Safety Culture,” Rev 0
EN-PL-187, “Safety Conscious Work Environment Policy,” Rev 0
EN-QV-109, "Audit Process"
EN-RP-104, “Personnel Contamination Events,” Rev 1
EN-WM-100, “Work Request (WR) Generation, Screening and Classification,” Rev 0
EN-WM-105, "Planning," Rev 0
ENN-DC-112, “Engineering Request and Project Initiation Process,” Rev 7
ENN-DC-128, "Calculations," Rev 6
FAN-006-VSS, “Inspection of PAB/VC Purge Exhaust Fan and Filter Replacement,” Rev 6
FP-31, "Fire Door Inspection (Balance of Plant)," Rev 3
IP-SMM-OP-106, "Procedure Use and Adherence"
IP-SMM-WM-100, "Work Management Process," Rev 4
OAP-042, “Storage and Control of Fuses,” Rev 0
VLV-062-NIT, "Non-Intrusive Testing of Check Valves," Rev 1

Audits and Assessment Reports

QA Audits

QA-03-2005-IP-1, "IPEC Corrective Action Program," May 2005
QA-08-2005-IP-1, "IPEC Unit 3 Engineering Programs"
QA-04-2006-IP-1, "Design Control"
QA-07-2006-IP-1, "IPEC Emergency Planning Audit," May 2006

QA-10-2005-IP-1, "IPEC Maintenance Program," June 2006
QA-12-2005-IP-1, "IPEC Operations Program"
QA-14-2006-IP-1, “IPEC Radiation Protection Program,” April 2006
QA-16-2005-IP-1, "IPEC Security Audit," March 2006

QA Surveillances

QS-2006-IP-05, "Initial Licensed Operator (ILO) Training Program"
QS-2006-IP-10, "Followup Assessment on Corrective Actions from Security Audit"
QS-2006-IP-15, "Refueling - Fuel Receipt, Core Unload, Core Reload"

Oversight Observation Checklists

O2C-IPEC-2005-0097, "Use of Operating Experience throughout the IPEC Station"
O2C-IPEC-2005-0188, "Inquiry by QA Manager as to how manual CRs and Operability reviews are being handled by Operations"
O2C-IPEC-2006-0477, "Control Room Observation and AOT Entry"
O2C-IPEC-2006-0685, "Conduct of Operations"
O2C-IPEC-2006-0691, "Control Room Observation and Startup"
O2C-IPEC-2006-0844, "Operations Procedures and Documentation"
O2C-IPEC-2006-0873, "July/August 2006 Monthly SCWE Summary for Site Meeting Attendance"

Assessments (Learning Organization Condition Reports)

IP3LO-2005-00075, "Conduct of I&C -I&C Department Assessment of Teamwork and Trust (Snapshot)"
IP3LO-2005-00102, "Compliance with Gun Room Procedures (Snapshot)"
IP3LO-2005-00108, "Line Ownership of CR Trending (Snapshot)"
IP3LO-2005-00119, "Security Officers Knowledge of Human Performance Error Prevention Tools & Error Traps (Snapshot)"
IP3LO-2005-00147, "Human Performance Self Assessment"
IP3LO-2005-00168, "Fourth Quarter 2005 CA&A Self-Assessment (Ongoing)"
IP3LO-2005-00207, "Problem Identification and Resolution"
IP3LO-2005-00216, "Lubrication/Predictive Maintenance Program (Focused)"
IP3LO-2005-00219, "Human Performance Self Assessment"
IP3LO-2005-00222, "EP Non-siren Equipment Self Assessment (Focused)"
IP3LO-2005-00224, "Performance of Supplemental Personnel"
IP3LO-2005-00298, "Effectiveness of Corrective Action Closures to Lower Tier Monitored Processes (Snapshot)"
IP3LO-2005-00307, "IPEC Safety Culture Corporate Assessment"
IP3LO-2005-00314, "Anonymous Condition Reports (Ongoing)"
IP3LO-2006-00003, "Conservative Decision Making"
IP3LO-2006-00014, "Cross-cutting Root Cause Issues (Snapshot)"
IP3LO-2006-00016, "Work Package Generation and Distribution"
IP3LO-2006-00038, "Compliance with Gun Room Procedures (Snapshot)"
IP3LO-2006-00072, "Second Quarter 2006 CA&A Self-Assessment (Ongoing)"
IP3LO-2006-00138, "Operations Training Accreditation"
IP3LO-2006-00140, "PI&R Self Assessment (Focused)"

IP3LO-2006-00158, "Corrective Actions, OE, and Human Performance in Emergency Planning Department (Focused)"
IP3LO-2006-00166, "Periodic Review of RP Standing Orders and RP Standards (Snapshot)"
IP3LO-2006-00206, "Common Cause of Emergent Work in 2005 (Snapshot)"
IP3LO-2006-00331*, "Track Development and Implementation of Action Plans to Improve Safety Culture in Various IPEC Departments"
"IPEC 2004 Operating Experience Program Self Assessment"
"Indian Point Nuclear Station's Corporate Follow-up Assessment"
"2006 Nuclear Safety Culture Assessment" (Proprietary)

Trend Reports

IPEC Quarterly Trend Report -Third Quarter 2005
IPEC Quarterly Trend Report -Fourth Quarter 2005
IPEC Quarterly Trend Report -First Quarter 2006
IPEC Quarterly Trend Report -Second Quarter 2006

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

Common Issues

IP2-2004-04099	IP2-2005-04290	IP2-2005-04412	IP2-2005-04475
IP2-2005-04727	IP2-2005-05095	IP2-2005-05138	IP2-2006-00208
IP2-2006-00648	IP2-2006-00676	IP2-2006-00722	IP2-2006-00876
IP2-2006-00903	IP2-2006-01134	IP2-2006-01199	IP2-2006-01200
IP2-2006-01202	IP2-2006-01350	IP2-2006-02120	IP2-2006-02144
IP2-2006-02156	IP2-2006-02462	IP2-2006-02747	IP2-2006-02750
IP2-2006-02796	IP2-2006-03483	IP2-2006-03704	IP2-2006-03880
IP2-2006-03881	IP2-2006-04031	IP2-2006-04158	IP2-2006-04308
IP2-2006-04311	IP2-2006-05097	IP2-2006-05105	IP2-2006-05106
IP2-2006-05109	IP2-2006-05551	IP2-2006-05553	IP2-2006-05968*
IP3-2004-03071	IP3-2004-03072	IP3-2004-03303	IP3-2004-03774
IP3-2004-03925	IP3-2005-00330	IP3-2005-00462	IP3-2005-00603
IP3-2005-00605	IP3-2005-00627	IP3-2005-00723	IP3-2005-00890
IP3-2005-01346	IP3-2005-01909	IP3-2005-01912	IP3-2005-02492
IP3-2005-02624	IP3-2005-02982	IP3-2005-03125	IP3-2005-03530
IP3-2005-03697	IP3-2005-03880	IP3-2005-03881	IP3-2005-03885
IP3-2005-04303	IP3-2005-04304	IP3-2005-04305	IP3-2005-04306
IP3-2005-04307	IP3-2005-04566	IP3-2005-04654	IP3-2005-05092
IP3-2005-05724	IP3-2005-05818	IP3-2006-00006	IP3-2006-00288
IP3-2006-00338	IP3-2006-00509	IP3-2006-00547	IP3-2006-00664
IP3-2006-01131	IP3-2006-02112	IP3-2006-02113	IP3-2006-02191
IP3-2006-02193	IP3-2006-02831	IP3-2006-02833	IP3-2006-03099*
IP3-2006-03150*			

ECH-2005-00080

Unit 3

IP3-2002-01899	IP3-2002-02435	IP3-2002-04043	IP3-2002-04423
IP3-2003-00335	IP3-2003-00739	IP3-2003-02419	IP3-2003-02480
IP3-2003-02576	IP3-2003-02838	IP3-2003-05222	IP3-2003-05274
IP3-2003-06179	IP3-2003-06372	IP3-2004-00140	IP3-2004-00200
IP3-2004-01126	IP3-2004-01567	IP3-2004-01756	IP3-2004-02399
IP3-2004-02624	IP3-2004-02652	IP3-2004-02691	IP3-2004-02747
IP3-2004-02918	IP3-2004-02944	IP3-2004-03114	IP3-2004-03406
IP3-2004-03483	IP3-2004-03712	IP3-2004-03720	IP3-2004-03766
IP3-2004-03797	IP3-2004-03983	IP3-2005-00075	IP3-2005-00266
IP3-2005-00315	IP3-2005-00451	IP3-2006-00487	IP3-2005-00709
IP3-2005-00725	IP3-2005-00733	IP3-2005-00756	IP3-2005-00779
IP3-2006-00845	IP3-2005-01115	IP3-2005-01371	IP3-2005-01461
IP3-2005-01501	IP3-2005-01639	IP3-2005-01874	IP3-2005-01909
IP3-2005-02027	IP3-2005-02137	IP3-2005-02163	IP3-2005-02225
IP3-2005-02394	IP3-2005-02411	IP3-2005-02419	IP3-2005-02456
IP3-2005-02472	IP3-2005-02473	IP3-2005-02478	IP3-2005-02531
IP3-2005-02572	IP3-2005-02618	IP3-2005-02758	IP3-2005-02954
IP3-2005-02958	IP3-2005-02976	IP3-2005-03054	IP3-2005-03122
IP3-2005-03336	IP3-2005-03565	IP3-2005-03726	IP3-2005-03817
IP3-2005-03822	IP3-2005-03837	IP3-2005-03865	IP3-2005-03866
IP3-2005-04179	IP3-2005-04343	IP3-2005-04373	IP3-2005-04804
IP3-2005-04927	IP3-2005-05337	IP3-2005-05375	IP3-2005-05380
IP3-2005-05388	IP3-2005-05389	IP3-2005-05401	IP3-2005-05497
IP3-2005-05548	IP3-2005-05793	IP3-2006-00205	IP3-2006-00245
IP3-2006-00312	IP3-2006-00324	IP3-2006-00338	IP3-2006-00340
IP3-2006-00341	IP3-2006-00342	IP3-2006-00369	IP3-2006-00486
IP3-2006-00489	IP3-2006-00561	IP3-2006-00574	IP3-2006-00669
IP3-2006-00679	IP3-2006-00759	IP3-2006-00956	IP3-2006-01000
IP3-2006-01069	IP3-2006-01093	IP3-2006-01233	IP3-2006-01295
IP3-2006-01361	IP3-2006-01384	IP3-2006-01427	IP3-2006-01478
IP3-2006-01575	IP3-2006-01596	IP3-2006-01616	IP3-2006-01618
IP3-2006-01715	IP3-2006-01732	IP3-2006-01751	IP3-2006-01784
IP3-2006-01835	IP3-2006-01890	IP3-2006-01919	IP3-2006-01960
IP3-2006-01985	IP3-2006-02071	IP3-2006-02104	IP3-2006-02120
IP3-2006-02149	IP3-2006-02184	IP3-2006-02190	IP3-2006-02210
IP3-2006-02227	IP3-2006-02264	IP3-2006-02317	IP3-2006-02429
IP3-2006-02471	IP3-2006-02515	IP3-2006-02529	IP3-2006-02620
IP3-2006-02630	IP3-2006-02656	IP3-2006-02694	IP3-2006-02715
IP3-2006-02873	IP3-2006-02884	IP3-2006-02895*	IP3-2006-02896*
IP3-2006-02912*	IP3-2006-02943*	IP3-2006-02991*	IP3-2006-03083*

Operating Experience Reviews

EA 03-09, "Head and nozzle inspection"
IN 1998-018, "Recent Contamination Incidences Resulting from Failure to Perform Adequate Surveys"

IN 2004-019, "Problems Associated with Back-up Power Supplies to Emergency Response Facilities and Equipment"
IN 2005-006, "Failure to Maintain Alert and Notification System Alert Radio Capability"
IN 2005-015, "PVNGS 3 Unit Trip"
IN 2005-024, "RCS Leak Detection"
IN 2005-030, "Safe Shutdown Potentially Challenged by Unanalyzed Internal Flooding Events and Inadequate Design"
IN 2006-009, "Performance of NRC-Licensed Individuals While on Duty with Respect to Control Room Attentiveness"
LO-OEN-2003-0364, "Reactor trip due to decreasing vacuum"
OE 2378, "MOV Motor Bolting Failure"
OE 15162, "Containment Spray (CS) Valve 1CS001A Failed to Open During Quarterly

Maintenance Work Orders

94-0339200	04-11545	04-18129	05-11396	05-20969	06-12596
98-0389000	04-12562	04-18229	05-13136	05-21158	06-13174
02-7708996	04-13203	04-18818	05-13204	05-21205	06-14994
02-7709177	04-13404	04-19920	05-13367	05-24929	06-15596
02-22090	04-14307	04-20256	05-17041	05-25030	06-15597
03-10340	04-15564	05-00637	05-17329	06-00255	06-17329
03-24453	04-16381	05-01284	05-18084	06-00363	06-17655
04-04542	04-17311	05-01347	05-19041	06-01050	06-18062
04-05114	04-17493	05-01895	05-19996	06-11988	06-18508
04-06001	04-17706	05-01925	05-20427	06-12389	*06-21688

Non-Cited Violations and Findings Reviewed

NCV 50-286/2004-06-01	Failure to provide adequate maintenance procedure for work on GT-35 breaker
NCV 50-286/2004-09-01	Failure to complete voltage calculation and to properly translate design output voltage requirements into design change package
FIN 50-286/2005-03-01	Inadequate work controls during troubleshooting lead to automatic reactor trip
FIN 50-286/2005-03-02	Inadequate corrective actions associated with training, procedural adequacy and operator knowledge on methods to address degraded grid
FIN 50-286/2005-04-01	Inadequate work instructions during troubleshooting leads to manual reactor trip
NCV 50-286/2005-05-01	Inadequate corrective action to preclude repetitive failure of control building exhaust fan 33
NCV 50-286/2005-05-02	Inadequate equipment to assess threshold for EAL 8.4.3
FIN 50-286/2005-05-03	Inadequate Corrective Actions for Frame Relay System Problems
NCV 50-286/2005-05-04	Failure to make 10 CFR 50.72 notification for siren problems
NCV 50-286/2006-03-01	Failure to perform adequate risk assessment for the nuclear power range channel N42 axial offset calibration

System Health Reports

2nd Quarter 2006 Auxiliary Feed Water System
2nd Quarter 2006 PAB Ventilation - VC Purge System

Calculations

IP3-CALC-ED-00297, "480V Buses 2A, 3A, 5A & 6A Degraded Voltage Alarm Relay Setpoint Calculation," Rev 3
IP3-CALC-EL-00116, "F38-0045/Instrument Bus AC Power 118 Volt AC Instrument Bus 34 - Voltage Drop Calculation," Rev 1

Miscellaneous

Entergy memorandum dated June 3, 2006, "Expectations for Condition Report Initiation," from F. Dacimo, Site Vice President, to IPEC Managers
Entergy memorandum IPEC-ADM-06-008, dated February 8, 2006, "Expectations," from P. Rubin, General Manager Plant Operations, to Managers and Supervisors
Entergy Nuclear Northeast Operating Experience Program Monthly Reports for July and August 2006
Indian Point Energy Center 2006 Second Quarter Report
IPEC Maintenance Rule Basis Document, Main Feedwater System, Units 2&3, Rev 0
IPEC Project/Team Lead Job Familiarization & Professional Development Guide, Rev 1
Inside Entergy Tailgate Edition dated September 21, 2006
Inside Entergy dated April 24, 2006, "Preliminary Results of the Synergy Nuclear Safety Culture Assessment (NSCA)"
Inside Entergy dated August 6, 2006, "Heron, Campbell Address Nuclear Safety Culture Results"
Morale Committee Newsletters dated September 2005, March 2006 and July 2006
Tailgate article dated August 17, 2006, "PCRS Operability and Immediate Reportability Screening"
Tailgate article dated August 17, 2006, "The Condition Reporting Process"
Tailgate article dated August 24, 2006, "The Importance of Stand-Alone Quality"
Tailgate article dated August 31, 2006, "Condition Report Initiation"
Tailgate article dated September 7, 2006, "What Makes a Good Condition Report?"
Talking Points for GMPO Web Page, dated October 4, 2006
Ultrasonic Testing Plan, IPEC Utility Tunnel, Rev 0
Westinghouse Technical Bulletin TB-04-22, “Reactor Coolant Pump Seal Performance - Appendix R Compliance and Loss of All Seal Cooling,” Rev 1
DCP-03-3-034 IB, Rev 0: "Instrument Bus 34 Sola Transformer Replacement"

IP3-DBD-315, Rev 1: “Indian Point 3 Design Basis Document for the Heating, Ventilation and Air Conditioning Systems”
IP3-ECCF-936, Rev 1: Modification No. DCP-03-3-034 IB
IP3-ECCF-936, Rev 2: Modification No. DCP-03-3-034 IB
IP3-RPT-HVAC-01905, Rev 0: “Maintenance Rule Basis Document for Fuel Storage Building HVAC, Primary Auxiliary Building HVAC and Containment Purge and Supply Systems”
Vendor Manual ID 439.100000442, November 1961: “Westinghouse Centrifugal Fans; General Purpose and Industrial”

LIST OF ACRONYMS

ABFP	Auxiliary Boiler Feed Pump
AC	Alternating Current
ACE	Apparent Cause Evaluation
ADAMS	Agency Document Administrative Management System
AFI	Area for Improvement
AFW	Auxiliary Feedwater System
AOPs	Abnormal Operating Procedures
ARP	Alarm Response Procedure
CA&A	Corrective Action and Assessment
CAP	Corrective Action Program
CARB	Corrective Action Review Board
CFR	Code of Federal Regulations
CR	Condition Report
CRG	Condition Review Group
DC	Direct Current
DRP	Division of Reactor Projects
ECP	Employee Concerns Program
ER	Engineering Request
FIN	Finding
HVAC	Heating, Ventilation, and Air Conditioning
I&C	Instrumentation and Controls
IMC	NRC Inspection Manual Chapter
IN	NRC Information Notice
IP	NRC Inspection Procedure
IPEC	Indian Point Energy Center
IR	NRC Inspection Report
LO	Learning Organization
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OE	Operating Experience
PAB	Primary Auxiliary Building
PARS	Publicly Available Records
PCRS	Paperless Condition Reporting System
PI&R	Problem Identification & Resolution
QA	Quality Assurance
RCS	Reactor Coolant System
ROP	Reactor Oversight Program
SARB	Self-Assessment Review Board

SCWE	Safety Conscious Work Environment
SDP	Significance Determination Process
SOP	System Operating Procedure
VC	Vapor Containment
WO	Work Order