May 12, 2006

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 UNIT 3 - NRC INTEGRATED INSPECTION REPORT 05000286/2006002

Dear Mr. Dacimo:

On March 31, 2006, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Indian Point Nuclear Generating Unit 3. The enclosed integrated inspection report documents the inspection findings, which were discussed on March 28, 2006, with Mr. Paul Rubin and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of the inspection, two findings of very low safety significance (Green) were identified. The findings were also 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) consistent with Section VI.A of the NRC Enforcement Policy. If you contest the NCVs in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Senior Resident Inspector at Indian Point 3.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the

NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/ By Donald E. Jackson Acting For/

Eugene W. Cobey, Chief
Projects Branch 2
Division of Reactor Projects

Docket No. 50-286
License No. DPR-64

Enclosure: Inspection Report No. 05000286/2006002
w/Attachment: Supplemental Information

cc w/encl:
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.	50-286
License No.	DPR-64
Report No.	05000286/2006002
Licensee:	Entergy Nuclear Northeast (Entergy)
Facility:	Indian Point Nuclear Generating Unit 3
Location:	295 Broadway, Suite 3 Buchanan, NY 10511-0308
Dates:	January 1, 2006 through March 31, 2006
Inspectors:	T. Hipschman, Senior Resident Inspector, IP3 B. Wittick, Resident Inspector, IP3 M. Cox, Senior Resident Inspector, IP2 J. D'Antonio, Senior Operations Examiner C. Long, Reactor Engineer D. Silk, Senior Emergency Preparedness Inspector S. Barr, Reactor Engineer
Approved by:	Eugene W. Cobey, Chief Projects Branch 2 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000286/2006002; 01/01/2006 - 03/31/2006, Indian Point Nuclear Generating Unit 3; Maintenance Risk Assessments and Emergent Work Control.

The report covers a 3-month period of inspection by resident inspectors and regional inspectors. Two Green findings were identified, 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.

A. NRC Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified a Green non-cited violation of 10 CFR 50.65(a)(4), when Entergy failed to perform a risk assessment for the appendix 'R' emergency diesel generator when it was removed from service for planned maintenance on January 10, 2006. Entergy performed a risk assessment in response to this finding and entered the deficiency into their corrective action program. Corrective actions completed included a review of the risk assessment process and a management discussion of lessons learned with work week managers. Ongoing corrective action includes a review of risk assessment practices by the Operations Department. The inspectors determined that the finding had a human performance cross-cutting aspect because the work week manager did not perform a risk assessment for all risk significant systems removed from service in accordance with the Site Management Manual.

The deficiency was greater than minor per appendix E of Manual Chapter 0612 example 7(e), because the deficiency is consistent with Manual Chapter 0612, appendix B, section 3, condition (5)(a). Specifically, the licensee's risk assessment failed to consider risk significant systems, structures, and components, as well as support systems (included in Table 2 of the plant specific Phase 2 SDP, "Risk-Informed Inspection Notebook for Indian Point Nuclear Power Plant Unit 3 (Revision 2))" that were unavailable during the maintenance. The appendix 'R' emergency diesel generator is risk significant for power recovery following a loss of offsite power. The inspectors assessed the finding using Manual Chapter 0609, appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," Flowchart 1, "Assessment of Risk Deficit," and determined the finding to be of very low safety significance because the incremental core damage probability deficit was less than 1×10^{-6}. (Section 1R13)

Green. The inspectors identified a Green non-cited violation of 10 CFR 50.65(a)(4), when Entergy failed to re-perform a risk assessment on the 33 emergency diesel

generator during a High Wind Warning issued by the National Weather Service on January 18, 2006, which had the potential to cause offsite power instability. Entergy performed a risk assessment in response to this finding and entered the deficiency into the corrective action program. Entergy's corrective actions included conducting a review of the site risk assessment process and severe weather procedure. The inspectors determined that the finding had a human performance cross cutting aspect because the work week manager failed to perform a qualitative or quantitative risk assessment of external events for the maintenance and operations personnel failed to consider appropriate risk management actions described in the severe weather procedure.

The deficiency was greater than minor per appendix E of Manual Chapter 0612 example 7(e), because the deficiency is consistent with Manual Chapter 0612, appendix B, section 3, condition (5)(d). Specifically, the licensee risk assessment failed to consider unusual external conditions that were present or imminent (e.g., severe weather, offsite power instability). The 33 emergency diesel generator is risk significant for loss of offsite power considerations. Specifically, the licensee's risk assessment failed to consider external events' impact on risk significant systems, structures, and components, (included in Table 2 of the plant specific Phase 2 SDP, "Risk-Informed Inspection Notebook for Indian Point Nuclear Power Plant Unit 3 (Revision 2))" during the maintenance. The inspectors assessed the finding using Manual Chapter 0609, appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," Flowchart 1, "Assessment of Risk Deficit," and determined the finding to be of very low safety significance because the incremental core damage probability deficit was less than 1×10^{-6}. (Section 1R13)

B. Licensee-Identified Violations.

None.

REPORT DETAILS

Summary of Plant Status

Unit 3 operated at or near full power for the duration of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 - 2 samples)

a. Inspection Scope

The inspectors reviewed Entergy's administrative controls and implementation of a maintenance program to ensure adequate protection of the condensate storage tanks from freezing conditions. This system was selected because the safety-related function could be affected by adverse weather. Additionally, the inspectors reviewed the licensee's strategy for coping with a severe weather high wind warning condition and the potential impact related to a loss of offsite power. The inspectors also reviewed work orders, condition reports and risk assessments associated with the high wind conditions, which had the potential to impact offsite power. The specific information reviewed is listed in the Supplemental Information attachment to this report. This inspection satisfied one sample of site weather preparations, and one sample of system preparation.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04Q - 3 samples)

a. Inspection Scope

The inspectors performed system walkdowns during periods of system train unavailability in order to verify that the alignment of the available train was proper to support the availability of safety functions, and to ensure that Entergy had identified and properly addressed equipment discrepancies that could potentially impair the functional capability of the available train. The specific information reviewed is listed in the Supplemental Information attachment to this report. The following system walkdowns were counted as three samples:

- 32 component cooling water pump following maintenance activities;
- Component cooling system in the primary auxiliary building to verify proper alignment during maintenance on the 31 component cooling heat exchanger; and
- Boric acid storage system and transfer pumps following maintenance activities.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q - 8 samples)

a. Inspection Scope

The inspectors toured areas that were identified as important to plant safety and risk significance. The inspectors consulted the Indian Point 3 Individual Plant Examination for External Events (IPEEE), Section 4.0, "Internal Fires Analysis," and the top risk-significant fire zones in Table 4.6-2, "Summary of Core Damage Frequency Contributions from Fire Zones." The objective of this inspection was to determine if Entergy had adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, and had adequately established compensatory measures for degraded fire protection equipment. The inspectors evaluated conditions related to: (1) control of transient combustibles and ignition sources; (2) the material condition, operational status, and operational lineup of fire protection systems, equipment, and features; (3) the fire barriers used to prevent fire damage or fire propagation; and (4) compensatory measures for out-of-service, degraded, or inoperable fire protection equipment in order to determine if they were implemented in accordance with Entergy's fire plan. The specific information reviewed is listed in the Supplemental Information attachment to this report. The following areas constitute 8 samples:

- Fire Zone 35A;
- Fire Zone 352 and 352A;
- Fire Zone 385;
- Fire Zone 307;
- Fire Zone 306;
- Fire Zone 35;
- Fire Zone 8; and
- Fire Zone 351A.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06 - 1 sample)

d. Inspection Scope

The inspector reviewed Entergy's internal flood analysis, flood mitigation procedures and design features of the control building flood zone CTL 15-1, to verify whether they were consistent with Unit 3 design requirements. The inspector walked down several internal and external plant areas that contained equipment important to safety. The

inspector evaluated the condition and adequacy of mitigation equipment to assess whether flood protection design features were adequate.

The inspector reviewed a sample of Entergy's preventive maintenance and surveillance procedures on flood mitigation equipment. In addition, the inspector reviewed the Corrective Action Program (CAP) to verify whether previous flood related issues had been appropriately evaluated and resolved. The specific information reviewed is listed in the Supplemental Information attachment to this report. This review was one sample of internal flood protection.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Inspection

Resident Inspector Quarterly Review (71111.11Q - 1 sample)

a. Inspection Scope

On March 6, 2006, the inspectors observed training for operations staff licensed operators. The inspectors reviewed an "as found" simulator scenario to determine if the scenario contained: (1) clear event descriptions with realistic initial conditions; (2) clear start and end points; (3) clear descriptions of visible plant symptoms for the crew to recognize; and (4) clear expectations of operator actions in response to abnormal conditions.

During the simulator exercise, the inspector evaluated the team's performance for: (1) clarity and formality of communications; (2) correct use and implementation of emergency operating procedures (EOPs) and abnormal operating procedures (AOPs); (3) operators' ability to properly interpret and verify alarms; and (4) operators' ability to take timely actions in a safe direction based on transient conditions. In addition, the inspectors evaluated the Control Room Supervisor's ability to exercise effective oversight and control of the crew's actions during the exercise. The inspectors verified that the feedback from the instructors was thorough; identified specific areas for improvement; and reinforced management expectations regarding crew competencies in the areas of procedure use, communications, and peer checking. The inspectors also evaluated Entergy's post-scenario critique. The observation of requalification training on March 6, 2006, constituted one inspection sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12Q - 1 sample)

a. Inspection Scope

The inspectors evaluated Entergy's work practices and corrective actions for selected systems, structures, and components (SSC) to assess the effectiveness of maintenance activities. The inspectors reviewed the performance history of those SSCs and assessed extent of condition determinations performed by Entergy personnel for those issues with potential common cause or generic implications to evaluate the adequacy of corrective actions. The inspectors reviewed problem identification and resolution actions for these issues identified by Entergy personnel to evaluate whether they had appropriately monitored, evaluated, and dispositioned the issues in accordance with Entergy's procedures and the requirements of 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance." In addition, the inspectors reviewed selected SSC classification, performance criteria and goals, and Entergy's corrective actions that were taken or planned, to verify whether the actions were reasonable and appropriate. The inspectors specifically reviewed the 31 and 32 central control room air conditioning units to constitute one sample within the scope of this inspection.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Control (71111.13 - 5 samples)

a. Inspection Scope

The inspector observed selected portions of emergent and planned maintenance work activities to assess Entergy's risk management in accordance with 10 CFR 50.65(a)(4). The inspector verified that Entergy took the necessary steps to plan and control emergent work activities, to minimize the probability of initiating events, and to maintain the functional capability of mitigating systems. The inspector observed and/or discussed risk management with maintenance and operations personnel. The specific information reviewed is listed in the Supplemental Information attachment to this report. The following three emergent activities and two planned activities were observed and treated as inspection samples:

- Work order IP3-03-21223, appendix R EDG 2 year calibration;
- Work order IP3-03-21701, EDG 33 during high wind condition;
- Work order IP3-03-01915, RWST high level switch replacement;
- Work order IP3-06-11433, 33 EDG exhaust fan excessive vibration; and
- Work order IP3-05-22256, 32 component cooling water (CCW) pump.

b. Findings

1. Introduction: The inspector identified a Green non-cited violation of 10 CFR 50.65 (a)(4) for Entergy's failure to perform a risk assessment for planned maintenance activities on the appendix 'R' emergency diesel generator (EDG).

Description: On January 10, 2006, the appendix 'R' EDG was removed from service for planned preventive maintenance activities. The appendix 'R' EDG is risk significant for power recovery following a loss of offsite power. The inspectors identified that the Work Week Manager did not perform a risk assessment for the appendix 'R' EDG when it was removed from service on January 10, 2006, for scheduled maintenance activities. Specifically, the licensee's risk assessment failed to consider risk significant systems, structures, and components, as well as support systems (included in Table 2 of the plant specific Phase 2 SDP, "Risk-Informed Inspection Notebook for Indian Point Nuclear Power Plant Unit 3 (Revision 2))" that were unavailable during the maintenance.

Analysis: The inspector determined that the finding was a performance deficiency since the licensee failed to perform a risk assessment of a risk significant, safety-related system. "Indian Point Energy Center (IPEC) Site Management Manual," IP-SMM-WM-101, Revision 0, requires that work affecting the unavailability of the appendix 'R' EDG shall be risk evaluated. It is reasonable that Entergy should have identified that the scheduled work would require a risk assessment. Traditional enforcement does 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 deficiency was greater than minor per appendix E of Manual Chapter 0612 example 7(e), because the deficiency is consistent with Manual Chapter 0612, appendix B, section 3, condition (5)(a). Specifically, the licensee's risk assessment failed to consider risk significant systems, structures, and components, as well as support systems (included in Table 2 of the plant specific Phase 2 SDP, "Risk-Informed Inspection Notebook for Indian Point Nuclear Power Plant Unit 3 (Revision 2))" that were unavailable during the maintenance. The appendix 'R' EDG is risk significant for power recovery following a loss of offsite power.

The inspectors assessed the finding using Manual Chapter 0609, appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," Flowchart 1, "Assessment of Risk Deficit," and determined the finding to be of very low safety significance. Equipment included in this overall risk assessment due to planned maintenance or surveillance activities included the 31 auxiliary boiler feed pump, the 31 charging pump, the 31 component cooling water pump, and the 33 condensate pump. The aggregate risk assessment for the equipment removed from service, not including the appendix 'R' EDG, was calculated to be a core damage frequency (CDF) of 1.21×10^{-4} per year. The aggregate risk assessment including the appendix 'R' EDG was a CDF of 1.32×10^{-4} per year. Although the actual aggregate CDF for the maintenance activities was higher than initially calculated, the overall risk remained moderate (Yellow), and required no additional risk management actions. It is

important to note that this Yellow risk is a designation of Entergy's to assess risk for maintenance activities and does not correspond to the NRC's color system for characterizing the risk of inspection findings. The inspectors determined the incremental core damage probability deficit (ICDPD) from the licensee's CDF, and the actual duration of the configuration with appendix 'R' EDG removed from service (approximately 17.8 hours), and calculated that the ICDPD to be 2.28 x 10^{-7}. This was determined to be a green finding having very low safety significance because the calculated risk deficit was not greater that 1 x 10^{-6}.

Entergy performed a risk assessment in response to this finding and entered the deficiency into their corrective action program. Corrective actions completed included a review of the risk assessment process and a management discussion of lessons learned with work week managers. Ongoing corrective action includes a review of risk assessment practices by the Operations Department.

The inspectors determined that the finding had a human performance cross-cutting aspect because the work week manager did not perform a risk assessment for all risk significant systems removed from service in accordance with the Site Management Manual.

Enforcement: 10 CFR 65 (a)(4), states, "Before performing maintenance activities (including but not limited to surveillance, post-maintenance testing, and corrective and preventive maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. The scope of the assessment may be limited to structures, systems, and components that a risk-informed evaluation process has shown to be significant to public health and safety." Contrary to the above, the inspectors identified that on January 10, 2006, Entergy failed to perform a risk assessment or manage the increase in risk when the appendix 'R' EDG was removed from service for planned maintenance. Because this finding is of very low safety significance and has been entered into the corrective action program (CR-IP3-2006-00245), this violation is being treated as an NCV, consistent with Section VI.A of the Enforcement Policy: **NCV 05000286/2005006-01, Failure to Perform an Adequate Risk Assessment when required by 10 CFR 50.65(a)(4) for the Appendix 'R' EDG.**

2. Introduction: The inspector identified a Green non-cited violation of 10 CFR 50.65 (a)(4) for Entergy's failure to re-perform a risk assessment for maintenance activities on the 33 EDG during a severe weather event which had the potential to cause offsite power instability.

   Description: On January 18, 2006, with the 33 EDG out of service for planned preventive maintenance activities, a High Wind Warning was declared by the National Weather Service for several counties which included the Indian Point Energy Center. The 33 EDG is risk significant for loss of offsite power considerations. The inspectors interviewed the work week managers to determine how the High Wind Warning and external events were factored into their risk assessment process. After discussions with Entergy risk management group the inspectors determined that the work week

managers did not take into account external events either qualitatively or quantitatively on January 18, 2006.

Analysis: The inspector determined that the finding is a performance deficiency since the licensee failed to re-evaluate risk assessments involving a risk significant, safety-related system, specifically the 33 EDG, for changing environmental conditions that could have negatively impacted offsite power availability. It is reasonable that Entergy should have assessed and managed the changing risk condition associated with the changing weather conditions. Traditional enforcement does 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 deficiency was greater than minor per appendix E of Manual Chapter 0612 example 7(e), because the deficiency is consistent with Manual Chapter 0612, appendix B, section 3, condition (5)(d). Specifically, the licensee risk assessment failed to consider unusual external conditions that were present or imminent (e.g., severe weather, offsite power instability). The 33 EDG is risk significant for loss of offsite power considerations.

Equipment included in this evaluation due to planned maintenance or surveillance activities included the 33 EDG, 31 safety injection pump, steam line pressure bistable testing, and 34 control building exhaust fan. The risk assessment for equipment removed from service was calculated by Entergy to be a CDF of 2.99×10^{-5} per year. A revised risk assessment that included the Severe Weather Warning, calculated the CDF as 5.24×10^{-5} per year.

The inspectors assessed the finding using the Manual Chapter 0609, appendix K, "Maintenance Risk Assessment and Risk Management Significance Determination Process," Flowchart 1, "Assessment of Risk Deficit," and determined the finding to be of very low safety significance. The inspectors determined the incremental core damage probability deficit (ICDPD) from the licensee's CDF, and the actual duration of the 33 EDG maintenance with external event condition (2.5 hours), and calculated the ICDPD to be 6.5×10^{-9}. Because the calculated risk deficit was not greater that 1×10^{-6} ICDPD, this is a Green finding of very low safety significance.

The inspectors determined that the finding had a human performance cross-cutting aspect because the work week manager did not perform either a qualitative or quantitative risk assessment for EDG maintenance including an external event that risked loss of offsite power and Operations personnel failed to consider appropriate risk management actions from the Severe Weather Preparations procedure.

Enforcement: 10 CFR 50.65 (a)(4), states, "before performing maintenance activities (including but not limited to surveillance, post-maintenance testing, and corrective and preventive maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities. The scope of the assessment may be limited to structures, systems, and components that a risk-informed evaluation process has shown to be significant to public health and safety." Contrary to the above,

the inspectors identified that on January 18, 2006, Entergy failed to assess and manage changing risk conditions due to external events associated with the 33 EDG. Because this finding is of very low safety significance and has been entered into the corrective action program (CR-IP3-2006-00619), this violation is being treated as an NCV, consistent with Section VI.A of the Enforcement Policy: **NCV 05000286/2005006-02, Failure to Perform an Adequate Risk Assessment when required by 10 CFR 50.65(a)(4) for the 33 EDG during Emergent Conditions.**

1R14 Personnel Performance During Non-routine Plant Evolutions and Events (71111.14 - 2 samples)

a. Inspection Scope

For the non-routine planned evolution described below, the inspectors reviewed plant procedures, operator logs, plant computer data, and strip charts to evaluate operator performance in coping with non-routine events and determine if operator response was in accordance with the response required by procedures and training. The observed evolutions constituted two inspection samples.

- On March 16, 2006, inspectors observed operator manual control of plant pressure resulting from removal, testing and replacement of pressure controller PC-455K. The inspectors observed the control room and plant operator's activities to verify that they were performed in accordance with plant procedures and Technical Specifications.

- On March 28, 2006, inspectors observed main turbine stop valve and control valve testing. The inspectors observed the testing from the control room and locally at the turbine, observing plant operator activities to verify that they were performed in accordance with plant procedures and Technical Specifications.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 4 samples)

a. Inspection Scope

The inspectors selected a sample of Entergy's operability evaluations for review on the basis of potential risk significance. The operability evaluations selected as samples are associated with the CRs listed below. The inspectors assessed the accuracy of the evaluations, the use and control of compensatory measures (if needed), and compliance with the Technical Specifications. The inspectors' review included a verification that the operability evaluations were made as specified by procedure ENN-OP-104, "Operability Determinations." The inspectors reviewed the technical adequacy of the evaluations. References used during these reviews included the Technical Specifications, the Technical Requirements Manual, the Final Safety Analysis Report (FSAR), and

associated design basis documents. The specific information reviewed is referenced in the Supplemental Information attachment. The following six operability evaluation reviews were considered inspection samples:

- CR IP3-2006-00044, troubleshooting of power range detector N41 voltage fluctuation;
- CR IP3-2006-00095, increased leakage rate from 34 safety injection accumulator;
- CR IP3-2006-00613, reactor coolant flow transmitters FT-424, FT-444, and FT-445 calibration not within specified range; and,
- CR IP3-2006-00644, condensate storage tank breather valve freezing.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 5 samples)

a. Inspection Scope

The inspectors reviewed post maintenance testing (PMT) procedures and associated testing activities to assess whether: (1) the effect of testing in the plant had been adequately addressed by control room personnel; (2) testing was adequate for the maintenance performed; (3) acceptance criteria were clear and adequately demonstrated operational readiness consistent with design and licensing documents; (4) test instrumentation had current calibrations, range, and accuracy for the application; and (5) test equipment was removed following testing.

The selected testing activities involved components that were risk significant as identified in the Unit 3 Individual Plant Examination. The specific information reviewed is referenced in the Supplemental Information attachment to this report. The following testing activities were evaluated, and constituted five inspection samples:

- Work order I3-010407302, post-work test (PWT) for BFD-FCV-406B overhaul;
- Work order IP3-06-00695, VS-PCV-1190 containment pressure relief isolation repairs;
- Work order IP3-04-14159 and IP3-05-10095, PWT for 18M re-pack of 34 service water pump and pump vacuum breaker inspect/replace and 1Y inspection on 34 service water pump Zurn strainer;
- Work order IP3-05-22256, PWT for 32 component cooling water pump; and
- Work order IP3-05-21802, PWT for 36 service water piping repair.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 - 6 samples)

a. Inspection Scope

The inspectors observed portions of the surveillance tests listed below and reviewed the test procedures to assess whether: (1) the test preconditioned any of the components; (2) the effect of the testing was adequately addressed in the control room; (3) the scheduling and conduct of the tests were consistent with plant conditions; (4) the acceptance criteria demonstrated system operability consistent with design requirements and the licensing basis; (5) the test equipment range and accuracy were adequate for the application, and the test equipment was properly calibrated; (6) the test was performed in the proper sequence in accordance with the test procedure; and (7) the affected system was properly restored to the correct configuration following the test. The specific information reviewed is referenced in the Supplemental Information attachment to this report. The inspection of the following tests represented six inspection samples:

- SR 3.4.13.1, "RCS Leakage Determination;"
- 3-PT-Q120A, Revision 10, "31 ABFP (Motor Driven) Surveillance Test and IST;"
- 3-PC-Q109A, Revision 5, "Nuclear Power Range Channel N41 Axial Offset Calibration;"
- 3-PT-M079C, Revision 33, "33 EDG Functional Test;"
- 3-PT-Q088, Revision 15, "32 Component Cooling Pump Functional Test;" and
- 3-PT-Q134A, Revision 0, "31 RHR Pump Functional Test and AC-732 Stroke Test."

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23 - 1 sample)

a. Inspection Scope

The inspector reviewed documentation on Temporary Alteration TA-06-3-017, "Remove Channel Failure Alarm from Control Room Overhead Annunciator." The inspectors assessed the temporary modification, any planned compensatory actions, and reviewed drawings to evaluate any potential impact on equipment indications, alarms, or protective functions.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04 - 1 Sample)

a. Inspection Scope

The NRC had received and acknowledged the changes made to the Indian Point Entergy Center Emergency Plan and implementing procedures. The changes were made in accordance with 10 CFR 50.54(q), which the licensee had determined did not result in a decrease in effectiveness to the Plan and concluded that the changes continued to meet the requirements of 10 CFR 50.47(b) and appendix E to 10 CFR 50. During this in-office inspection, the inspector conducted a sampling review of the changes which could potentially result in a decrease in effectiveness. This review does not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 4. The requirements in 10 CFR 50.54(q) were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies (71114.05 - 2 samples)

a. Inspection Scope

The inspectors evaluated Entergy's corrective actions taken in regard to the current Indian Point alert and notification system, as described in Entergy's letter to the NRC, dated October 25, 2005. The inspection was conducted March 7 through 15, 2006, outside of the normal emergency preparedness baseline inspection program. This deviation from the baseline inspection program was authorized by the NRC Executive Director of Operations in a memorandum signed October 31, 2005.

Entergy had completed a number of corrective actions for the Indian Point siren system since the NRC's Emergency Preparedness program inspection conducted in November 2005. These corrective actions included:

- Installation of parallel data communication lines to provide redundancy to the existing frame relay;
- New routers as the interface between the data communication system and the siren control system;
- Installation of a high-speed data communication line between the siren activation points and the siren control system, as a backup to the frame relay network;
- Real-time monitoring of the data communication lines; and
- Indian Point on-site monitoring of siren performance to allow for the notification of Entergy duty personnel on a system failure.

The inspectors discussed the implementation of these corrective actions with the Indian Point Information Technology supervisor and reviewed all condition reports written

against the siren system since the November 2005 inspection in order to assess the effectiveness of the actions.

The inspectors observed the performance of the quarterly siren test conducted on March 8, 2006, to assess the effectiveness of the corrective actions and the performance of the siren system. The inspectors monitored the test from the Indian Point Emergency Operations Facility and observed the initial activation of 138 of the 156 sirens: one failed siren had a pre-existing power supply problem; two had a communications failure; and 15 failed to activate when a siren repeater was prevented from operating due to local radio frequency interference. The inspectors were present when the siren test was invalidated by the failure of the siren feedback system to confirm proper operation of the 138 activated sirens.

The inspectors returned to the site Emergency Operations Facility on March 15, 2006, for a repeat performance of the quarterly siren test. Entergy had determined the cause of the March 8 feedback system failure to be a lock-up of the operating system on the siren control system server. Entergy had also determined that the server could have been recovered by re-booting the computer and reinitiating siren activation. Entergy had not re-booted the server on March 8, in order to capture data from the computer hard drive. The inspectors discussed the failure mechanism and planned corrective actions with a number of information technology specialists and observed the successful performance of the siren test, in which all 156 sirens successfully activated and sounded.

While on-site, the inspectors also discussed with the assigned design engineer the vendor selection and design plans for the new siren system Entergy plans to install. This new siren system is intended to meet the requirements of the Energy Policy Act of 2005 and of the NRC's Confirmatory Order dated January 31, 2006.

In addition to observing the March 8 and March 15 full siren sounding tests from the Indian Point Emergency Operating Facility, the inspectors also observed from the Rockland County and Westchester County Emergency Operation Centers, and at various siren locations in Rockland and Westchester Counties. The observations of these two siren tests constituted two samples.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation (71114.06 - 1 sample)

a. Inspection Scope

The inspectors observed an Emergency Preparedness drill conducted on February 1, 2006. The inspectors used NRC Inspection Procedure 71114.06, "Drill Evaluation" as guidance and criteria for evaluation of the drill. The drill consisted of an Emergency Response Organization Drill. The inspectors observed the drill and conducted reviews

from the Indian Point Energy Center Emergency Operations Facility. The inspectors focused the reviews on the identification of weaknesses and deficiencies associated with the classification and notification timeliness, accuracy, and accountability of essential personnel during the drill. The inspectors were briefed on Entergy's critique results and compared these results with NRC-identified weaknesses and deficiencies to ensure that problem areas were properly identified. The review constituted one inspection sample.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 - 3 samples)

a. Inspection Scope

The inspectors reviewed the licensee's data submitted to the NRC for the performance indicators (PIs) listed below, and performed an independent verification that the source data was consistent with plant records. The inspectors reviewed the licensee's collecting and reporting process for PI data as described in procedure SAO-114, "Preparation of NRC and WANO Performance Indicators." The purpose of these reviews was to determine whether the methods for reporting PI data were consistent with the guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revision 2. The inspection included a review of the indicator definitions, data reporting elements, calculation methods, definition of terms, and clarifying notes for the performance indicators. Plant records and data, including operator log entries, daily morning reports (including daily CR descriptions), monthly operating reports and PI data sheets were sampled and compared to the reported data. In addition, the inspectors also interviewed licensee personnel responsible, as necessary for the PI data collection, evaluation, and distribution. This inspection activity represents the completion of three samples.

Reactor Safety Cornerstone

- Unplanned Scrams per 7,000 Critical Hours (January 2004 - December 2005)
- Scrams with a Loss of Normal Heat Removal (January 2004 - December 2005)
- Safety System Unavailability - Auxiliary Feedwater System (January 2004 - December 2005)

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution (71152)

.1 Daily Review

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive failures or specific human performance issues for follow-up, the inspectors screened all items entered into Entergy's corrective action program. This review was accomplished by reviewing hard copies or computer records of each condition report.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

.1 Institute of Nuclear Power Operations (INPO) Plant Assessment Report Review

a. Inspection Scope

The inspectors reviewed the final report for the INPO plant assessment of Indian Point Energy Center conducted in July 2005. The inspectors reviewed the report to ensure that issues identified were consistent with the NRC perspectives of licensee performance and to determine if any significant safety issues were identified that required further NRC follow-up.

b. Findings

No findings of significance were identified.

4OA6 Meetings, including Exit

Exit Meeting Summary

On March 28, 2006, the inspectors presented the inspection results to Mr. Paul Rubin and other Entergy staff members, who acknowledged the inspection results presented. Entergy did not identify any material as proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

F. Dacimo, Site Vice President
P. Rubin, General Manager, Plant Operations
J. Ventosa, Director, Engineering
J. Comiotes, Director, Nuclear Safety Assurance
E. O'Donnell, IP3 Operations Manager
A. Vitale, Site Operations Manager
T. Barry, Security Manager
T. Carson, Manager, Maintenance
P. Conroy, Manager, Licensing
F. Inzirillo, Emergency Planning Manager
M. Miele, Project Manager, Operations Support
T. Jones, Licensing Supervisor
L. Lee, Systems Engineering Supervisor
T. Orlando, Manager, Systems Engineering
C. Smyers, Shift Manager, Operations
P. Parker, Superintendent, Maintenance
D. Shah, Systems Engineer
S. Wilkie, Fire Protection Engineer
T. Beasley, Systems Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000286/2006-02-01 NCV Failure to Perform an Adequate Risk Assessment When Required by 10 CFR 50.65(a)(4) for the Appendix 'R' EDG

05000286/2006-02-02 NCV Failure to Perform an Adequate Risk Assessment When Required by 10 CFR 50.65(a)(4) for the 33 EDG during Emergent Conditions

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures:
OAP-008, Rev 0: "Severe Weather Preparations"
IP-SMM-WM-101, Rev 0: "On-Line Risk Assessment"
OD-8, Rev 1: "Guidelines for Severe Weather"

OAP-048, Rev 2: “Seasonal Weather Preparation”

Condition Reports:
IP3-2006-00222 IP3-2006-00619

Section 1R04: Equipment Alignment

Procedures:
3-COL-CC-1, Rev 27: “Component Cooling System”
3-COL-CVCS-1, Rev. 26: “Chemical and Volume Control System”

Drawings
New York Power Authority, 9321-F-27513, Rev 29: “Flow Diagram Auxiliary Coolant System”

Section 1R05: Fire Protection

Procedures:
SMM-DC-901: “IPEC Fire Protection Program Plan”
FP-19, Rev 10: “Fire Door Inspection”
AP-64.1, Rev 2: “Fire Protection/Appendix R Systems and Components Governed by Technical Requirements Manual and Technical Specifications”

Calculations:
IP3-CALC-FP-02795: “Combustible Loading Calculation for IP3 Fire Hazards Analysis, PAB CCW Pump Room”

Condition Reports:
IP3-2006-00840

Section 1R06: Flood Protection Measures

Procedures:
ARP-027, Rev 19: “Fire Display Control Panel”
3-PT-R040, Rev 14: “Transformer Yard Water Deluge Systems Testing”
3-COL-CC-3, Rev 10: “Instrument Air Closed Cooling”

Calculations:
IP3-CALC-FP-00944: “Seismic Analysis of Transformer Deluge Valve Station Piping”

Drawings:
Entergy Dwg No. 9321-F-40903, Rev 29: “Flow Diagram of Plant Fire Protection System”, Sh 1
Entergy Dwg No. 9321-F-40913, Rev 25: “Flow Diagram of Plant Fire Protection System”, Sh 2
New York Power Authority Dwg 9321-F-40913, Rev 5: “Plant Fire Protection System”, Sh 3
New York Power Authority Dwg 9321-F-40913, Rev 20: “Closed Cooling Water System”

Condition Reports:
IP3-2006-00033 IP3-2001-02821

Work Orders:
IP3-03-16683 IP3-05-01912 IP3-04-04645 IP3-05-00904
IP3-05-00902 IP3-05-01527

Miscellaneous:
Indian Point 3 Nuclear Power Plant Individual Plant Examination, Vol 1 & 2
IP3 Operations Document Feedback No. IP3-4436

Section 1R11: Licensed Operator Requalification Program

Procedures:
3-AOP-FW-1, Rev 2: "Loss of Feedwater"
3-AOP-RCP-1, Rev 1: "Reactor Coolant Pump Malfunction"
3-AOP-INST-1, Rev 2: "Instrument/Controller Failures"

Miscellaneous:
IPEC Simulator Guide 3-INPO-AOP-5: HDTP Trips, SG Pressure Channel PI-419C Fails High, RCP Malfunction

Section 1R12: Maintenance Effectiveness

Condition Reports:
IP3-2005-05862 IP3-2005-00053 IP3-2004-01474 IP3-2004-01056
IP3-2006-00439 IP3-2006-00438 IP3-2006-00362 IP3-2006-00327
IP3-2006-00324 IP3-2006-00231 IP3-2006-00029 IP3-2005-02305
IP3-2004-01125

Work Orders
IP3-05-15522 IP3-05-15523 IP3-05-22668

Section 1R13: Maintenance Risk Assessment and Emergent Work Control

Procedures:
IP-SMM-WM-101: "On-Line Risk Assessment"
OAP-008, Rev 0: "Severe Weather Preparations"

Work Orders:
IP3-03-21701

Condition Reports:
IP3-2006-00284 IP3-2006-00387 IP3-2006-00619 IP3-2006-00174
IP3-2006-00222

Miscellaneous:
National Weather Service Bulletin dated 18 Jan 2006, High Wind Warning
Indian Point Unit 2 & 3 LER dated 1/18/2006, Loss of 31 EP Sirens

Section 1R14: Operator Performance During Non-Routine Evolutions

Procedures:
3-SOP-RCS-002, Rev 19: "Pressurizer Pressure Control"
OAP-030, Rev 0:" Infrequently Performed Tests and Evolutions"

Work Orders:
IP3-06-10031 IP3-05-19902

Condition Reports:
IP3-2005-04211 IP3-2005-01272 IP3-2005-02048 IP3-2005-02514
IP3-2005-03499 IP3-2005-03846 IP3-2006-00968

Section 1R15: Operability Evaluations

Procedures:
EN-OP-104: "Operability Determinations"
OAP-026, Rev 0: "Determination of Operability"
3-PC-Q109A, Rev 5: "Nuclear Power Range Channel –14 Axial Offset Calibration"

Calculations:
IP-CALC-05-00249: "Estimate of Gas Volume Quantity Found in SIS Piping"
IP-CALC-05-00949: "Estimate of Nitrogen Gas Accumulation in the RHR system"
IP3-CALC-COND-00755, Rev 0: "Structural Assessment of CST Modification"
IP-CALC-05-00716, Rev 0: "Ultrasonic Examination Report"

Drawings:
Westinghouse Electric Corporation, 6050D89: Power Range Nuclear Inst System, Sheet 1
Westinghouse Electric Corporation, 6050D89: Power Range Nuclear Inst System, Sheet 2

Condition Reports:
IP3-2006-00044 IP3-2005-05836 IP3-2005-05830 IP3-2006-00095
IP3-2005-04369 IP3-2006-00937 IP3-2006-00862 IP3-2006-00854
IP3-2006-00644 IP3-2006-00366 IP3-2006-00653 IP3-2006-00199
IP3-2005-05458

Work Orders:
IP3-05-23662 IP3-05-19395

Miscellaneous:
New York Power Authority, Indian Point 3, System Descriptions, Ch 13, "Excore Nuclear Inst"
Operational Decision Making Issue (ODMI), Rev 5, 12/2/05: "Gas Void Increase in Unit 3 RHR"

Section 1R19: Post-Maintenance Testing

Procedures:
3-VLV-046-AOV, Rev 4: "Copes-Vulcan, Direct Acting Air Operated Control Valve Maintenance"

3-PT-Q120A, Rev 10: “31 ABFP (Motor Driven) Surveillance and IST”
VLV-060-AOV, Rev 3: “Fisher 10" Butterfly Valve Maintenance”
3-PT-Q092D, Rev 10: “34 Service Water Pump Train Operational Test”
OAP-024, Rev 2: “Operations Testing”
TCS-SD-01, Rev 6: “Pressure and Leak Test Requirements”
OAP-030, Rev 0:”Infrequently Performed Tests and Evolutions”

Condition Reports

IP3-2006-00077	IP3-2006-00087	IP3-2006-00093	IP3-2006-00047
IP3-2006-00565	IP3-2005-02827	IP3-2006-00677	IP3-2006-00440
IP3-2006-00215			

Work Orders

I3-010407300	I3-010407302	IP3-05-00047	IP3-03-13456
IP3-06-10649			

Miscellaneous
New York Power Authority, Indian Point 3, System Descriptions, Fig 21.2-1, “Auxiliary Feed Water System “(AFW-01)

Procedures:
IP-SMM-DC-907, Rev 2: “ASME Code Section XI - Repair/Replacement Program”

Section 1R22: Surveillance Testing

Procedures:
3-PT-Q120A, Rev 10: “31 ABFP (Motor Driven) Surveillance and IST”
3-PC-Q109A, Rev 5: “Nuclear Power Range Channel –41 Axial Offset Calibration
3-PT-SA045, Rev 2: “Main Turbine Stop and Control Valves Exercise Test”

Condition Reports

IP3-2006-00077	IP3-2006-00087	IP3-2006-00093	IP3-2006-00565
IP3-2005-02827	IP3-2006-00044	IP3-2005-05836	IP3-2005-05830
IP3-2005-02974	IP3-2005-01272	IP3-2005-02048	IP3-2005-02514
IP3-2005-03499	IP3-2005-03846	IP3-2006-00968	IP3-2006-00215

Work Orders:
IP3-05-19395 IP3-05-00047 IP3-06-00695 IP3-05-19902
IP3-06-10649

Miscellaneous
New York Power Authority, Indian Point 3, System Descriptions, Ch 13, "Excore Nuclear Inst"

1EP4: Emergency Action Level (EAL) and Emergency Plan Changes

Procedures
IP-EP-AD13, Rev 2: "IPEC Emergency Plan Administrative Procedures"
IPEC Emergency Plan, Rev 2 & 3
IP-EP-120, Emergency Classification, Rev 2
IP-EP-250, Emergency Operations Facility, Rev 8

Section 1EP6: Emergency Plan Drill

Procedures
IP-EP-410, Rev 3: "Protective Action Recommendations"
IP-EP-120, Rev 1: "Emergency Classification"
IP-EP-AD13, Rev 2: "IPEC Emergency Plan Administrative Procedures"

Section 4OA1:

Procedures:
IP-SMM-LI-114, Rev 1: "Performance Indicator Preparation Process"

LIST OF ACRONYMS

ABFP	auxiliary boiler feedwater pump
AFW	auxiliary feedwater
AOP	abnormal operation procedure
CAP	corrective action program
CCW	component cooling water
CDF	core damage frequency
CFR	Code of Federal Regulations
CR	condition report
EDG	emergency diesel generator
EOF	Emergency Operations Facility
EOP	emergency operating procedure
EP	emergency preparedness
FSAR	final safety analysis report
ICDPD	incremental core damage probability deficit
INPO	Institute of Nuclear Power Operation
IP3	Indian Point Nuclear Generating Unit 3
IPEC	Indian Point Energy Center

IPEEE	Individual Plant Examination of External Events
LOOP	loss of offsite power
NCV	non-cited violation
NRC	Nuclear Regulatory Commission
PI	performance indicator
RMA	risk management action
RWST	refueling water storage tank
SCBA	self-contained breather apparatus
SDP	significance determination process
SSC	systems, structures, and components
TS	technical specification
TSC	Technical Support Center
WO	work order