November 12, 2004

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 NO. 05000286/2004006

Dear Mr. Dacimo:

On September 30, 2004, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Indian Point Nuclear Generating Unit 3 (IP3). The enclosed integrated inspection report documents the inspection findings, which were discussed on October 14, 2004, with you 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, one finding of very low safety significance (Green) was identified. This finding was determined to be a violation of NRC requirements. However, because of its very low safety significance, and because it was entered into your corrective action program, the NRC is treating this finding as non-cited Violation (NCV) consistent with Section VI.A. of the NRC Enforcement Policy. If you contest the NCV 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 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/

Brian J. McDermott, Chief
Projects Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report No. 05000286/2004006
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.	05000286/2004006
Licensee:	Entergy Nuclear Northeast
Facility:	Indian Point Nuclear Generating Unit 3
Location:	295 Broadway, Suite 3 Buchanan, NY 10511-0308
Dates:	July 1, 2004 - September 30, 2004
Inspectors:	T. Hipschman, Senior Resident Inspector P. Habighorst, Senior Resident Inspector R. Berryman, Resident Inspector M. Cox, Resident Inspector W. Cook, Senior Project Engineer J. Furia, Senior Health Physicist J. Noggle, Senior Health Physicist S. Pindale, Senior Reactor Inspector D. Silk, Senior Emergency Preparedness Inspector
Approved by:	Brian J. McDermott, Chief Projects Branch 2 Division of Reactor Projects

CONTENTS

SUMMARY OF FINDINGS

IR 05000286/2004006; 07/01/2004 - 09/30/2004, Indian Point Nuclear Generating Unit 3; Maintenance Risk Assessment and Emergent Work Control.

The report covers a 3-month period of inspection by resident inspectors, and 5 regional inspectors. One Green NCV and one licensee identified violation were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," (SDP). 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. A self-revealing, non-cited violation of Technical Specification (TS) 5.4.1 was identified involving Entergy's failure to develop a maintenance procedure appropriate for work on 6.9 KV breaker 52/GT5. An unexpected actuation of the 6.9 KV bus transfer block relay occurred when workers attempted to repair a bent cell switch and this rendered the 138 KV source of offsite electrical power temporarily unavailable.

  This finding is greater than minor because it is associated with the Mitigating Systems Cornerstone attribute of procedure quality and adversely affected the Mitigating Systems Cornerstone objective of availability of systems that respond to initiating events to prevent undesirable consequences. Actuation of the 6.9 KV bus transfer block relay prevents a fast-transfer of the power supply to 6.9 KV buses 1 and 2 from the unit auxiliary transformer to the station auxiliary transformer during a turbine trip event and would have left the 31 emergency diesel generator (EDG) as the only source of power to safety-related 480 V buses 2A and 3A. The finding is of very low safety significance because of the short duration (several seconds) that the 138 KV offsite electrical power system was unavailable. (Section 1R13)

B. Licensee-Identified Violations.

The inspectors reviewed one violation of very low safety significance, which was identified by Entergy. Corrective actions taken or planned by Entergy have been entered into Entergy's corrective action program (CAP). This violation and corrective actions are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Indian Point 3 (IP3) operated at or near full power for the entire report period.

1. **REACTOR SAFETY**

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope (71111.01 - 1 sample)

The inspectors reviewed Entergy procedure OAP-008, "Seasonal Weather Preparations," to verify that the checklists were completed in accordance with procedural requirements. On July 12, July 27, August 12, and August 13, 2004, the inspectors walked down outside areas to evaluate the susceptibility of external plant equipment to potential high winds, thunderstorms, tropical storms and hurricanes during that period. The inspectors evaluated accessible areas inside and outside of the plant's operating and auxiliary support structures to assess the adequacy of high wind measures. The inspectors also looked for vulnerable systems or components not previously identified by Entergy. The specific information reviewed is referenced in the Supplemental Information attachment at the end of this report.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope (71111.04Q - 4 samples)

Partial System Walkdowns. 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 assure that Entergy had identified and properly addressed equipment discrepancies that could potentially impair the functional capability of the available train. The specific information reviewed to verify correct system alignment is referenced in the Supplemental Information attachment at the end of this report. The following system walkdowns were performed:

- On July 8, 2004, the inspector performed a partial system walkdown of the chemical and volume control system (CVCS) during and after the maintenance on the 32 charging pump.

- On July 28, 2004, the inspector performed a partial system walkdown of the atmospheric relief valves during and after completion of corrective maintenance on the MS-PCV-1131 atmospheric relief valve.

- On August 3, 2004, the inspector performed a partial system walkdown of the 480 volt electrical distribution system during and after maintenance on the 32 EDG.

- On August 26, 2004, the inspector completed a partial system walkdown of the 31 and 33 safety injection (SI) pumps during and after completion of corrective maintenance on the 33 SI pump outboard mechanical seal.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

1. Routine Inspection

a. Inspection Scope (71111.05Q - 12 samples)

The inspectors toured areas that were identified as important to plant safety and risk significant. The inspectors consulted Section 4.0, "Fire," and the top risk significant fire zones in Table 4.4.4.2, "Core Damage Frequency for Fire Zones," within the Indian Point 3 Individual Plant Examination of External Events (IPEEE). 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; and 3) the fire barriers used to prevent fire damage or fire propagation. Reference material used by the inspectors to determine the acceptability of the observed conditions in the fire zones are referenced in the Supplemental Information section of this report. The areas reviewed were:

C Auxiliary boiler feedwater pump room (Fire Zone 23)
- Station auxiliary transformer (Fire Zone 67A)
- Containment spray pump room (Fire Zone 2)
- 32 coolant charging pump room ((Fire Zone 64)
- 36 battery room (Fire Zone 37A)
- 33 EDG room (Fire Zone 102A)
- Component cooling water pump room (Fire Zone 16)

C 34-ft elevation of the primary auxiliary building in the SI pump room (Fire Zone 9)
- 15-ft elevation of the primary auxiliary building in the residual heat removal (RHR) pump room (Fire Zones 3 and 4)
- 480 volt switchgear room (Fire Zone 14)
- 43-ft elevation of the auxiliary feedwater building at atmospheric steam dump controls (Fire Zone 57A)

- 54-ft elevation of the fan house at upper pipe penetration area (Fire Zone 59A)

2. Annual Inspection

k. Inspection Scope (71111.05A - 1 Sample)

On August 20, 2004, the inspectors observed an unannounced fire brigade drill. The drill was conducted in accordance with Entergy's preplanned drill scenario and simulated an electrical and lubricant fire in the 32 instrument air compressor. The drill was a routine training exercise for current fire brigade members. The inspectors evaluated the readiness of the fire brigade to suppress and contain the fire, and evaluated the following aspects of the drill:

- The fire brigade properly donned protective clothing/turnout gear.
- Self-contained breathing apparatus (SCBA) equipment was properly worn and used.
- Fire hose lines were capable of reaching all necessary fire hazard locations, were laid out without flow restrictions, and were simulated as charged with water.
- Brigade members entered the fire area in a controlled manner.
- Sufficient fire fighting equipment was brought to the scene by the fire brigade.
- The fire brigade leader's fire fighting directions were thorough, clear and effective.
- Radio communications with the plant operators and between fire brigade members were efficient and effective.
- Members of the fire brigade checked for fire victims and propagation into other plant areas.
- Effective smoke removal operations were simulated.
- The fire fighting pre-plan strategies were utilized.
- Entergy's pre-planned drill scenario was followed.
- The drill objectives and acceptance criteria were met.

The inspectors also observed the post-drill critique and evaluated it for thoroughness and degree of critical self-assessment.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope (71111.06 - 1 internal & 1 external sample)

The inspector reviewed Entergy's internal and external flood analysis, flood mitigation procedures and design features to verify whether they were consistent with IP3's design requirements. The inspector walked down selected external and internal 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 and operable. The specific information reviewed is referenced in the Supplemental Information attachment at the end of this report. The specific areas walked down by the inspector included:

- Service water (SW) strainer pit
- Condensate polishing facility
- 15-ft elevation of the control building
- 12-ft elevation of the turbine building

The inspector reviewed Entergy's flood mitigation procedures, selected preventive maintenance and surveillance procedures on flood alarms and SW strainer pit sump pumps. In addition, the inspector reviewed the CAP to verify whether previous flood related issues had been appropriately evaluated and resolved. The specific information reviewed is referenced in the Supplemental Information attachment at the end of this report.

b. Findings

No findings of significance were identified.

1R11 Operator Requalification Inspection

a. Inspection Scope (71111.11Q - 1 sample)

On August 2, 2004, the inspectors observed simulator training for licensed operators on Operations Team "3-B." 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 inspectors evaluated the team's performance for: 1) clarity and formality of communications; 2) correct use and implementation of emergency operating procedures (EOPs) and off-normal operating procedures (ONOPs); 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 that they identified specific areas for improvement, and that they 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.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors evaluated Entergy's work practices and follow-up corrective actions for selected systems, structures, and components (SSC) issues 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 following issues were reviewed:

- The inspector reviewed maintenance activities to correct repetitive failures of the central control room (CCR) air conditioning system. The system experienced a number of failures that were related to maintenance activities and material problems during the previous quarter. To date, several different corrective actions have been implemented, including adjusting the belts on the compressor. The inspector discussed these corrective actions with operations, engineering, maintenance personnel. Additionally, the inspectors reviewed maintenance, post work and surveillance test data.

- The inspector reviewed maintenance activities to correct minor deficiencies associated with the safety injection system, such as valve packing and pump mechanical seal leakage. To date, several different corrective actions have been implemented, including adjusting the valve packing and replacing the mechanical seal on the 31 safety injection pump. The inspector discussed these corrective actions with operations, engineering, maintenance personnel. Additionally, the inspectors reviewed maintenance, post work and surveillance test data.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Control

a. Inspection Scope (71111.13 - 9 samples)

The inspector observed selected portions of emergent 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 referenced in the Supplemental Information attachment at the end of this report. The following six emergent and three planned activities were observed:

- CR IP3-2004-03270: The inspectors verified the operability of affected components due to 32 and 33 electrical tunnel fans being inoperable while performing scheduled maintenance on the 34 DC distribution panel.
- 3PT-C01: The inspectors reviewed Entergy's unidentified leak rate plan due to elevated unidentified reactor coolant system (RCS) leakrates.
- WO IP3-02-20551: Cubicle preventive maintenance on 13.8 KV breaker 52/GT5.
- WO IP3-04-06022: Repair of 32 fuel oil storage tank level indications after discovering a failed connector during re-assembly of the instrument connections after tank testing.
- WO IP3-04-06023: Repair of jacket water leakage from instrument line on the 32 EDG.
- WO IP3-04-17404: Replacement of Foxboro transmitter for refueling water storage tank level indicator LI-920. The inspectors verified Entergy response to the discovery of one of the indicators reading below the required level in the tank.
- WO IP3-04-17887: Replacement of temperature indicating module for 33 reactor coolant pump (RCP) seal return temperature indicator TI-132.
- WO IP3-04-15451: Troubleshooting and repair of positive ground on the 31 battery charger due to bare wire on 31B moisture separator drain tank level switch LC-1106S.
- WO IP3-04-05950: Troubleshooting and repair of a failed unit parallel relay on the 32 EDG.

b. Findings

Introduction. A self-revealing, Green non-cited violation of Technical Specification (TS) 5.4.1 was identified involving Entergy's failure to develop a maintenance procedure appropriate for work on 6.9 KV breaker 52/GT5. An unexpected actuation of the 6.9 KV bus transfer block relay occurred when workers attempted to repair a bent cell switch and this rendered the 138 KV source of offsite electrical power temporarily unavailable.

Description. On July 26, 2004, Entergy maintenance technicians performed work on 6.9 KV breaker 52/GT5 and discovered that the breaker cubicle cell switch was bent. The maintenance technicians attempted to repair the actuating arms under the existing work order (WO IP3-04-20551). While attempting to repair the actuating arms, the maintenance technicians actuated the cell switch while breaker 52/GT5 was removed. This caused the "6900 BUS TRANSF BLOCK" alarm to actuate in the CCR and the 6.9 KV bus transfer block relay to actuate. Plant operators investigated the cause of the problem and halted the maintenance on the cell switch.

The operations impact summary of WO IP3-04-20551 did not include a discussion about the potential to cause the "6900 BUS TRANSF BLOCK" alarm to actuate in the CCR or the loss of the fast-transfer feature to power safety-related 480V buses 2A and 3A from the station auxiliary transformer during a turbine trip event. The maintenance technicians did not expect that any adverse impacts would result from their activities to correct minor deficiencies within the 52/GT5 breaker cubicle based on the approved WO.

Actuation of the 6.9 KV bus transfer block relay prevents a fast-transfer of the power supply to 6.9 KV buses 1 and 2 from the unit auxiliary transformer to the station auxiliary transformer during a turbine trip event. This would have left the 31 EDG as the only source of power to safety-related 480 V buses 2A and 3A had a turbine trip occurred during the period that the 6.9 KV bus transfer block was actuated.

Analysis. Entergy's failure to develop a maintenance procedure appropriate for work on 6.9 KV breaker 52/GT5 is a performance deficiency associated with the Mitigating Systems Cornerstone, and is contrary to NRC regulations. Traditional enforcement does not apply because an event did not occur that resulted in an actual safety consequence, the failure to have an adequate procedure did not impact the NRC's regulatory function, and was not the result of a willful violation of NRC requirements or Entergy procedures. The finding is greater than minor because it is associated with the Mitigating Systems Cornerstone attribute of procedure quality and adversely affected the objective of availability of systems that respond to initiating events to prevent undesirable consequences. The finding involved the unavailability of a TS required source of offsite power (TS 3.8.1.A), and the evaluation used the screening criteria in the Phase I SDP worksheet for Initiating Events, Mitigating Systems and Barrier Integrity Cornerstones. The finding was determined to be of very low risk significance (Green), because the offsite power source was unavailable for less than the TS allowed outage time (10 seconds compared to 24 hours) and the 31 EDG remained operable for the duration of the period that the fast-transfer feature for safety-related 480V buses 2A and 3A were blocked.

This finding is associated with the cross-cutting area of human performance, in that operators and maintenance technicians did not recognize the potential impact on availability of offsite power sources due to the breaker 52/GT5 cubicle maintenance. This error impacted the availability of mitigating systems (see Section 4OA4).

Enforcement. Technical Specification 5.4.1, "Procedures," requires in part that written procedures be established, implemented, and maintained per Regulatory Guide (RG) 1.33. Appendix A to RG 1.33 states that maintenance that can affect the performance of safety-related equipment should be properly preplanned and performed in accordance with written procedures, appropriate to the circumstances. Contrary to the above, Entergy did not properly implement procedures appropriate to the circumstances during maintenance on breaker 52/GT5 cubicle cell switch. Because the failure to implement appropriate procedures was entered into Entergy's CAP (reference CR-IP3-2004-02624), this violation is being treated as an NCV consistent with Section VI.A. of

the NRC Enforcement Policy. **(NCV 05000286/2004006-01: Failure to provide adequate maintenance procedure for work on breaker 52/GT5)**

1R14 Personnel Performance During Non-routine Plant Evolutions and Events

a. Inspection Scope (71111.14 - 1 sample)

For the non-routine event described below, the inspectors reviewed operator logs, plant computer data, and strip charts to determine what occurred and how the operators responded, and to determine if the response was in accordance with plant procedures.

- On August 12, 2004, the inspectors observed the control room and plant operator activities during a lightning strike and resulting disturbances on the 138KV offsite power system. The inspectors verified Entergy conducted 3PT-W019, "Electrical Verification - Offsite Power Sources and AC Distribution."

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope (71111.15 - 5 samples)

The inspectors selected operability evaluations that Entergy had generated that warranted 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 TSs. The inspectors' review included a verification that the operability evaluations were made as specified by procedure ENN-OP-104, "Operability Determinations." The technical adequacy of the evaluations was reviewed. References used during these reviews included the TS, 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 at the end of this report.

- CR IP3-2004-02382 High frequency output of 33 EDG.
- CR IP3-2004-02249 SW piping wall thinning at the discharge of the EDGs
- CR IP3-2004-03005 Carbon steel plug installed on 33 SI pump outboard pump casing stuffing box
- CR IP3-2004-00626 Reduced 32 RCP seal leakoff
- CR IP3-2004-01431 Increasing Xe133 chemistry trend

b. Findings

No findings of significance were identified.

1R16 Operator Workarounds

a. Inspection Scope (71111.16 - 2 samples)

The inspectors performed a cumulative review of operator workarounds to identify any potential effects on the functionality of mitigating systems and impacts on the operators. The inspectors reviewed workarounds and burdens identified by Entergy and performed an evaluation of selected WOs and deficiencies to ensure Entergy was appropriately classifying these issues. The inspectors evaluated deficiencies for effects on the reliability and availability, and the potential for mis-operation of a mitigating system. The inspector also reviewed the cumulative impact of deficiencies on the operators' ability to respond in a correct and timely manner to plant transients.

Additionally, the inspectors reviewed the following three current "operator burdens" to determine if they should have been classified as "operator workarounds," and to identify any potential effects on the functionality of mitigating systems and impacts on the operators:

- 31 sparging pump leaks (IP3-02-01053)
- Fire water storage tank fill system not in auto (IP3-03-10865)
- RWST temperature controller (IP3-03-25396).

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope (71111.17 - 1 sample)

The inspectors reviewed the engineering reevaluation of steam line breaks outside containment for environmental qualification purposes (WO IP3-02-24125 and EVL 02-3-123-MS) to verify that the design bases, licensing bases, and performance capability of risk significant SSCs have not been degraded through modifications. As a result of a change in the mass-energy model used by Westinghouse, Entergy found that the peak temperatures assumed in the original Final Safety Analysis Report (FSAR) were non-conservative. The evaluation looked at specific safety-related cables, switches and solenoid valves located in the auxiliary feedwater building. The inspectors reviewed the calculations, test data and thermal analyses involved with this analysis. The specific information reviewed is referenced in the Supplemental Information attachment at the end of this report. The inspectors also conducted walk-downs to compare installed equipment to the equipment that was analyzed.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope (71111.19 - 9 samples)

The inspectors reviewed 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 IP3 Individual Plant Examination. The regulatory references for the inspection included TS 6.8.1.a and 10 CFR 50, Appendix B, Criteria XIV, "Inspection, Test, and Operating Status." The specific information reviewed is referenced in the Supplemental Information attachment at the end of this report. The following testing activities were evaluated:

- WO IP3-03-24373: PWT after rebuilding MS-PCV-1135 32 steam generator atmospheric dump valve performed on July 1, 2004.
- WO IP3-04-13929: PWT after preventive maintenance and inspection of the 32 containment spray pump power supply breaker cubicle performed on July 13, 2004.
- 3PT-Q117B, "33 Safety Injection Pump Functional Test," following maintenance to replace the outboard mechanical seal on the 33 SI pump, performed on August 10, 2004.
- WO IP3-04-17384: PWT after repairs to 32 CCR ventilation system filter booster fan performed on August 17, 2004.
- WO IP3-04-17438: PWT after replacement of 34 auxiliary feedwater flow indicator differential pressure sensor low side drain valve performed on August 25, 2004.
- WO IP3-04-16100: PWT after repairs to the 32 EDG unit parallel relay.
- WO IP3-03-20317: PWT following replacement of the 32 boric acid transfer pump rotating element performed on September 1, 2004.
- 3PT-Q97, "Steam Generator Analog Functional Test," following calibration of the steam generator narrow range level instrumentation on September 23, 2004.
- WO IP3-03-022667, IP3-04-15103, and IP3-04-17933. 3PT-Q116B, "32 Safety Injection Pump Functional Test," following maintenance to correct minor oil leaks on the 32 SI pump, performed on September 30, 2004.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope (71111.22 - 9 samples)

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 at the end of this report.

- 3PT-Q120B, “32 ABFP (Turbine Driven) Surveillance and IST,” performed on July 2, 2004.
- SOP-RCS-005, “Reactor Coolant Leakage Evaluation,” performed on July 11, 2004.
- 3PT-M62A, B, C, “480V UV Degraded Grid Protection,” on July 22, 2004.
- 3PT-M079A, “32 EDG Functional Test,” on August 2, 2004.
- 3PT-M064, “Periodic Verification of Containment Isolation Valves,” on August 29, 2004.
- 3PT-Q031, “Inservice Inspection Test Liquid Waste Disposal System Containment Isolation Valves,” performed on August 26, 2004.
- 3PT-EM29, "Cable Tunnel Vent Fans Functional Test," performed on September 29, 2004, for fans 21 and 22.
- 3-PT-W10, "Weekly Battery Surveillance Requirements," performed on September 29, 2004, and associated WO IP3-03-25957.
- 3PT-R111, “Area Temperature Sensors in PAB - Functional Test,” performed on September 30, 2004, and associated CR IP3-2004-03389.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope (71111.23 - 1 sample)

The inspector reviewed documentation on Temporary Alteration No: TA-04-3-047 “Install alternate EDG SW flow for 31 EDG during flange weld repairs of valve SWN-55.” The SW discharge from all three EDGs normally flows through a common header and valve SWN-55. The modification involved installing a flange on the 31 EDG jacket water cooler with a valve and hose connection attached to the flange to direct SW flow from

the EDG jacket water cooler and into the room drain. The specific information reviewed is referenced in the Supplemental Information attachment at the end of this report.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope (71114.06 - 1 sample)

The inspectors observed an EP drill conducted on September 22, 2004. The drill consisted of a security credible threat followed by a large break loss of coolant accident and failure of emergency core cooling systems. The drill also included use and implementation of the Severe Accident Control Room Guidelines for Technical Support Center (TSC) personnel. The inspectors observed the drill and conducted reviews from the participating facilities onsite, including the IP2 Plant Simulator, the TSC, and the Emergency Operations Facility (EOF). The inspectors focused their reviews on the classification, notification, and protective action recommendation activities performed by Entergy during the drill. The inspectors compared NRC identified issues to those identified by Entergy's critique to ensure that problem areas were properly identified.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Public Radiation Safety

2PS1 Gaseous and Liquid Effluents

a. Inspection Scope (71122.01 - 10 samples)

The inspector reviewed the documents and issues listed below to evaluate the effectiveness of Entergy’s radioactive gaseous and liquid effluent control programs. The requirements for radioactive effluent controls are specified in the TSs and the Offsite Dose Calculation Manual (ODCM).

- The 2002 and 2003 Radiological Annual Effluent Release Reports were reviewed including projected public dose assessments. There were no abnormal results reported in these two reports. The current ODCM (Revision 16) was reviewed including technical justifications for any changes made since the previous revision. The inspector reviewed FSAR Sections 11.1 and 11.2, which describe

the radioactive waste systems and radiation monitoring system (RMS). The latest QA audit (IPEC Quality Assurance Audit Report, A03-0141) and effluents program self-assessment (Liquid Radiological Release, IP3-LO-2003-00402) were also reviewed.

- The inspector observed the following plant equipment and work activities to evaluate the effectiveness of Entergy's radioactive gaseous and liquid effluent control programs:

  - walkdown to determine the availability of radioactive liquid/gaseous effluent RMS and to determine the equipment material condition;
  - observation of sampling and laboratory measurement techniques;
  - walkdown to determine the operability of air cleaning systems and to determine the equipment material condition:
  - observation of the weekly administration building ventilation air sample collection, counting and analysis; and
  - observation of the R-20 waste gas radiation monitor biennial detector calibration.

- Two radioactive liquid waste batch release permits (Nos. 4322 and 4394), and three radioactive gaseous release permits (Nos. 3611, 3744 and 3743) were selected and reviewed with respect to ODCM and procedural requirements.

- Three instances of effluent RMS unavailability were selected to verify implementation of the compensatory sampling and analysis program by validation that required effluent sampling and analysis was provided.

- Changes to the ODCM (Revision 16) were reviewed along with the technical justification for each change. No significant changes to the liquid or gaseous radioactive waste system design or operation were identified.

- Effluent release dose calculations were reviewed for 2003 and the first two quarters of 2004 with respect to TS/ODCM calculation methodology, and 10 CFR 50, Appendix I public dose requirements. The inspector verified the methods used and that no regulatory requirements were exceeded.

- The inspector reviewed the most recent air cleaning system filter surveillance test results required by TSs (visual inspection, pressure differential, in-leakage tests, laboratory charcoal efficiency test, and air flow capacity tests) for the following:

  - fuel storage building emergency ventilation system;
  - CCR ventilation system;
  - containment fan cooler units (31-34); and
  - containment purge system.

- The inspector reviewed the most recent calibration results for the gaseous and liquid effluent RMS radiation monitors and associated flow rate measurement devices, as required by the ODCM for the following:

  - liquid radwaste effluent line (R-18);
  - steam generator blowdown effluent line (R-19);
  - condenser air ejector radiation monitor (R-15);
  - containment particulate and gaseous radiation monitors (R-11, R-12);
  - plant vent wide range radiation monitor (R-27);
  - plant vent narrow range radiation monitor (R-14)
  - CVCS liquid effluent flow transmitter (FT-1064);
  - waste gas holdup system radiation monitor (R-20);
  - main steam line radiation monitors (R-62 A-D); and
  - SW effluent radiation monitors (R-16A&B, R-23).

- Effluent liquid and gas sample radiation measurement equipment calibrations were reviewed for currently in-use high purity germanium gamma spectrometers and liquid beta scintillation counters. Selected counting equipment quality control charts were reviewed that documented continued operability of this equipment.

- Implementation of the measurement laboratory quality control program was reviewed, including effluent intra-laboratory and inter-laboratory comparisons. In addition, the inspector reviewed the 2003 QA audit (Audit No. A03-0141) of the radioactive liquid and gaseous effluent control program and the ODCM.

- The inspector also reviewed the following effluent program self-assessments: "Liquid Radiological Release," IP3-LO-2003-00402; and "Liquid Effluents Optimization Plan at IPEC," Rev. 0. The inspector also reviewed 24 condition reports (CRs) associated with the Indian Point Unit 3 effluents program between January 2003 and July 2004. (See Section 4OA2.3)

b. Findings

No findings of significance were identified.

2PS3 Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope (71122.03 - 9 Samples)

The inspector reviewed: the most current Annual Environmental Monitoring Report (Annual Radiological Environmental Operating Report, Entergy Nuclear Northeast, Indian Point Units 1, 2, and 3, January 1 - December 31, 2003) and Entergy assessment results to verify that the REMP was implemented as required by TS and the ODCM and for changes to the ODCM with respect to environmental monitoring, commitments in terms of sampling locations, monitoring and measurement frequencies, land use census, inter-laboratory comparison program, and analysis of data; the ODCM (Unit 2,

Revision 8; Unit 3, Revision 16) to identify environmental monitoring stations; Entergy self-assessments, audits, Licensee Event Reports (LERs), and inter-laboratory comparison program results; the FSAR for information regarding the environmental monitoring program and meteorological monitoring instrumentation; and, the scope of Entergy's audit program to verify that it meets the requirements of 10 CFR 20.1101(c).

The inspector walked down 6 (of 9) air sampling stations; 1 (of 3) broadleaf vegetation locations; 1 (of 2) rainwater collection location; and, 13 (of 41) thermoluminescence dosimeter (TLD) monitoring stations and determined that they were located as described in the ODCM and determined the equipment material condition to be acceptable.

The inspector observed the collection and preparation of a variety of environmental samples (listed above) and verified that environmental sampling was representative of the release pathways as specified in the ODCM and that sampling techniques were in accordance with procedures.

Based on direct observation and review of records, the inspector verified that the meteorological instruments were operable, calibrated, and maintained in accordance with guidance contained in the FSAR, NRC Safety Guide 23, and Entergy procedures. The inspector verified that the meteorological data readout and recording instruments in the control room and at the tower were operable.

The inspector reviewed each event documented in the Annual Environmental Monitoring Report which involved a missed sample, inoperable sampler, lost TLD, or anomalous measurement for the cause and corrective actions. The inspector conducted a review of Entergy's assessment of any positive sample results.

The inspector reviewed any significant changes made by Entergy to the ODCM as the result of changes to the land census or sampler station modifications since the last inspection. The inspector also reviewed technical justifications for any changed sampling locations and verified that Entergy performed the reviews required to ensure that the changes did not affect its ability to monitor the impacts of radioactive effluent releases on the environment.

The inspector reviewed the calibration and maintenance records for all air samplers. The inspector reviewed: the results of Entergy's contractor interlaboratory comparison program to verify the adequacy of environmental sample analyses performed by Entergy's contractor; Entergy's quality control evaluation of the interlaboratory comparison program and the corrective actions for any deficiencies; Entergy's determination of any bias to the data and the overall effect on the REMP; and QA audit results of the program to determine whether Entergy met the TS/ODCM requirements. The inspector verified that the appropriate detection sensitivities with respect to TS/ODCM were utilized for counting samples and reviewed the results of the vendor's quality control program including the interlaboratory comparison program to verify the adequacy of the vendor's program.

The inspector observed several locations where Entergy monitors potentially contaminated material leaving the radiologically controlled area (RCA), and inspected the methods used for control, survey, and release from these areas, including observing the performance of personnel surveying and releasing material for unrestricted use verifying that the work was performed in accordance with plant procedures.

The inspector verified that the radiation monitoring instrumentation was appropriate for the radiation types present and was calibrated with appropriate radiation sources. The inspector reviewed Entergy's criteria for the survey and release of potentially contaminated material; verified that there was guidance on how to respond to an alarm which indicates the presence of licensed radioactive material; and reviewed Entergy's equipment to ensure the radiation detection sensitivities were consistent with the NRC guidance contained in IE Circular 81-07 and IE Information Notice 85-92 for surface contamination and HPPOS-221 for volumetrically contaminated material (SMM-RP-801, Rev 0, Radiological Control of Volumetric Material; RE-CON-3-4, Rev 11, Release of Material from the Radiologically Controlled Area; O-RP-RMC-800, Rev 0, Release of Equipment and Materials from the Radiologically Controlled Area). The inspector also reviewed Entergy's procedures and records to verify that the radiation detection instrumentation was used at its typical sensitivity level based on appropriate counting parameters and verified that Entergy had not established a "release limit" by altering the instrument's typical sensitivity through such methods as raising the energy discriminator level or locating the instrument in a high radiation background area.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope (71151 - 2 Samples)

The inspectors sampled Entergy submittals for the performance indicators (PIs) listed below for the period from January 2003 through March 2004. To verify the accuracy of the PI data reported during that period. The inspectors used PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline," Rev. 2, to verify the basis in reporting for each data element.

Reactor Safety Cornerstone

- Safety System Unavailability - Residual Heat Removal
- Safety System Unavailability - High Pressure Injection

The inspectors reviewed a selection of LERs, portions of operator log entries, daily morning reports (including the daily CR descriptions), the monthly operating reports, and PI data sheets to determine whether Entergy adequately identified the number of

safety system unavailability hours that occurred during the previous four quarters for the RHR and high pressure injection systems. This number was compared to the number reported for the PI during the current quarter. In addition, the inspectors also interviewed Entergy personnel associated with the PI data collection, evaluation, and distribution.

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

1. Daily Review

a. Inspection Scope (71152)

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 CAP. This review was accomplished by reviewing hard copies of each CR.

b. Findings

No findings of significance were identified.

2. PI&R Annual Sample - Post Work Testing and Work Order Closeout

a. Inspection Scope (71152 - 1 sample)

During a review of WOs involving PMT and surveillance testing, the inspectors noted that many WOs did not follow Entergy's administrative procedures for closure. To follow up on this issue, the inspectors selected several WOs for safety-related components which required PMT or surveillance testing, to assess the effectiveness of Entergy's corrective actions. The documents reviewed are listed in the Supplemental Information attachment to this report.

The inspectors evaluated Entergy's corrective actions to ensure that they were appropriately focused to correct the identified problems. The procedures were reviewed to verify that appropriate changes had been made to properly implement the prescribed corrective actions. The inspectors also evaluated the changes for technical adequacy.

b. Findings

No findings of significance were identified.

3. PI&R Annual Sample - Closeout of Historical Open Action Items

a. Inspection Scope (71152 - 1 sample)

The inspectors selected CR IP3-2003-05448 which documented 73 historical open action items, for detailed review. These open items were initiated in the corrective action system previously used by Entergy (ACTS items). Quality Assurance identified this issue and initiated the CR. The historical ACTS items were associated with fire protection codes, updates of design basis documents, fire hazard analysis, modifications, safety evaluations, and audit recommendations. The inspectors reviewed CR-IP3-2003-05448, interviewed personnel, and reviewed associated documents to ensure that the full extent of the issue was identified, an appropriate evaluation was performed, and appropriate corrective actions were specified, prioritized, and implemented. The inspectors evaluated these items against the requirements of Entergy's CAP as delineated in EN-LI-102, "Corrective Action Process."

b. Findings

No findings of significance were identified

4. PI&R Annual Sample - Emergency Preparedness

a. Inspection Scope (71152 - 1 sample)

The inspector reviewed Entergy's processes for identification and resolution of issues under the purview of the EP program. The inspector focused on the operation, maintenance, programmatic controls, and corrective actions associated with the alert and notification system (ANS). Reasons for actual and indicated siren failures for 2004 were reviewed to identify adverse trends. Included in these reviews were investigations into the potential impact of degraded grid voltage on the siren system. Also, siren outage and maintenance data was reviewed to assess the timeliness and effectiveness of Entergy repairs and maintenance. The inspector reviewed activities associated with the outage of the primary meteorological tower just prior to the June 8, 2004 full-participation exercise. Also, the inspector reviewed the purpose, status, and planned actions for the local government radio (LGR) and its role in emergency communications. The inspector reviewed documentation and conducted interviews to accomplish this inspection. The planning standard 10 CFR 50.47(b)(5) and its related 10 CFR 50, Appendix E requirements were used as reference criteria.

b. Findings

No findings of significance were identified.

The inspector viewed a demonstration of the siren activation and feedback system. Results from previous tests, archived within the system, were reviewed to verify the announced results. Entergy had developed criteria from among the monitored siren parameters to determine a "satisfactory" or "unsatisfactory" test result. Inputs for a siren

"unsatisfactory" test results are: power, starter, communications, audio, and rotation. These criteria, although reasonable, were selected without input from the end-users (the counties). The main display screen of the feedback system was changed from its original format which displayed all parameters to format displaying either "satisfactory" or "unsatisfactory" results. The detailed information regarding individual siren performance was still available through the feedback system but on a sub-menu from the main display. Training was provided on this change and the lesson plans appeared acceptable.

Indicated "false" failures, reported by the feedback system during tests, continue to occur although at a lower rate than in 2003 when the new system was tested. The primary cause of indicated "false" failures are rotation sensors which are impacted by debris, specifically birds nests. Past Entergy attempts to solve this issue have not been fully effective. Although false indicated rotation failures are declining, more needs to be done than using bird repellant and increased monitoring of sirens that have been prone to nesting. Entergy was assessing a design change to the sirens that will prevent bird nests. The false indications would cause the counties to expend resources to perform route alerting in those areas. However, those sirens would fulfill their intended function of notifying the public. Although permitted by NRC guidance, Entergy did not count these indicated "false" failures as failed tests in the ANS PI because, after a further review of other feedback data, they determined that these sirens fulfilled their function to notify the public. Due to the design of the sirens, if a siren is sounding as indicated by the audio sensor, then the siren is rotating. Thus, Entergy can justify that the siren was functioning.

The inspector determined that repair and maintenance of the sirens was acceptable and there were only isolated instances of prolonged siren outages. The prolonged outages did not appear to be excessive given the nature of the problem, the coordination efforts needed with outside entities (i.e., local utilities) to restore the sirens, and to some extent, the weather. Repairs and maintenance performed on the sirens appear effective as there have been no repeats of identical component failures aside from the rotation sensors.

Component problems with the sirens appear to be addressed appropriately. Some problems have been caused by issues beyond Entergy's control such as local utility work or power distribution component issues (i.e., local transformers). While reviewing corrective actions to siren failures for the June 15, 2004 test; one initial assessment by Entergy stated that degraded voltage on the grid due to warm weather (and the time of day when the test occurred) may have contributed to the failures. Subsequent to that initial preliminary assessment, Entergy had determined that the sirens' failures were due to component issues. Entergy analyzed for degraded voltage condition impact on siren performance, and concluded that, under the most adverse grid condition in which end-user voltages would be dropped, the sirens could operate although they would just be within their operating limits.

Communications between Entergy and the counties regarding the status of the siren could be improved. Entergy communicates siren status to the counties (for the purpose

of conducting route alerting in the event of an emergency) via daily status reports which are sent to various county representatives. However, some reports from earlier this year were confusing unless one had regularly followed the status reports. Entergy recognized this and was working towards an improved status/communication format. However, it should be noted that in the daily status reports, Entergy informs the counties if an inoperable siren would require route alerting. Using data from the original ANS design, some siren outages would not require route alerting, due to overlap from adjacent sirens. This data appears to have been developed to support FEMA-REP-10, Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants, Section E.6.2.4.6, Use of Police Fire, or Rescue Vehicles and Personnel.

The outage of the primary meteorological tower on June 1, 2004, was due to a lightning strike. A swap over of data to the backup tower should have occurred. However, questions about the data after the lightning strike were not clearly communicated nor actively pursued until just prior to the exercise when the problem with the meteorological data was understood. The system that sends data to the end-users was transmitting erroneous stability class information due to a configuration of the system. It was still reading stability class from the inoperable primary tower instead of the backup. Once understood, Entergy took necessary action to provide reliable meteorological data to offsite agencies from the backup meteorological tower. Entergy acknowledged that their response to early indications of meteorological data discrepancies did not meet their expectations. This issue was entered in the licensee's corrective action program.

The LGR serves as a backup communication method for Entergy to make emergency notifications to offsite agencies. There are no concerns or issues regarding the ability of the LGR to function in that capacity. The LGR is a New York State communication system. Due to the terrain around the Indian Point site, this radio system will not permit reliable communications among the various offsite agencies. Although outside of NRC requirements and the commitments of Entergy's emergency plan, Entergy provided a repeater to upgrade the LGR system to permit interagency communication for the surrounding offsite agencies.

5. Problem Identification and Resolution - Public Radiation Safety

a. Inspection Scope (71122.01 & 71122.03 - 2 Samples)

The inspector reviewed Entergy's LERs, Special Reports, and audits (Audit report A03-11-I, IPEC Radiological Environmental and Meteorological Monitoring Program) related to the REMP performed since the last inspection. The inspector determined that identified problems were entered into the CAP for resolution. The inspector also reviewed corrective action reports affecting environmental sampling, sample analysis, or meteorological monitoring instrumentation. Two CRs (CRs) related to the problems identified in the REMP during the audit were reviewed (CR-IP3-2003-04799 and CR-IP3-2003-04800).

Additionally, the inspector reviewed 24 CRs initiated between January 2003 and July 2004, relative to the radioactive liquid and gaseous radioactive effluent control program.

The inspector verified that problems identified by these CRs were properly characterized in Entergy's event reporting system, and that applicable causes and corrective actions were identified commensurate with the safety significance of the occurrences.

b. Findings

No findings of significance were identified.

4OA4 Cross Cutting Aspects of Findings

Section 1R13 described a finding in which Entergy failed to provide an adequate procedure for maintenance on the breaker 52/GT5 cubicle, in that the potential impact of work on/near the cell switch was not identified. This error was compounded by the technicians' failure to question the impact of their manipulating the cell switch, which impacted protective relaying. Consequently, an offsite power source to two 480V vital buses was rendered inoperable. This finding was determined to be associated with the cross-cutting area of human performance.

4OA6 Meetings, including Exit

On October 14, 2004, the inspectors presented the inspection results to Mr. F. Dacimo and other Entergy staff members. No proprietary information was presented in this report.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by Entergy and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as an NCV.

Technical Specification Surveillance Requirement 3.5.2.1 requires that certain emergency core cooling systems be checked for power being removed from their valve operators every 12 hours. On July 16, 2004, Entergy discovered that the required check had not been performed since the implementation of Improved Standard Technical Specifications on February 27, 2001. Entergy documented this deficiency in their CAP as CR IP3-2004-02509. This finding is only of very low safety significance because all affected valves remained in their proper positions and all of the power supplies to the affected valves were verified to be removed immediately upon discovery of the missed requirement.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

T. Beasley, Systems Engineer
J. Boccio, I&C Superintendent
T. Carson, Manager, Maintenance
J. Comiotes, Director, Nuclear Safety Assurance
P. Conroy, Manager, Licensing
F. Dacimo, Site Vice President
G. Dean, Assistant Operations Manager - Training
R. DeCensi, Technical Support Manager
P. Donahue, Senior Environmental Specialist
A. Eng , Licensing, White Plains Office
C. Ingrassia, Systems Engineer
F. Inzirillo, Emergency Planning Manager
T.R. Jones, Licensing Supervisor
D. Leach, Director, Site Engineering
T. McCaffrey, Manager, Systems Engineering
B. McGuire, Contractor/Investigator, VPA Corporation
V. Myers, Systems Engineering Primary Systems Supervisor
E. O'Donnell, IP3 Assistant Operations Manager
J. O'Driscoll, Systems Engineer
J. Parrotia, QA Manager
F. Phillips, Emergency Planner
P. Rubin, Manager, Site Planning and Outage Services
C. Schwarz, General Manager, Plant Operations
J. Venosa, Site Operations Manager
A. Vitae, Operations Manager, IP3
C. Wend, Radiation Protection Manager

Other Personnel Contacted

R. Albacete, Four County Coordinator
N. Sweeney, Westchester County

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

50-286/2004-006-01	NCV	Failure to provide adequate maintenance procedure for work on breaker 52/GT5. (Section 1R13)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

OAP-008, "Seasonal Weather Preparations," Rev. 0

Section 1R04: Equipment Alignment

Procedures

3-COL-EL-1, "6900 and 480 Volt AC Distribution," Rev. 35
3-COL-SI-1, "Safety Injection System," Rev. 33
3-COL-MS-1, "Main and Reheat Steam System," Rev. 27

Clearances

3C13-3-CVCS-32 Charging Pump

Drawings

9321-F-27363, "Flow Diagram Chemical and Volume Control System," Rev. 49

Work Orders

IP3-03-02946

Condition Reports

IP3-2003-02252

Section 1R05: Fire Protection

Procedures

IP3-RP-UNSPEC-02182, "Indian Point Three Nuclear Power Plant Individual Plant Examination of External Events," dated September 1997
SMM-DC-901, "IPEC Fire Protection Program Plan," Rev. 1
ENN-DC-127, "Control of Hot Work and Ignition Sources," Rev. 1
ENN-DC-161, "Transient Combustible Program," Rev. 1
IP-EP-AD13, "IPEC Emergency Plan Administrative Procedures," Rev. 0

1R06: Flood Protection Measures

Procedures

OAP-008, "Severe Weather Preparations," Rev. 0
ONOP-RW-3, "Plant Flooding," Rev. 9
FSAR Section 2.5, Hydrology
IPEEE Section 5.4.1.1, 5.4.1.2, 5.4.1.3, 5.4.2, and 5.4.3

Condition Reports

IP2-2003-06065

Section 1R11: Licensed Operator Requalification Program

Miscellaneous

LRQ-SES-33, "IPEC Simulator Guide," Rev. 9
IP-EP-AD13, "IPEC Emergency Action Level Technical Bases," Rev. 0

Section 1R12: Maintenance Effectiveness

Work Orders

IP3-04-20189 IP3-03-04443

Condition Reports

IP3-2004-00873 IP3-2004-00895 IP3-2004-00798 IP3-2004-01453

Miscellaneous

IP3-RP-EHT-01899, "Maintenance Rule Basis Document for Electrical Heat Trace (General), Yard Area Heat Trace, Nuclear Tank Heat Trace, Diesel Generator Heat Trace and Plant Vent Monitor Heat Trace System," Rev. 0
IP3-RP-EHT-01948, "Maintenance Rule Basis Document for Boric Acid Heat Trace System," Rev. 0

Section 1R13: Maintenance Risk Assessment and Emergent Work Control

Drawings

9321-F-20303, "Flow Diagram Fuel Oil to Diesel Generators," Rev. 28
IP3V-0373-0005, "Level Indicator for Diesel Fuel Oil Storage Tank," Rev. 1

Procedures

SPO-SD-09, “On-Line Risk Assessment Process,” Rev. 0
3-AOP-SSD-1, “Control Room Inaccessibility Safe Shutdown Control,” Rev. 2
3PT-C01, “Total Leakage Rate Monitoring Tabulation,” Rev. 16

Work Orders

IP3-04-06022	IP3-04-06023	IP3-04-15451	IP3-04-05950
IP3-02-20551	IP3-930093305	IP3-04-16100	
IP3-04-17404	IP3-04-17887		

Condition Reports

IP3-2004-03022 IP3-2004-02048 IP3-2004-03270

Miscellaneous

MMP 94-03-132 EDG, “EDG Fuel Oil Tank Level Indicator Modification,” Rev. 0

Section 1R14: Operator Performance During Non-Routine Evolutions

Procedures

3PT-W019, “Electrical Verification - Offsite Power Sources and AC Distribution,” Rev. 4

Section 1R15: Operability Evaluations

Calculations

IP3-CALC-ED-00207, “Electrical Load Study,” Rev. 7

Condition Reports

IP3-2004-02382	IP3-2004-00626	IP3-2004-03005
IP3-2004-02349	IP3-2004-01431	

Operability Evaluations

OE IP3-2004-03005

Miscellaneous

Radiographic Examination Report EOC-04-6
Radiographic Examination Report EOC-04-7
Radiographic Examination Report EOC-04-8
Radiographic Examination Report EOC-04-9
Radiographic Examination Report EOC-04-10

Section 1R16: Operator Work-Arounds

Condition Reports

IP3-2003-04741 IP3-2002-00750 IP3-2002-06487 IP3-2004-01706

Procedures

OAP-045, "Operator Burden Program," Rev. 0
3-ARP-007, "Condenser Hotwell #32 High Level Alarm," Rev. 26
SPO-SD-01, "Work Control Process," Rev. 13

Work Orders

I3-007700037	IP3-03-10865	IP3-03-25396	IP3-03-03503
IP3-03-03964	IP3-03-05686	IP3-04-06134	

Section 1R17: Permanent Plant Modifications

Condition Reports

IP3-1998-02508

Work Orders

IP3-02-24125

Calculations

IP3-CALC-MS-03667, "Thermal Lag Analysis for the ASCO Solenoid Valves in the Steam and Feedwater Pipe Penetration Area," Rev. 0
IP3-CALC-MS-03697, "Thermal Lag Analysis for the GE-PVC Cables in the Steam and Feedwater Pipe Penetration Area," Rev. 0

50.59 Evaluations

EVL 02-3-123-MS

Test Reports

Automatic Switch Company Test Report No. AQR-67368, "Report on Qualification of Automatic Switch Company (ASCO) Catalog NP-1 Solenoid Valves for Safety-Related Applications in Nuclear Power Generating Stations," Rev. 1
Wyle Laboratories Test Report No. 47951R02, "Environmental Qualification of Rockbestos Firewall III XLPE and GE Flamenol PVC Cables for use in Entergy Nuclear Northeast - Indian Point Energy Center Unit 3," dated December 23, 2002

Section 1R19: Post-Maintenance Testing

Condition Reports

IP3-2004-02392 IP3-2004-02906

Procedures

3PT-R032C, "Control Room Filtration System Functional," Rev. 20
3PT-Q117B, "33 Safety Injection Pump Functional Test," Rev. 33
3PT-Q97, "Steam Generator Analog Functional Test," Rev. 1

Work Orders

IP3-03-24373	IP3-03-20317	IP3-04-17384	IP3-04-13929
IP3-03-16100	IP3-03-22667	IP3-04-17438	

Section 1R22: Surveillance Testing

Procedures

3PT-Q031, "Inservice Inspection Test Liquid Waste Disposal System Containment Isolation Valves," Rev. 16
3PT-M62A, B, C, "480v UV Degraded Grid Protection," Rev. 0
3PT-M064, "Periodic Verification of Containment Isolation Valves," Rev. 4
3PT-EM29, "Cable Tunnel Vent Fans Functional Test," Rev 3
3-PT-W10, "Weekly Battery Surveillance Requirements," Rev. 4
3PT-R111, "Area Temperature Sensors in PAB - Functional Test," Rev. 14
3-PT-M079B, "32 EDG Functional Test," Rev. 34
3PT-Q120B, "32 ABFP (Turbine Driven) Surveillance and IST," Rev. 8
SOP-RCS-005, "Reactor Coolant Leakage Evaluation," Rev. 18

Calculations

IP3-RP-RCS-01799, "Containment Isolation Valve Closure Time Including Phase "A" Valves," Rev. 0

Work Orders

IP3-04-05951

Section 1R23: Temporary Plant Modifications

Calculations

IP3-CALC-SWS-02379, "Service Water EDG Lube Oil and Jacket Water HX Flow versus Differential Pressure," Rev. 2

Safety Evaluations

04-0561-TM-00-RE, Rev. 0

Work Orders

IP3-04-14652 IP3-04-16287

Section 2PS1: Gaseous and Liquid Effluents

Condition Reports

IP3-2003-0412	IP3-2003-1252	IP3-2003-3656	IP3-2003-6528
IP3-2003-0863	IP3-2004-2368	IP3-2003-3673	IP3-2004-0002
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2PS3: Radiological Environmental Monitoring Program (REMP)

Miscellaneous

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Condition Reports

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Section 4OA1: Performance Indicator Verification

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Section 4OA2: Problem Identification and Resolution

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LIST OF ACRONYMS

ABFP	auxiliary boiler feedwater pump
ANS	alert and notification system
CAP	corrective action program
CCR	central control room
CFR	Code of Federal Regulations
COL	check-off list
CR	condition report
CVCS	chemical and volume control system
EDG	emergency diesel generator
EOF	Emergency Operations Facility
EOP	emergency operating procedure
EP	emergency preparedness
FSAR	final safety analysis report
IMC	inspection manual chapter
IP3	Indian Point Nuclear Generating Unit 3
IPEC	Indian Point Energy Center
IPEEE	Individual Plant Examination of External Events
KV	kilo volts
LER	Licensee Event Report

LGR	local government radio
NCV	non-cited violation
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
ONOP	off-normal operating procedure
PI	performance indicator
PMT	post maintenance test
PWT	post-work test
RCP	reactor coolant pump
QA	quality assurance
RCA	radiologically controlled area
RCS	reactor coolant system
REMP	radiological environmental monitoring program
RHR	residual heat removal
RMS	radiation monitoring system
RWST	refueling water storage tank
SCBA	self-contained breathing apparatus
SDP	significance determination process
SI	safety injection
SOP	system operating procedure
SW	service water
TLD	thermoluminescent dosimeter
TS	technical specification
TSC	technical support center
WO	work order