July 29, 2005

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 2 - NRC INTEGRATED INSPECTION REPORT NO. 05000247/2005003

Dear Mr. Dacimo:

On June 30, 2005 the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Indian Point Nuclear Generating Unit 2 (IP2). The enclosed integrated inspection report documents the inspection findings which were discussed with Mr. Paul Rubin, and other members of your staff, on July 20, 2005.

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. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of the inspection, two findings of very low safety significance (Green) were identified. One of these findings was determined to involve 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 a 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. 20555-001: with copies to the Regional Administrator, Region I; the Director, Office of Enforcement; and the NRC Resident Inspector at Indian Point 2.

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

Sincerely,

/RA/

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

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

Enclosure: Inspection Report No. 05000247/2005003
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 50-247

License No. DPR-26

Report No. 05000247/2005003

Licensee: Entergy Nuclear Northeast

Facility: Indian Point Nuclear Generating Unit 2

Location: 295 Broadway, Suite 3
Buchanan, NY 10511-0308

Dates: April 1, 2005 - June 30, 2005

Inspectors: P. Habighorst, Senior Resident Inspector, IP2
M. Cox, Resident Inspector, IP2
D. Jackson, Senior Project Engineer, Region I
C. Long, Reactor Engineer, Region I
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R. Berryman, Resident Inspector, IP3
R. Prince, Decommissioning Branch Inspector, DNMS, Region I
S. Chaudry, Decommissioning Branch Inspector, DNMS, Region I
M. Snell, Reactor Engineer, Region I
L. Scholl, Senior Reactor Engineer, Region I
J. Lilliendahl, Reactor Engineer, Region I
K. Young, Reactor Inspector, Region I (In office review June 26 - 30)

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

Enclosure

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SUMMARY OF FINDINGS

IR 05000247/2005003; 04/01/2005 - 06/30/2005, Indian Point Nuclear Generating Unit 2; TI 2515/163, Operational Readiness of Offsite Power; Event Followup

The report covers a 3-month period of inspection by resident inspectors and eight regional inspectors. Two Green findings were identified, one of which was also determined to be a non-cited violaton (NCV). 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. The inspector identified a Green NCV of 10 CFR 50, App. B, Criterion XI "Test Control" involving an inadequate post work test following maintenance on auxiliary component cooling water discharge check valve 755A. This resulted in the failure to identify a condition which led to one train of the containment recirculation spray system being unavailable for greater than its technical specification (TS) allowed outage time. The finding is associated with the cross-cutting issue of problem identification and resolution in that the licensee's evaluation for CR IP2-2005-00252 failed to identify the deficiencies in the post maintenance test therefore no corrective actions were written to address this issue until prompted by the inspectors. (See Section 4OA2)

  This issue is greater than minor because the performance deficiency adversely affected the equipment performance attribute of the Mitigating Systems Cornerstone objective associated with ensuring the availability of systems that respond to initiating events to prevent undesirable consequences. A Phase 3 SDP analysis was used to assess the deficiency due to modeling limitations of the Phase 2 SDP tools. The Phase 3 evaluation, performed by a Region I Senior Reactor Analyst, confirmed that this issue was of very low safety significance. (Section 4OA3)

- Green. The inspectors identified a Green finding involving inadequate corrective actions associated with the adequacy of plant procedures to be utilized during degraded grid voltage conditions and the operators' knowledge of these procedures.

  This finding is greater than minor because the performance deficiency adversely impacted the Mitigating Systems Cornerstone objective associated with procedure quality. The inspectors conducted a Phase 1 SDP screening and

determined that the finding was of very low safety significance. The 138KV system voltage had been maintained greater than the minimum operating voltage throughout the year and implementation of the procedure was not required, therefore an actual loss of safety function did not exist during the period in question. (Section 4OA5)

B. Licensee-Identified Violations.

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and corrective actions are listed in Section 4A07 of this report.

Report Details

Summary of Plant Status

Indian Point Unit 2 (IP2) began the inspection period at full power. On May 14, May 24, June 3, and June 20, Entergy initiated planned power reductions to between 95 - 97% of rated power to accomplish turbine stop/control valve testing and troubleshooting (Sections 1R15 and 1R22). The unit was at 100% power at the end of the inspection period.

1. REACTOR SAFETY
Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness

1R01 Adverse Weather Protection

c. Inspection Scope (71111.01 - **1** sample of actual adverse weather)

The inspectors reviewed Entergy's administrative controls and implementation of a periodic maintenance program to ensure adequate protection to the ultimate heat sink in the event of severe debris on the Hudson River. On April 22, 2004, the inspectors walked down of the circulating water traveling screens, service water discharge strainers, screenwash system, and availability of alarm functions for degraded conditions. The inspectors verified the availability of mitigating systems in response to a loss of service water event, applicable system operating procedures, alarm response procedures, calibration records for associated instrumentation, outstanding maintenance deficiencies, temporary modifications, operator workarounds, and control room deficiencies that impact availability of the ultimate heat sink. 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 - 3 samples, 71111.04S- 1 Sample)

Partial System Walkdowns: The inspectors performed three partial system walkdowns during periods of system train unavailability in order to verify that the alignment of the available train was proper to support its required safety functions, and to assure that Entergy had identified and properly addressed equipment discrepancies that could potentially impair the capability of the available train. Referenced documents are listed in the Supplemental Information attachment at the end of this report. The following system walkdowns were performed:

- On April 28, 2005, the inspector performed a partial system walkdown of 22 containment spray train while 21 containment spray pump was out of service for

maintenance. The inspector reviewed system drawings and applicable checkoff lists (COL) to verify proper alignment of valves, and control switches. The inspector also observed the physical condition of the equipment during the verification.

- On June 14, 2005, the inspector performed a partial system walkdown of gas turbine 1 fuel oil system while gas turbine 3 and the 23 emergency diesel generator were out of service for planned maintenance and testing. The inspector reviewed system drawings and the applicable checkoff list to verify proper alignment of valves. The inspector also observed the physical condition of the equipment during the verification.

- On June 22, 2005, the inspector performed a partial system walkdown of 23 Auxiliary feedwater system while 21 auxiliary feedwater pump was out of service for planned maintenance and testing. The inspector reviewed system drawings and the applicable checkoff list to verify proper alignment of valves. The inspector also observed the physical condition of the equipment during the verification.

Full Equipment Alignment: The inspectors performed an extensive walkdown of the auxiliary feedwater system. The inspectors walked down the systems using COL 21.3, "Steam Generator Water Level and Auxiliary Boiler Feedwater," Rev 27 and the system flow diagram, drawing 9321-F-2019-112. The inspectors verified that all accessible components were in the proper position per the COL and verified that any position discrepancies were properly documented. The inspectors also verified that the field configuration was consistent with the current revision of the COL. Additionally, the inspectors evaluated the physical condition of the equipment during the walk down and reviewed open condition reports and work orders to evaluate if any would potentially impact system performance.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope (71111.05Q - 6 samples)

The inspector toured areas that were identified as important to plant safety and risk significance. The inspector consulted the Indian Point 2 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 inspector 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 inspector to determine the acceptability of the observed conditions in the fire zones are referenced in the Supplemental Information attachment at the end of this report. The areas reviewed were:

- Zone 9
- Zone 12
- Zone 13A
- Zone 650
- Zone 6A
- Zone 7A

b. Findings

No findings of significance were identified.

1R06 Flood Measures

e. Inspection Scope (71111.06 - 1 external sample)

The inspector reviewed Entergy's external flood analysis, flood mitigation procedures and design features to verify whether they were consistent with IP2's 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 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 pump area
- 15-ft elevation of the control building
- Circulating water pump area
- Intake Structure

The inspector reviewed Entergy's flood mitigation procedures, selected preventative 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 referenced in the Supplemental Information attachment at the end of this report.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope (71111.11Q - 2 samples)

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 abnormal operating procedures (AOPs); 3) operators' ability to properly interpret and verify alarms; 4) operator's ability to classify events in a timely fashion, 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.

On May 2, 2005, the inspectors observed simulator training for licensed operators on Operations Team 2A. The inspectors reviewed an "as found" simulator scenario, performed under lesson plan 2-INPO-AOP-2" 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.

On June 13, 2005, the inspectors observed simulator training for licensed operators on Operations Team 2B. The inspectors reviewed two annual simulator evaluations, performed under lesson plans SES-FR-S.1-E2 and SES-ECA-00.a 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.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope (71111.12Q - 2 samples)

The inspectors reviewed the maintenance activities listed below, and recent performance issues with systems and components to assess the effectiveness of Entergy's Maintenance Rule (MR) program. Using 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," and Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," the inspectors verified that Entergy was implementing their MR program in accordance

with NRC regulations and guidelines, properly classifying equipment failures, and using the appropriate performance criteria for MR systems in 10 CFR 50.65 (a)(2) status.

The inspectors also reviewed work orders (WOs), and associated post-maintenance test activities to assess whether: 1) the effect of maintenance work in the plant had been adequately addressed by control room personnel; 2) work planning was adequate for the maintenance performed; 3) the acceptance criteria were clear and adequately demonstrated operational readiness consistent with design and licensing documents; and, 4) the equipment was effectively returned to service. Referenced documents are listed in the Supplemental Information attachment at the end of this report. The below-listed maintenance activities were observed and evaluated.

Safety Injection System

The inspector performed a review of maintenance issues associated with the safety injection (SI) system since June 2004. The inspector evaluated the MR basis document to determine system boundaries and verified that the system was being properly tracked in accordance with the requirements of 10 CFR 50.65, "Requirements of Monitoring the Effectiveness of Maintenance." The inspector reviewed the quarterly system health report for the first quarter of 2005 and evaluated the system performance monitoring criteria for scope and accuracy. The inspector reviewed CRs for the system and evaluated their proper classification for the MR and compliance with ENN-DC-171, Rev. 2, "Maintenance Rule Monitoring."

22 Auxiliary Feedwater Train

The inspector performed a review of maintenance issues associated with the 22 auxiliary feedwater train since April 2004. The inspector evaluated the MR basis document to determine system boundaries and verified that the system was being properly tracked in accordance with the requirements of 10 CFR 50.65, "Requirements of Monitoring the Effectiveness of Maintenance." The inspector reviewed the quarterly system health report for the fourth quarter of 2004 and evaluated the system performance monitoring criteria for scope and accuracy. The inspector reviewed CRs for the system and evaluated their proper classification for the MR and compliance with ENN-DC-171, Rev. 0, "Maintenance Rule Monitoring."

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope (71111.13 - 4 samples)

The inspectors observed selected portions of emergent maintenance work activities to assess Entergy's risk management in accordance with 10 CFR 50.65(a)(4). The inspectors 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 inspectors observed and/or discussed risk management actions with maintenance and operations personnel. The following planned activity was observed:

- WO IP2-05-11908, 839H Modification

The following three emergent activities were observed:

- WO-IP2-05-14629, Containment Spray Discharge Valve 866 C
- WO IP2-05-00220, 22 Service Water Outlet Valve from CCW Heat Exchanger
- WO IP2-05-15246, GT-1 Repairs following Surveillance Failure

b. Findings

No findings of significance were identified.

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.

- Main Generator Hydrogen Stator Coolant System Trouble and Inlet Low Pressure Alarms due to flow controller failure.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope (71111.15 - 5 samples)

The inspectors selected operability evaluations for review on the basis of their potential risk significance. The selected operability evaluations were developed by Entergy to address degraded or non-conforming conditions identified in 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 were reviewed and compared to the TSs, Technical Requirements Manual (TRM), FSAR, and associated design basis documents.

- CR IP2-2004-06768, Operability Determination of 26 SWPs With 26 Zurn Strainer Low Blowdown Flow
- CR IP2-2005-01546, Assessment of Part 21 issue associated with Emergency Diesel Generator (EDG) governors due to potential for null voltage shift
- CR IP2-2005-02197, Operability Determination for 23 Safety Injection (SI) pump following indications of gas in the pump casing
- CR IP2-2005-02307, Operability Determination of recirculation pumps to assess difference in pump rotational speed than that used in system calculations.
- CR IP2-2005-02051, Failure of No. 1 Turbine Stop Valve to Close during PT-SA067

b. Findings

No findings of significance were identified.

1R17 Permanent Modifications

a. Inspection Scope (71111.17A - 1 sample)

The inspectors reviewed a plant design change to install an isolation valve in a 3/4" test line associated with the safety injection system in accordance with design change package (DCP) ER-05-2-030, "Install Isolation Valve in 3/4" SI-1501R Line #31". The plant design change was reviewed to verify that: (1) the design bases, licensing bases and performance capability of the system had not been degraded by the modification and, (2) the modification performed did not place the plant in an unsafe condition. During this evaluation the inspectors reviewed the design inputs, assumptions and associated calculations to determine design adequacy.

The inspectors reviewed the freeze seal method used for system isolation during the modification installation to ensure it conformed to industry standards. The inspectors also observed full scale mock-up testing performed prior to the installation and observed portions of the valve installation in the field. After the valve installation, the inspectors reviewed and observed the post modification testing performed to ensure system integrity.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope (71111.19 - 5 samples)

The inspector reviewed post-work test (PWT) 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 WO 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 IP2 Individual Plant Examination (IPE). The regulatory references for the inspection included TSs and 10 CFR 50, Appendix B, Criterion XIV, "Inspection, Test, and Operating Status." The following testing activities were evaluated:

- WO IP2-05-16151, 866C Bucket Replacement
- WO IP2-04-13051, CCW Heat Exchanger Tube Plugging Activity
- WO IP2-05-11908, SI-839H Valve Replacement
- WO IP2-05-13576, 90 Day Follow-up NDE UT Inspection of 23 EDG 5th weld SW Pipe
- WO IP2-04-23593, PWT following 21 AFW Pump Shaft Alignment

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope (71111.22 - 7 samples)

The inspectors reviewed surveillance test procedures and observed testing activities to assess whether: 1) the test preconditioned the component tested; 2) the effect of the testing was adequately addressed in the control room; 3) the acceptance criteria demonstrated operational readiness consistent with design calculations and licensing documents; 4) the test equipment range and accuracy were adequate and the equipment was properly calibrated; 5) the test was performed per the procedure; 6) test equipment was removed following testing; and 7) test discrepancies were appropriately evaluated. The surveillance tests observed were based upon risk significant components as identified in the IP2 IPE. The regulatory requirements that provided the acceptance criteria for this review were 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," Criterion XIV, "Inspection, Test, and Operating Status," Criterion XI, "Test Control," and TS 6.8.1.a. The following test activities were reviewed:

- PT-Q026F, "26 Service Water Pump", Rev. 8 - performed on April 5, 2005
- PT-M21B, "22 Emergency Diesel Generator," Rev. 12 - performed on April 22, 2005
- WO IP2-05-18082, No 1 Stop and Control Valve Testing - performed on June 3, 2005
- WO IP2-05-22331, Electrical Tunnel Exhaust Fan Air Flow Test - performed on June 7, 2005
- PT-Q55, "Pressurizer Pressure [Channel Operational Test and Channel Calibration]", Rev. 8- performed on June 8, 2005

- 2-SOP-10.1.1, Safety Injection Accumulators and Refueling Water Storage Tank Operations, Rev. 48 - performed on June 14, 2005
- WO IP2-05-19227, Temporary TSC Diesel Annual Load Test - performed on June 22, 2005

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope (71111.23 - 1 sample)

The inspectors reviewed a temporary alteration, TA-05-2-017, to install a Foreign Material Exclusion (FME) cover over the spent fuel pool. This cover is required to support construction activities associated with the removal of existing fuel storage building ventilation duct work and supports. The inspectors reviewed the modification to ensure that there would be no adverse consequences.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope (71114.06 - 1 sample)

The inspectors observed an emergency preparedness (EP) drill conducted on May 19, 2005. The inspectors used NRC Inspection Procedure (IP) 71114.06, "Drill Evaluation" as guidance and criteria for evaluation of the drill. The drill consisted of a loss of component cooling water, reactor coolant pump thermal barrier leak, steam generator tube leak followed by a loss of all on-site and off-site power. The inspectors observed the drill and conducted reviews from the participating facilities on-site, including the IP2 Plant Simulator, the Technical Support Center (TSC), and the Emergency Operations Facility (EOF). The inspectors focused the reviews on the identification of weaknesses and deficiencies in the classification and notification timeliness and quality and accountability of essential personnel during the drill. The inspectors were briefed on Entergy's critique results and compared the licensee's self-identified issues with the observations from the inspectors' review to ensure that performance issues were properly identified.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Physical Protection (PP)

3PP8 Fitness for Duty Program

a. Inspection Scope (71130I.08)

The inspector evaluated selected portions of this program relative to fatigue and work hour controls by: reviewing program procedures, implementing procedures, and records; conducting interviews with responsible personnel and plant employees; and reviewing payroll records, work hour tracking records, and overtime hour records for compliance with the Indian Point Energy Center Physical Security Plan.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

1. Daily Review

a. Inspection Scope (71152)

The inspectors screened all items entered into Entergy's corrective action program (CAP), as required by IP 71152, "Identification and Resolution of Problems," in order to identify repetitive failures or specific human performance issues for follow-up. This review was accomplished by reviewing paper copies of each condition report (CR).

b. Findings

No findings of significance were identified.

2. PI&R Annual Sample - Reactor Protection System Calculational Error in Core Operating Limits Report (COLR)

a. Inspection Scope (71152 - 1 sample)

The inspectors selected CR-IP2-2004-6713, which identified that the overpower delta T setpoint calculation was inconsistent between the engineering calculation, technical specifications, and the core operating limit report. The inspectors reviewed CR-IP2-2004-06713, 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 corrective action program (CAP) as delineated in EN-LI-102, "Corrective Action Process."

b. Findings

No findings of significance were identified.

3. PI&R Annual Sample - Cable Separation

a. Inspection Scope (71152 - 1 sample)

The inspectors performed a detailed review of the implementation of the Design Basis Improvement Project (PI-10) Electrical Separation Program including: post-1995 modification reviews, cable tray walkdowns inside and outside of containment, documentation reconstitution from the 1995 Cable Separation Program, and improvements to the cable separation controls in the design process. The inspectors noted that although significant work remains to complete the project (scheduled for completion in December 2005), substantial progress has been made. The inspectors reviewed documentation, interviewed staff, and walked down congested areas in the plant to assess the adequacy of the licensee's modification reviews and cable tray walkdowns. The inspectors reviewed upgrades made to the Electrical Cable and Raceway Information System (ECRIS), and interviewed staff and contractors to verify that significant progress has been made toward resolving the data discrepancies identified in the Data Transfer Verification Reports (DTVRs). The inspectors verified that issues identified by the PI-10 program were properly characterized in the corrective action program, that operability evaluations were accurate and complete, and that appropriate corrective actions were implemented. The documents reviewed are listed in the supplemental information in the attachment to this report.

b. Findings and Observations

No findings of significance were identified, however inspectors identified a minor violation of 10CFR50 Appendix B, Criterion XVI in that a level "B" CR (CR-IP2-2004-01914) and several of its corrective actions were inappropriately closed. The licensee generated a new corrective action document (CR-IP2-2005-02602) to address the inappropriate corrective action closure. The violation is considered minor because it is not considered a precursor to a more significant event, and if left uncorrected would not lead to a more significant safety concern. In addition, this violation is not related to Reactor Oversight Program performance indicators or cornerstones. Although this issue should be corrected, it constitutes a violation of minor significance that is not subject to enforcement action in accordance with Section IV of the NRC Enforcement Policy. Entergy management was informed of the minor violation of 10CFR50 Appendix B, Criterion XVI.

4. PI&R Semi-annual Trend Review

a. Inspection Scope (71152 - 1 sample)

The inspectors reviewed Entergy's CAP database over the last quarter of 2004 and first quarter of 2005 in order to assess the total number and significance of CRs written in various subject areas such as equipment and processes. The results were evaluated on a per quarter basis to identify any notable trends. The assessment specifically consisted of CR reviews in the following areas:

C Level "A" CRs: which required a full root cause analysis and review by the Corrective Actions Review Board (CARB) prior to closeout; and Level "B" CRs: which required an apparent cause evaluation and an optional CARB review.

- The number and significance of CRs associated with plant equipment previously identified as having reliability issues.

- A review of the corrective action database to assess trends in the number of CRs written in the previous two quarters that were related to subject areas that reflect the quality of maintenance, work controls, operations, procedures, etc.

- A review of the Indian Point Energy Center Quarterly Integrated Self-Assessment/Trend Reports for 4Q04 and 1Q05 written by the IPEC Quality Assurance Department, which contained Entergy's assessments of CR trends during those quarters.

b. Findings

No findings of significance were identified.

5. Cross-References to PI&R Findings Documented Elsewhere

Inspection findings in other sections of this report also had implications regarding Entergy's identification, evaluation and resolution of problems as follows:

- Section 4AO3.1 - The licensees evaluation following the identification of a failed check valve did not identify deficiencies in the post work test therefore no corrective actions were written to address this issue.
- Section 4A05.1 - Inadequate corrective actions resulted in inadequate training and operator knowledge of procedure for degraded grid voltage conditions.

4OA3 Event Followup

1. (Closed) LER 05000247/2005001-00, Technical Specification Prohibited Condition Due to Exceeding the Allowed Completion Time for One Inoperable Train of ECCS Caused by an Inoperable Auxiliary Component Cooling Water Check Valve

a. Inspection Scope

The inspectors reviewed the LER 05000247/2005001-00 and CR IP2-2005-00252, and evaluated the conditions that led to the loss of one train of the containment recirculation spray system (RSS) for greater than its technical specification (TS) allowed outage time. On January 19, 2005, a quarterly surveillance was performed on 21 Auxiliary Component Cooling Water (ACCW) pump. The test failed due to the pump not achieving the required head. Subsequent troubleshooting identified the failure was due to the parallel pump's discharge check valve, valve 755A, being hung open thus short circuiting flow back to the suction of 21 ACCW pump. Entergy evaluated the condition and determined that the discharge check valve and its associated ACCW pump were inoperable since the maintenance performed in November 2004. One inoperable ACCW pump renders the associated containment RSS pump inoperable. The licensee identified that inadequate maintenance on a discharge check valve was the root cause of the event. The inspectors determined that this issue constituted a non-cited violation of Technical Specification Requirement 3.5.2.A which limits the allowed outage time for one ECCS train to less than 72 hours. This licensee identified finding involved a violation of TS 3.5.2., "ECCS - Operating". The enforcement aspects of the violation are discussed in Section 4OA7. This LER is closed.

In addition the inspectors reviewed the post maintenance testing (PMT) performed on the check valve to evaluate it for proper scope and depth based on the maintenance performed. The PMT was conducted in accordance with work order #IP2-03-29254.

b. Findings

Introduction. The inspectors identified a Green non-cited violation of 10 CFR 50 Appendix B Criterion XI, "Test Control" for a post maintenance test on ACCW discharge check valve 755A that was not sufficient to ensure the valve could perform its safety function. Entergy's evaluation of the check valve failure in CR IP-2005-00252 did not assess why the post maintenance test failed to detect the problem.

Description. On November 4, 2004, Entergy personnel performed a maintenance inspection of valve 755A, the discharge check valve for 22 ACCW pump. The technicians discovered that the valve disk was bound, and work was performed to establish freedom of movement for the disk. Following completion of the work, a post maintenance test was performed to verify operability. The post work test consisted of two steps: 1) running 22 ACCW pump and verifying that proper flow was achieved to ensure that the check valve would open and 2) running the parallel pump, 21 ACCW pump, and observing that 22 ACCW pump did not reverse rotate to verify the check valve operated in the closed direction. This PWT was completed satisfactorily and the system was returned to service. However, on January 19, 2005, during the investigation of an inservice test failure of the 21 ACCW pump, technicians found that the 755A check valve's disc was stuck partially open.

Analysis. The inspectors determined that the post-work testing on valve 755A involved a performance deficiency because the test was insufficient to ensure the valve could

perform its design function to close and prevent reverse flow through the 22 ACCW pump. The examples in IMC 0612 Appendix E were not applicable to this specific finding. This issue was more than minor because it affected the equipment performance attribute of the Mitigating Systems cornerstone objective. One aspect of the objective is to ensure the availability of systems that respond to initiating events to prevent undesirable consequences.

The inspectors performed a Phase 1 screening in accordance with IMC 0612 and determined that the failure of the 755A check valve to close, by itself, would not have resulted in an actual loss of the safety function of an RSS train. Additional failures of the 22 CCW pump or loss of power to the 22 ACCW pump would have been required to cause the loss of cooling to the RSS pumps. While these additional failures are part of the licensing basis for the plant, they are not assumed when using the risk based significance determination process. As such the finding was determined to be of very low safety significance because, by itself, it did not result in the loss of a safety function and was not potentially significant due to a seismic, flooding or severe weather initiating event.

An SRA Phase 3 assessment, conducted because of the complexities and interactions involved, confirmed that this issue was of very low safety significance. This assessment used the Indian Point Unit 2 Standardized Plant Analysis Risk Model, Rev. 3.12., with modifications for both ACCW pumps to included the check valve failures to close and the associated conditions where this failure would result in a failure of the other ACCW pump. The assumed exposure time was the 77 days, between November 4, 2004 and January 19, 2005. The increase in internal core damage frequency was on the order of 1 core damage accident in 1,250,000 years of reactor operation (in the range of 8E-7 per year). The dominate core damage sequence was a loss of offsite power with: the failure of the 23 EDG, a stuck open PORV, and failure of HPR and LPR due to the inability to cool the RSS pump motors and failures of RHR recirculation valves due to the loss of power and EDG 23 failure. The SRA determined that external initiating events were not a significant contributor to the overall core damage frequence increase. Specifically, the initiating event frequency for seismically inducted LOOP was significantly below the internal events LOOP frequency assumption and the ACCW pumps were not credited in fire safety shutdown path nor were they credited in the 480 volt switchgear room internal flooding event.

The finding is associated with the cross-cutting issue of problem identification and resolution in that the licensee's evaluation for CR IP2-2005-00252 failed to identify the deficiencies in the post maintenance test therefore no corrective actions were written to address this issue until prompted by the inspectors. (See Section 4OA2)

Enforcement. 10 CFR 50 Appendix B Criterion XI, "Test Control", state in part that a test program shall assure that all testing required to demonstrate that structures, system and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. Contrary to this the licensee failed to provide a post work test of sufficient scope to ensure that ACCW

check valve 755A could perform its intended safety function in the closed direction. Because this violation is of very low safety significance and has been entered in the licensee's corrective actions program (CR IP2-2005-00252) this violation is being treated as a non-cited violation (NCV), consistent with Section VI.A of the NRC Enforcement Policy: **(NCV 50-247/05-03-01; Inadequate post work test resulting in a safety related system exceeding its AOT)**

2. (Closed) Unresolved Item (URI) 05000247/2004005-01, RCP Seal Cooling for Alternate Safe Shutdown Procedure Strategies.

During a triennial fire protection inspection (NRC IR 05000247/2004005, August 20, 2004) the team identified an unresolved item concerning the ability of the alternate safe shutdown system (ASSS) procedure 2-AOP-SSD-1, "Control Room Inaccessibility Safe Shutdown Control," Revision 1, to ensure Indian Point Unit 2, could achieve and maintain post-fire safe shutdown of the plant for a severe fire in the 480 volt switchgear room. Specifically, the procedure may not have precluded an extended loss of reactor coolant pump (RCP) seal injection flow which could have led to RCP leakage above the Westinghouse Owners Group (WOG) guidance of 21 gallons per minute (gpm) after 13 minutes.

On June 1, 2005, the NRC issued Information Notice (IN) 2005-14, "Fire Protection Findings on Loss of Seal Cooling to Westinghouse Reactor Coolant Pumps." The inspectors reviewed the Information Notice and the following Entergy documents:

- ASSS procedure AOP-SSD-1, "Control Room Inaccessibility Safe Shutdown Control," Revision 1
- Calculation CN-PO-04-02, "Indian Point Unit 2 Appendix R Loss of All AC Power Recovery Analysis
- Operator timeline validation information provided by Entergy Nuclear Northeast

The inspectors determined that Indian Point Unit 2 utilizes high temperature O-rings in their RCPs, the ASSS procedure provided instructions to secure the RCPs prior to the operators leaving the control room, and the operators had sufficient time to initiate charging. When the operators initiate charging prior to the required time, pressurizer level would be maintained in the indicating range with an assumed RCP seal leakage of 21 gpm per pump and a RCP purge volume of 50 gallons. Sufficient charging pump capability (98 gpm) existed for make-up to the RCP seals. During the inspection (NRC IR 05000247/2004005), operators demonstrated that they could perform the time critical steps of revision 1 of the ASSS procedure within the required times. Additionally, discussions with Entergy personnel indicated that revision 1 of the ASSS procedure, operated their RCPs consistent with the manufacturer's guidance at the time the procedure was active. Revision 4 of the procedure operates the RCPs within the requirements of the current manufacturer's guidance.

Based on the information provided in the IN 2005-14 and by Entergy, the inspectors determined that the ASSS procedure, AOP-SSD-1, Revision 1, would allow pressurizer

level to be maintained in the indicating range with the assumed RCP seal leakage of 21 gpm and a RCP purge volume of 50 gallons. Therefore, the inspectors did not identify a violation of NRC requirements. Additionally, Entergy has initiated a CR IP2-2004-01445 that will review any additional WOG RCP operational guidance that may result from the WOG's review of NRC IN 2005-14. This unresolved item is closed.

4OA5 Other Activities

1. TI 2515/163, Operational Readiness of Offsite Power

a. Inspection Scope

The inspector performed Temporary Instruction 2515/163, "Operational Readiness of Offsite Power." The inspector reviewed licensee procedures and supporting information pertaining to the offsite power system. The inspector reviewed this data against the requirements of 10 CFR 50.63; 10 CFR 50.65; 10 CFR 50 Appendix A General Design Criterion 17, "Electric Power Systems," and Plant Technical Specifications. This information was forwarded to NRC headquarters for further review.

b. Findings

Introduction. The inspectors identified a green finding involving inadequate corrective actions associated with the adequacy of plant procedures to be utilized during degraded grid voltage conditions and the operators' knowledge of these procedures.

Description. In June 2004, the inspectors performed Temporary Instruction (TI) 2515/156, "Operational Readiness of Offsite Power." As part of the inspection effort the inspectors reviewed plant procedures dealing with degraded voltage on the offsite power grid. The required plant actions for responding to degraded grid conditions are contained in procedure IP-SMM-OP-104 "Offsite Power Continuous Monitoring and Notification." The inspectors noted that the Site Management Manual (SMM) does not contain procedures that operators would normally reference for routine or abnormal plant operations. A review of the standard and abnormal operating procedures (SOP's and AOP's) associated with the system showed that no reference was provided in these procedures to the appropriate SMM procedure. Based on discussions with licensed plant operators the inspectors determined there was a general lack of knowledge that this specific procedure existed and that the minimum voltage for operability of the138KV system was not known by the operators and not readily available to them in any documents or procedures except for IP-SMM-OP-104. The inspectors discussed these deficiencies with site operations management in June 2004. Entergy documented these items in CR-IP2-2004-6535 and CR-IP2-2004-2447.

During the performance of TI 2515/163 in June 2005, the inspectors again evaluated procedures associated with degraded grid conditions and operator knowledge of IP-SMM-OP-104 to ensure the corrective actions from observations the preceding year had been adequately addressed. The inspectors found that a majority of the operators interviewed would not have referenced the appropriate procedure and did not know the

minimum voltage requirements for system operability. The inspectors reviewed condition reports relating to offsite power and found that no CR's were written to specifically address the operators lack of knowledge identified the previous year. A review of corrective actions for condition reports associated with procedure quality showed that the licensee evaluated the procedure to determine if the SMM was the appropriate place for its inclusion and additional corrective actions were written to provide the operating limits in the technical specification basis and in SOP 27.1.1 "Operation of 345 KV and 138 KV Components." Entergy determined that the SMM was the appropriate manual for the procedure and the technical specification basis change had not yet been submitted.

Analysis. The inspectors determined that this was a performance deficiency since the corrective actions associated with existing CR's (CR-IP2-2004-6535 and CR-IP2-2004-2447) did not correct the operator lack of knowledge on how to mitigate grid problems resulting in low voltage on the 138 KV system. In addition, procedural inconsistencies that were previously identified were not adequately addressed. Entergy procedure EN-LI-102 Rev.1 "Corrective Action Process" requires that appropriate corrective actions be developed and implemented to correct adverse conditions. It is reasonable that Entergy was cognizant that this requirement existed and the deficiencies should have been prevented. 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. This finding was determined to be greater than minor because it impacted the Mitigating Systems Cornerstone Objective, and was associated with the cornerstone's procedure quality attribute. The inspectors determined that without adequate operator training to ensure the operators would follow the steps specified in IP-SMM-OP-104, the standard and abnormal operating procedures would be inadequate to ensure appropriate compensatory measures would be established during a degraded grid condition. In addition, the SOP's and AOP's associated with the 138kV system would not guide the operators to IP-SMM-OP-104 or list it as an interfacing document. A review of training records identified that while the SMM procedure had been placed in the training document database, there was no formal training associated with the procedure. Based on these factors the inspectors determined that the SOP's and AOP's associated with the 138KV system were inadequate to address a degraded voltage condition. This issue has been placed in Entergy's corrective actions program as CR-IP2-2005-1814. The inspectors conducted a Phase 1 SDP screening and determined that the finding is of a very low safety significance since the performance deficiency does not represent an actual loss of safety function. The 138KV system voltage had been maintained greater than the minimum operating voltage throughout the year, and procedure entry would not have been required.

This finding is associated with the cross-cutting issue of problem identification and resolution in that it resulted from inadequate corrective actions associated with a previously identified issue. (See Section 4OA2)

Enforcement. No violation of regulatory requirements occurred since corrective action issues related to the non safety-related 138KV system are outside of the scope of

10 CFR 50 Appendix B. **(FIN 50-247/05-03-02; Inadequate corrective actions associated with training, procedural adequacy and operator knowledge on methods to address degraded grid)**

2. On-site Fabrication of Components and Construction of an ISFSI

a. Inspection Scope (IP 60853 1 - sample)

The inspector evaluated the design, supporting documentation, and construction activities associated with the ISFSI pad. The inspection consisted of interviews with cognizant personnel, observation of field work activities and review of documentation.

Entergy procured a batching plant to allow for the onsite preparation and mixing of the concrete to be used in the pouring of the Indian Point Independent Spent Fuel Installation Facility (ISFSI) pad. The inspector discussed the mechanisms established to ensure that a proper mix would be achieved, necessary test samples would be collected and lab test results communicated in a timely manner. The inspector noted that Entergy had made arrangements with a qualified contractor to provide oversight of batch plant operations during the pouring of the ISFSI pad. The inspector noted that the availability of a batch plant within the Protected Area would allow for timely transport of the prepared concrete mix, minimizing transit time after mixing and the initiation of a pour.

The inspector observed ongoing construction work in the field. ISFSI pad subsoil preparation work was complete with the engineered backfill in-place. The installation of the rebar was in progress. The inspector inspected the rebar that was already installed and observed work activities that were in progress. The inspector discussed work activities with the construction manager and other cognizant personnel and verified that personnel were knowledgeable of the design requirements. The inspector reviewed design documents and associated calculations to confirm that ISFSI pad parameters were bounded by the Safety Analysis requirements for the Holtec dry cask storage system to be utilized at Indian Point.

The inspector observed activities associated with the pouring of the ISFSI pad on May 16, 2005. Entergy had made arrangements for a fleet of concrete trucks to be available to transport concrete directly from the onsite batching plant to the ISFSI pad. The inspector observed activities in the batching plant control room and noted that appropriate controls were established to ensure that the mix of feed material was properly monitored to provide the desired batch composition in accordance with design specifications.

The inspector observed the collection of test samples and witnessed slump and air entrainment tests in the field. Entergy personnel stated that at least one truck was rejected based on failure to meet the air entrainment values (i.e., test sample was less than 4% for oxygen). Discussions with cognizant personnel indicated that personnel were knowledgeable of the test requirements and the procedure to be followed in the

event that a sample failed to meet design specifications. The inspector noted that a vehicle was staged in the field for storage of test samples that were to be cured and tested for compressive strength.

The inspector observed the performance of vibration activities associated with the pour of the concrete pad. The inspector observed that the vibration of the concrete was being limited to the outer regions of the poured areas. The inspector discussed this with the licensee and as a result the vibration activities were expanded to other areas of the concrete pad. All other activities associated with the pouring of the ISFSI concrete pad were adequately controlled to meet design specifications.

b. Findings

No findings of significance were identified.

4OA6 Meetings, including Exit

Exit Meeting Summary

On July 20, 2005, the inspectors presented the inspection results to Mr. P. Rubin and other Entergy staff members, who acknowledged the inspection results presented. The inspectors asked the licensee what materials examined during the inspection should be considered proprietary. No proprietary information is presented in this report.

4OA7 Licensee Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee 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 a NCV.

- TS 3.5.2 requires that the allowed outage time for one train of ECCS equipment be limited to less than 72 hours. Contrary to this the licensee determined that one ACCW pump and thus its associated recirculation pump were inoperable between November 4, 2004 and January 19, 2005. This was identified in the licensee's corrective actions process under CR-IP2-2005-00252. This finding was considered to have very low safety significance since no actual loss of safety function occurred and did not screen as risk significant due to seismic, flooding or severe weather initiating events.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

E. Anderson	Lead Engineer, Cable Separation Program Improvements
T. Barry	Security Manager
T. Beasley	System Engineer
L. Bello	Records Management Clerk
T. Foley	System Engineer
C. Wend	Radiation Protection Manager
C. Bergeren	In-Service Testing Engineer
J. Boccio	I&C Superintendent
J. Comiotes	Director, Nuclear Safety Assurance
P. Conroy	Manager, Licensing
F. Dacimo	Site Vice President
G. Dahl	Technical Specialist, Licensing
G. Dean	Assistant Operations Manager - Training
R. DeCensi	Technical Support Manager
R. Drake	Supervisor, Mechanical Design Engineering
D. Gately	Assistant Radiation Protection Superintendent
G. Hinrichs	Project manager
F. Inzirillo	Emergency Planning Manager
T. Jones	Nuclear Safety/Licensing Specialist, Licensing
R. Kalantari	Contractor, EPM (Engineering Services Division Manager
W. Mahlmeister	Technical Lead, Cable Separation Program Improvements
D. Mayer	Unit 1 Project Manager
B. Meek	System Engineer
V. Myers	Systems Engineering Primary Systems Supervisor
P. Peloquin	Project Engineer
S. Petrosi	Manager, Design Engineering
J. Raffaele	Supervisor, Electrical Design Engineering
V. Renzi	Contractor, EPM (Software Support and Operations Manager)
B. Rokes	Licensing Engineer
H. Santis	Project Construction Manager
C. Schwarz	Vice President, Operations Support
G. Schwartz	ISFSI Project Manager
J. Skonieczny	Project Engineer
A. Stewart	Licensing
D. Smith	Scheduling and Work Order Coordinator
R. Sutton	Systems Engineer
J. Tuohy	Manager, Cable Separation Program Improvements
J. Ventosa	Site Operations Manager

C. Wend	Radiation Protection Manager
S. Wilke	Fire Protection Engineer

NRC Personnel

D. Caron	Physical Security Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

05000247/2004005-01	URI	RCP Cooling for Alternate Safe Shutdown Procedure Strategies (Section 4OA3.1)
05000247/2005001-00	LER	Technical Specification Prohibited Condition Due to Exceeding the Allowed Completion Time for One Inoperable Train of ECCS Caused by an Inoperable Auxiliary Component Cooling Water Check Valve

Opened and Closed

05000247/2005003-01	NCV	Inadequate post work test resulting in a safety related system exceeding its AOT
50000247/2005003-02	FIN	Inadequate corrective actions associated with training, procedural adequacy and operator knowledge on methods to address degraded grid

LIST OF BASELINE INSPECTIONS PERFORMED

71111.01	Adverse Weather Protection	1R01
71111.04	Equipment Alignment	1R04
71111.05	Fire Protection	1R05
71111.06	Flood Protection Measures	1R06
71111.11	Operator Requalification Inspection	1R11
71111.12	Maintenance Effectiveness	1R12
71111.13	Maintenance Risk Assessment and Emergent Work Control	1R13
71111.14	Personnel Performance During Non-routine Plant Events	1R14
71111.15	Operability Evaluations	1R15

71111.17	Permanent Modifications	1R17
71111.19	Post-Maintenance Testing	1R19
71111.22	Surveillance Testing	1R22
71111.23	Temporary Plant Modifications	1R23
71114.06	EP Drill	1EP6
71130.08	Fitness for Duty Program	3PP8
71152	Problem Identification and Resolution	4OA2
71153	Event Followup	4OA3
60853	On-Site Fabrication of Components and Contruction of an ISFSI	4OA5
TI 2515/163	Operational Readiness of Offsite Power	4OA5

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures

SOP 22.1, Wash Water System and Traveling Screen Operation, Revision 22
2-ARP-SJF, Cooling Water and Air, Revision 34
LARP 28, Unit 2 Service Water Screen Trouble, revision 4
2-ARP-018, Traveling Water Screen Trouble, Revision 0
2-AOP-SW-1, Service Water Malfunction, Revision 2
IP2-ICPM-0407-D09
IP2-ICPM-0408-D09

Work Orders

IP2-04-14549
IP2-04-8962
IP2-04-8962
IP2-04-9393
IP2-04-8756
IP2-04-34615
IP2-02-1130
IP2-05-00700
IP2-03-5853
IP2-05-00801

Condition Reports

CR-IP2-2005-1471
CR-IP2-2005-1595
CR-IP2-2005-1598
CR-IP2-2005-1602
CR-IP2-2005-1643
CR-IP2-2005-1646

Temporary Alterations

TA-03-2-11, Strainer Blowdown Line
TA-04-2-052, 21 Traveling Water Screen High Differential Level
TA-04-2-170, Install temporary trash rack for Unit 1 Dock

Drawings

9321-F01–238-4
9321-F-2011
9321-F-2012

Miscellaneous

FSAR Section 9.6.1

Section 1R04: Equipment Alignment

Procedures

2-COL 31.1, Gas Turbine 1, Revision 7
2-COL-10.2.1, Containment Spray, Revision 18
2- COL-21.3, Steam Generator Water Level and Auxiliary Boiler Feedwater, Revision 17

Drawings

A260586-10, Gas Turbine #1 Flow Diagram Fuel Forwarding System
A260587-06, Gas Turbine #1 Fuel Oil System
312901-10, One Line Diagram Gas Turbine Generator #1 27
9321-2018
9321-F-2019-112
A240128-05

Section 1R05: Fire Protection

Procedures

SMM-DC-901, "IPEC Fire Protection Program Plan," Rev. 1
ENN-DC-161, "Transient Combustible Program," Rev. 1
ENN-DC-127, "Control of Hot Work and Ignition Sources," Rev.1
Fire Protection Implementation Plan, Pre-Fire Plans
Pre-Fire Plans, PFP-167, Rev. 0 May 2004, "Unit 1 Gas Turbine (GT-1), Elev. 15'-0"
Pre-Fire Plans, PFP-211, Rev.0, May 2004, "Unit 2 Primary Auxiliary Building, Elev. 80'-0""
Fire Hazards Analysis DC-85-101 Zone 6A
Fire Hazards Analysis DC-85-101 Zone 650
SAO-703, "Fire Protection Impairment Criteria and Surveillance"

FP-16, "Handling and Storage of Flammable and Combustible Liquids and Compressed Gas Cylinders", Rev. 8
PFP-211, General Floor Plan - Primary Auxiliary Building

Condition Reports

CR-IP3-2005-02002
CR-IP2-2005-01383 for Compressed Gas
CR-IP2-2004-00609
CR-IP2-2003-00765
CR-IP2-2005-01338

Miscellaneous

NRC Information Notice 99-17, Problems Associated with Post-Fire Safe-Shutdown Circuit Analyses
NRC Information Notice 2005-007, Results of Heymc Electrical Raceway Fire Barriers System Full Scale Fire Testing
IPEC Security Fire Watch Sheet Dates of May 23 through May 30, 2005
IP2 Appendix R Issues and Impairment Description as of April 19, 2005

Section 1R06: Flood Protection Measures

Condition Reports

CR IP3-2005-02250
CR IP3-2005-02349

Drawings

IP3V-503-0010	Intake Structure Plan 12'X 16' Traveling Screens 31-38, Rev. 1
9321-LL-12003	Intake Structure EL 15'0" Floor Access Hatch Key Plan, Section and Details, Rev. 0

Procedures

IP-EP-AD13	IPEC Emergency Action Level Technical Bases, Rev. 1
OAP-008	Severe Weather Preparations, Rev. 0
IP-SMM-MA-118	Foreign Material Exclusion, Rev. 0

Section 1R11: Operator Requalification

Miscellaneous

SES-ECA-00.a, PT-412A Fails Low, Station Auxiliary Transformer Fails, Main Generator Trip, Loss of all AC
SES-FR-S.1-E2, Loss of CCW, Steam Break in Turbine Building, ATWS, Failure of All MSIVs to Close, Loss of Offsite Power

2-INPO-AOP-2, CCW Pump Trips with Failure of Standby Pump to Auto Start, RCP Thermal Barrier HX Leak, RCP High Vibration
IP-EP-120 Revision 1, Emergency Classification
MC 0609 Appendix I
Section 1R12: Maintenance Effectiveness

Condition Reports

IP2-2004-03152	IP2-2005-00935	IP2-2005-00370	IP2-2005-05532
IP2-2004-06364	IP2-2004-06531	IP2-2005-00398	IP2-2004-03516
IP2-2004-03518	IP2-2004-02262	IP2-2004-02246	IP2-2004-02248
IP2-2004-04847	IP2-2005-00264	IP2-2005-01437	

Procedures

ENN-DC-121, "Maintenance Rule", Rev. 2
ENN-DC-143, "System Health Reports", Rev. 5
ENN-DC-172, "Maintenance Rule (a)(3) Periodic Assessment", Rev. 0
ENN-DC-171, Attachment 9.1, "Screening & Functional Failure (FF) Determination Form", Rev. 1

Miscellaneous

Indian Point Energy Center Maintenance Rule Basis Document, Safety Injection System, Rev. 0
IP-2 Safety Injection System Unavailability, June 8, 2005
Indian Point Energy Center Maintenance Rule Program Quarterly Report, First Quarter 2005
Unit 2 Safety Injection System Second Quarter 2004 System Health Report
Unit 2 Auxiliary Feedwater Fourth Quarter 2004 System Health Report
Indian Point 2 Maintenance Rule Basis Document Auxiliary Feedwater, revision 4
Indian Point 2 Auxiliary Feedwater Unavailability 2 year rolling average

Section 1R13: Maintenance Risk Assessment and Emergent Work Control

Procedures

EOP ES 1.3, Transfer to Recirculation
PT-2Y11A, Gas Turbine 1 Blackstart Timing

Work Orders

WO-IP2-05-00220
WO-IP2-05-15246

Section 1R15: Operability Evaluations

Calculations

FMX-00227-00, Pipe Flow Calculation of Service Water System
WCAP-12655, Emergency Diesel Generator Loading Study

Condition Reports

CR-IP2-2004-06768
CR-IP2-2005-02501
CR-IP2-2005-06407
CR-IP2-2005-01546
CR-IP2-2005-02197
CR-IP2-2005-02307

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Ultrasonic Examination Report 05UT162
Ultrasonic Examination Report 05UT161
Ultrasonic Examination Report 05UT160
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Section 1R22: Surveillance Testing

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2-PT-Q026F, "26 Service Water Pump", Rev 8
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2-SOP-10.1.1, Safety Injection Accumulator and Refueling Water Storage Tank Operations, rev. 48
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Section 1R23, Temporary Alterations

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Procedures

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Section 3PP8: Fitness for Duty Program

Security Training records for Range Qualifications, Annual T&Q, and Inclusion Training
Sample of Security Payroll records for November 28, 2004 - February 19, 2005
Sample of Security Fatigue Hour tracking records for November 28, 2004 - February 19, 2005
Security Shift rosters for November 28, 2004 - February 19, 2005.

Section 40A2: Problem Identification and Resolution

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*Generated as a result of this inspection

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LIST OF ACRONYMS

ACCW	auxiliary component cooling water
AFW	auxiliary feedwater
ASSS	Alternate Safe Shutdown System
AOP	abnormal operating procedure
CARB	corrective actions review board
CFR	Code of Federal Regulations
COL	check off list
DCP	design change package
DTVR	Data Transfer Verification Report
ECRIS	Electrical Cable and Raceway Information System
EDG	emergency diesel generator
EOF	Emergency Operations Facility
EOP	emergency operating procedure
EP	emergency preparedness
FME	foreign material exclusion
IMC	inspection manual chapter

INPO	Institute of Nuclear Power Operations
IN	Information Notice
IP	Inspection Procedure
IP2	Indian Point 2
IPE	individual plant examination
IPEC	Indian Point Energy Center
IPEEE	individual plant examination of external events
IR	Inspection Report
ISFSI	Indian Point independent spent fuel installation facility
MR	maintenance rule
NCV	non cited violation
NRC	Nuclear Regulatory Commission
PWT	post work test
RCP	Reactor Coolant Pump
RSS	Recirculation Spray System
SDP	significance determination process
SOP	standard operating procedure
TI	temporary instruction
TS	technical specification
TSC	Technical Support Center
WOG	Westinghouse Owners Group