UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

August 7, 2012

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

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT 3 – NRC INTEGRATED INSPECTION REPORT 05000286/2012003

Dear Mr. Ventosa:

On June 30, 2012, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at Indian Point Nuclear Generating Unit 3. The enclosed integrated inspection report documents the inspection results, which were discussed on August 2, 2012, 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.

This report documents two NRC-identified findings of very low safety significance (Green). These findings were determined to involve violations of NRC requirements. However, because of the very low safety significance, and because they are entered into your corrective action program (CAP), the NRC is treating these findings as non-cited violations (NCVs), consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest any NCVs in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Senior Resident Inspector at Indian Point Nuclear Generating Unit 3. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region I, and the NRC Senior Resident Inspector at Indian Point Nuclear Generating Unit 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 of from the Publicly Available Records component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Mel Gray, Chief
Reactor Projects Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report 05000286/2012003
w/Attachment: Supplementary Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-286
License No.:	DPR-64
Report No.:	05000286/2012003
Licensee:	Entergy Nuclear Northeast (Entergy)
Facility:	Indian Point Nuclear Generating Unit 3
Location:	450 Broadway, GSB Buchanan, NY 10511-0249
Dates:	April 1, 2012, through June 30, 2012
Inspectors:	P. Cataldo, Senior Resident Inspector – Indian Point 3 M. Halter, Resident Inspector – Indian Point 3 J. Furia, Senior Health Physicist – Region I J. Lilliendahl, Reactor Inspector – Region I
Approved By:	Mel Gray, Chief Reactor Projects Branch 2 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000286/2012003; 4/01/12 – 6/30/12; Indian Point Nuclear Generating (Indian Point) Unit 3; Operability Determinations and Functionality Assessments.

This report covered a three-month period of inspection by resident inspectors and announced inspections performed by regional inspectors. Inspectors identified two findings of very low safety significance (Green), which were NCVs. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspects for the findings were determined using IMC 0310, "Components Within the Cross-Cutting Areas." Findings for which the SDP does not apply may be Green, or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Cornerstone: Mitigating Systems

- Green. The inspectors identified a finding of very low safety significance (Green) involving a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XI, "Test Control," because Entergy personnel did not properly document and evaluate test results to ensure that the test requirements were satisfied. Specifically, Entergy personnel did not ensure that the 33 battery modified performance test procedure prescribed the correct vendor discharge rate and that the 33 battery load profile service test and the 33 battery modified performance test prescribed the correct design peak (one minute) load profile amperage. Entergy personnel entered this issue into the corrective action program to evaluate and correct the deficiencies in the battery testing program, perform an extent of condition review, and evaluate the risk associated with delaying testing of the 33 battery until the next refueling outage.

  The finding was more than minor because it was similar to NRC IMC 0612, Appendix E, "Examples of Minor Issues," Example 2.c, in that the test control issue was repetitive through multiple performances of the surveillance test over a course of six years. Additionally, the finding was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to external events. There was not a cross-cutting aspect associated with this finding because the performance deficiency is not reflective of current performance. Specifically, the inspectors determined that Entergy personnel did not adequately implement their modification process when they did not update their test procedures in 2005, following the modification to the 33 station battery. (Section 1R15.1)

- Green. The inspectors identified a finding of very low safety significance (Green) involving an NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," because Entergy staff did not ensure or verify the adequacy of design with respect to the 33 battery sizing calculation. Specifically, Entergy staff used an incorrect methodology for the safety-related 33 battery voltage drop calculation which provided reasonable doubt about the ability of the battery to operate safety-related breakers. Entergy staff entered this issue into the corrective action program and performed an operability evaluation, which concluded that the battery was operable, based on breaker testing and input from the breaker vendor. The inspectors independently reviewed Entergy staff's basis for operability and similarly concluded that the failure to account for control power wiring did not render the 33 battery inoperable.

  The performance deficiency was determined to be more than minor because it was similar to example 3.j of NRC IMC 0612, Appendix E, "Examples of Minor Issues," in that, based on the minimum voltage available to the 31 auxiliary feedwater (AFW) pump breaker being below the manufacturer's rating there was reasonable doubt that the 33 battery would have adequate capacity under all design conditions. In addition, the performance deficiency was associated with the design control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the capability of systems that respond to initiating events to prevent undesirable consequences. The finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due external events. The finding had a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program Component, because Entergy staff did not thoroughly evaluate the problem such that the resolution addressed causes and extent of conditions, as necessary. Specifically, Entergy staff did not accurately evaluate the inadequate voltage drop calculation for the 33 battery and the extent of condition for the affected components. [P.1(c) per IMC 0310] (Section 1R15.2)

REPORT DETAILS

Summary of Plant Status

Indian Point Unit 3 began the inspection period at 100 percent power. On April 11, 2012, operators completed a downpower and reactor shutdown, to re-energize the Unit Auxiliary Transformer, which was taken off-line in March 2012, due to combustible gassing issues. Operators re-started the unit on April 11 and following power ascension, returned to 100 percent power on April 12. The unit remained at or near 100 percent power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 2 samples)

.1 Readiness for Seasonal Extreme Weather Conditions

a. Inspection Scope

The inspectors performed a review of Entergy's readiness for the onset of seasonal high temperatures. The review focused on the auxiliary boiler feed pump building ventilation system and the 480 volt vital switchgear room. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), technical specifications, control room logs, and the corrective action program to determine specific temperatures or other seasonal weather conditions that could challenge these systems, and to ensure Entergy personnel had adequately prepared for these challenges. The inspectors reviewed station procedures, including Entergy's seasonal weather preparation procedure and applicable operating procedures. The inspectors performed walkdowns of the selected systems to ensure station personnel identified issues that could challenge the operability or functionality of these systems during hot weather conditions.

b. Findings

No findings were identified.

.2 Summer Readiness of Offsite and Alternate Alternating Current (AC) Power Systems

a. Inspection Scope

The inspectors performed a review of plant features and procedures for the operation and continued availability of the offsite and alternate AC power system to evaluate readiness of the systems prior to seasonal high grid loading. The inspectors reviewed Entergy's procedures affecting these areas and the communications protocols between the transmission system operator and Entergy. This review focused on changes to the established program and material condition of the offsite and alternate AC power equipment. The inspectors assessed whether Entergy personnel established and implemented appropriate procedures and protocols to monitor and maintain availability and reliability of both the offsite AC power system and the onsite alternate AC power

system. The inspectors evaluated the material condition of the associated equipment by interviewing the responsible system engineer, observing selected maintenance activities, reviewing condition reports and open work orders, and walking down portions of the offsite and AC power systems including the 345/138/13.8 kV switchyards to assess the condition of these systems for summer readiness.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04Q – 4 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- 31 central control room air conditioner (CCR A/C) with 32 CCR A/C out of service on April 2, 2012
- 31/33 auxiliary boiler feedwater pump (ABFP) restoration following operation during the shutdown and subsequent startup on April 11, 2012
- 31/33 ABFP during 32 ABFP maintenance on May 11, 2012
- 32 component cooling water (CCW) heat exchanger during 31 CCW heat exchanger maintenance on May 15, 2012

The inspectors selected these systems based on their risk-significance relative to the reactor safety cornerstones at the time they were inspected. The inspectors reviewed applicable operating procedures, system diagrams, the UFSAR, technical specifications, work orders, condition reports, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether Entergy staff had properly identified equipment issues and entered them into the corrective action program for resolution with the appropriate significance characterization.

b. Findings

No findings were identified.

.2 Full System Walkdown (71111.04S – 1 sample)

a. Inspection Scope

On June 27 and 28, 2012, the inspectors performed a complete system walkdown of accessible portions of the 480V AC Distribution System to verify the existing equipment lineup was correct. The inspectors reviewed equipment line-up check-off lists and the UFSAR to verify the system was aligned to perform its required safety functions. The inspectors performed field walkdowns of accessible portions of the system to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components to verify that there were no deficiencies.

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Resident Inspector Quarterly Walkdowns (71111.05Q – 5 samples)

a. Inspection Scope

The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that Entergy staff controlled combustible materials and ignition sources in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out of service, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- Pre-fire plan (PFP)-351A [fire zone (FZ) 35A]: A/C Equipment Room – Control Building on June 26, 2012
- PFP-357 (FZ 60A): Upper Electrical Tunnel on June 26, 2012
- PFP-358 (FZ 73A): Upper Electrical Penetration Area on June 26, 2012
- PFP-390: Fire Pump House on June 26, 2012
- PFP-359: Electrical Tunnel Exhaust Fan Room on June 28, 2012

a. Findings

No findings were identified.

.2 Fire Protection – Drill Observation (71111.05A – 1 sample)

a. Inspection Scope

The inspectors observed a fire brigade drill scenario conducted on April 23, 2012, that involved a fire associated with the main turbine lube oil purifier, in the 36’ elevation of the turbine building. The inspectors evaluated the readiness of the plant fire brigade to fight

fires. The inspectors verified that Entergy personnel identified deficiencies, openly discussed them in a self-critical manner during the post-drill debrief, and took appropriate corrective actions as required. The inspectors evaluated specific attributes as follows:

- Proper wearing of turnout gear and self-contained breathing apparatus
- Proper use and layout of fire hoses
- Employment of appropriate fire-fighting techniques
- Sufficient fire-fighting equipment brought to the scene
- Effectiveness of command and control
- Smoke removal operations
- Utilization of pre-planned strategies
- Adherence to the pre-planned drill scenario
- Drill objectives met

The inspectors also evaluated the fire brigade's actions to determine whether these actions were in accordance with the site's fire-fighting strategies.

b. Findings

No findings were identified.

1R07 Heat Sink Performance (71111.07A – 1 sample)

a. Inspection Scope

The inspectors reviewed the 31 CCW heat exchanger to determine its readiness and availability to perform its safety function. The inspectors reviewed the design basis for the component and verified Entergy's commitments to NRC Generic Letter 89-13. The inspectors reviewed the results of previous inspections of the 31 CCW heat exchanger. The inspectors discussed the results of the most recent inspection with engineering staff and reviewed pictures of the as-found and as-left conditions. The inspectors verified that Entergy staff initiated appropriate corrective actions for identified deficiencies. The inspectors also verified that the number of tubes plugged within the heat exchanger did not exceed the maximum amount allowed.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11Q – 2 samples)

.1 Quarterly Review of Licensed Operator Requalification Testing and Training

a. Inspection Scope

The inspectors observed licensed-operator simulator training on April 24, 2012, which included various equipment faults, transients, and plant events. The inspectors evaluated operator performance for Crew 3E, during the simulated event, and verified completion of risk significant operator actions, including the use of abnormal and emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the control room supervisor. The inspectors verified the accuracy and timeliness of the emergency classification made by the shift manager and the technical specification action statements entered by the shift technical advisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Room

a. Inspection Scope

The inspectors observed and reviewed various activities conducted in the control room, including: plant shutdown and reactor trip for recovery of the unit auxiliary transformer, on April 11, 2012; and later that same day, operating mode transition activities, reactor startup activities, and initial criticality to the point of adding heat. Additionally, the inspectors observed surveillance test performances, observed procedure use and adherence, crew communications, and coordination of activities between work groups to verify that established expectations and standards were met.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 3 samples)

a. Inspection Scope

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on structure, system, and component (SSC) performance and reliability. The inspectors reviewed system health reports, corrective action program documents, maintenance work orders, and maintenance rule basis documents to ensure that Entergy was identifying and properly evaluating performance problems within the scope of the maintenance rule. For each sample selected, the inspectors verified that the SSC was properly scoped into the maintenance rule in accordance with 10 CFR 50.65 and verified that the (a)(2) performance criteria established by Entergy staff was

reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2). Additionally, the inspectors ensured that Entergy staff was identifying and addressing common cause failures that occurred within and across maintenance rule system boundaries.

- 125 volts direct current (VDC) distribution system in March 2012
- 34 static inverter maintenance for failures that occurred in 2011
- Miller slide valve deficiencies and PCV-1190 misoperation in March 2012

a. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 – 5 samples)

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that Entergy staff performed the appropriate risk assessments prior to removing equipment for work. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that Entergy personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When Entergy performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and, as appropriate, discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed applicable technical specification requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- Elevated risk during planned testing 3-PT-M13A1, and unit auxiliary transformer, 31 Circulating Water Pump, and 32 isophase fan maintenance on April 9, 2012
- Elevated risk during planned testing 3-PT-M62C and undervoltage relay replacement on April 18, 2012
- Elevated risk during planned maintenance on the 31 and 36 isophase fans, 33 service water pump (SWP), and the 32 ABFP on May 11, 2012
- Elevated risk for 138 kV relay troubleshooting and 32 charging pump maintenance on June 19, 2012
- Elevated risk for isophase bus duct cooling fan maintenance and residual heat removal motor operated valve (MOV) breaker contactor replacement, on June 21, 2012

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 6 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions:

- 32 ABFP steam supply isolation valve stroke time testing failure, on April 5, 2012
- 33 station battery testing deficiency on April 9, 2012
- Isolation valve seal water system and reactor coolant system (RCS) following packing failure of SP-956E, on April 14, 2012
- 33 auxiliary component cooling water pump excessive flow during surveillance testing, on May 12, 2012
- 33 emergency diesel generator (EDG) with a de-energized pre-lube pump, on May 31, 2012
- Refueling water storage tank during alignment with the non-seismic purification system piping, in May 2012

The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the operability determinations to assess whether technical specification operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the technical specifications and UFSAR to Entergy staff's evaluations to determine whether the components or systems were operable. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled by Entergy operators. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

b. Findings

.1 Inadequate Procedures for Testing 33 Station Battery

Introduction: The inspectors identified a finding of very low safety significance (Green) involving an NCV of 10 CFR 50, Appendix B, Criterion XI, "Test Control," because Entergy personnel did not ensure that written test procedures for the 33 battery were adequate to ensure that the test requirements of surveillance requirement (SR) 3.8.4.3 and SR 3.8.4.4 were satisfied.

Description: The inspectors reviewed test procedures and test results for the safety-related 33 station battery and identified several test control issues that affected the battery. Specifically, the modified battery performance test procedure did not prescribe the correct battery manufacturer's discharge rate and the design peak (one-minute) load profile amperage.

SR 3.8.4.3 requires a service test or a modified performance discharge test to be performed on each station battery once every 24 months to verify that each battery is able to supply emergency loads for the design duty cycle. SR 3.8.4.4 requires a performance discharge test or a modified performance discharge test to be performed on each station battery once every 60 months, and on increased frequency if battery degradation is noted or calculated battery life expectancy drops below specific values outlined in TS. During a performance test or modified performance test, the battery is discharged at a vendor specified rate that is adjusted based on the battery temperature, in order to verify that the battery capacity is greater than or equal to 80 percent of the manufacturer's rating. Every four years, when SR 3.8.4.3 and SR 3.8.4.4 are due to be performed during coincident outages, Entergy personnel utilize a modified performance test, as permitted by TS, to satisfy the requirements of both SRs during one test. When SR 3.8.4.3 is due to be performed alone, a service test is performed.

The inspectors reviewed the results of procedure 3-PT-R172C, "Station Battery #33 Modified Performance Test," which was performed in March 2011 to satisfy the requirements of both SR 3.8.4.3 and SR 3.8.4.4. The inspectors also reviewed IP3-CALC-EL-186, "33 Battery Charger, Associated Panels and Cables Component Sizing and Voltage Drop Calculation," which is a development document for the test, to ensure that the correct battery design parameters were translated into the test procedure.

During their review, the inspectors identified two deficiencies. First, the inspectors noted that the design duty cycle of 33 battery requires the battery to supply 311 amps during the peak first minute of a postulated accident scenario. The inspectors reviewed the results of 3-PT-R172C, performed in 2011, and identified that the battery was tested at 267 amps for the first minute of its duty cycle test. The inspectors concluded that 33 battery had not been tested to meet the design duty cycle and the requirements of SR 3.8.4.3 had not been met in March 2011. Based on the inspectors' questions, Entergy personnel reviewed previous tests used to satisfy SR 3.8.4.3, dating back to the most recent replacement of the battery in 2005, including a modified performance test performed in 2007 and load-profile service tests performed in 2005 and 2009. The inspectors noted that the peak load had been correctly tested in 2005, but had not been tested correctly since that time.

Second, the inspectors reviewed the manufacturer's design rating for the type of cells currently installed in 33 battery, as listed in IP3-CALC-EL-186, and noted that that an incorrect and non-conservative discharge rate was used during the modified performance discharge test. Specifically, a discharge rate of 110 amps was used rather than the manufacturer's design discharge rate of 130 amps. The inspectors identified that the incorrect discharge rate used for the test matched the cell type of the previously installed 33 battery, which had been replaced with new, different cells in 2005, and that the incorrect discharge rate had been used since 2005. During the test, the discharge rate is maintained until the battery is fully discharged (105 VDC, or an average of 1.75 VDC per cell). The battery capacity is then calculated based on the duration in which the battery becomes fully discharged. The calculated battery capacity, when trended and properly evaluated, will accurately determine when a battery is reaching the end of its service life.

The inspectors determined that this error resulted in a calculated battery capacity which was 20 percent greater than the actual capacity of the battery. The calculated capacity is also used to determine the test frequency. The inspectors concluded that although the

actual battery capacity was greater than the lowest acceptable by TS, the error, if undetected, could have masked future battery degradation and precluded Entergy personnel from taking required action to test the battery at a greater frequency or replace the battery, as needed.

Entergy personnel entered the above issues into the corrective action program as CR-IP3-2012-01010, CR-IP3-2012-01020, and CR-IP3-2012-01024 to evaluate and correct the deficiencies in the battery testing program and perform an extent of condition review. Additionally, Entergy operators declared SR 3.8.4.3 and SR 3.8.4.4 to be surveillance tests that had been missed since 2005, and generated a risk assessment in accordance with SR 3.0.3 to evaluate the risk associated with delaying the required battery testing until the next refueling outage. Based on the magnitude of the errors found in the test results, the age of the battery, and current battery capacity margins, Entergy personnel determined that the 33 battery was operable, that the current testing frequency for the battery was appropriate, and that there was very low risk associated with delaying 33 battery testing until the next refueling outage in 2013. The inspectors reviewed Entergy's risk assessment and independently evaluated the operability of 33 battery and concluded that the issues identified did not render the 33 station battery inoperable and that there was acceptably low risk associated with delaying testing until early 2013.

Analysis: The inspectors identified that the failure to incorporate the correct design load profile and discharge rate into written test procedures was a performance deficiency that was reasonably within Entergy's ability to foresee and prevent. The finding was more than minor because it was similar to NRC Inspection Manual Chapter 0612, Appendix E, "Examples of Minor Issues," Example 2.c, in that the test control issue was repetitive through multiple performances of the SR test over a course of six years. Additionally, the finding was more than minor because it was associated with the procedure quality attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. Using IMC 0609.04, "Phase 1 – Initial Screening and Characterization of Findings," the inspectors determined this finding was of very low safety significance (Green) because the finding was not related to a design or qualification deficiency, did not represent a loss of safety system function and did not screen as potentially risk significant due to external initiating events.

The inspectors did not identify a cross-cutting aspect with this finding because the performance deficiency is not reflective of current performance. Specifically, the inspectors determined that Entergy personnel did not adequately implement their modification process when they did not update their test procedures in 2005, following the modification to the 33 station battery.

Enforcement: 10 CFR 50, Appendix B, Criterion XI, "Test Control," requires, in part, that a test program shall be established to assure that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is performed in accordance with written test procedures, and test results are documented and evaluated to assure that test requirements have been satisfied. Contrary to the above, on multiple occasions between 2005 and 2012, written test procedures for 33 battery were not adequate, and Entergy personnel did not ensure that test results were properly documented and evaluated to assure that the test requirements of SR 3.8.3.3. and SR 3.8.3.4 were satisfied. Because this violation was of very low safety significance and was entered into Entergy's corrective action program, this violation is being treated as an

NCV, consistent with section 2.3.2 of the NRC Enforcement Policy. **(NCV 05000286/2012003-01, Inadequate Procedures for Testing 33 Station Battery)**

.2 Inadequate 33 Battery Voltage Drop Calculation

Introduction: The inspectors identified a finding of very low safety significance (Green) involving an NCV of 10 CFR 50, Appendix B, Criterion III, "Design Control," because Entergy personnel did not verify the adequacy of design with respect to the 33 battery sizing calculation. Specifically, an incorrect methodology was used for the safety-related 33 battery sizing calculation which provided reasonable doubt about the ability to operate safety related breakers.

Description: The inspectors reviewed IP3-CALC-EL-00186, "33 Battery, Charger, Associated Panels and Cables Component Sizing and Voltage Drop Calculation," which established the adequacy of the 33 battery to supply its loads. The inspectors noted that the calculation showed a minimum voltage to the safety related breakers of 101.32VDC, and the manufacturer's minimum required voltage was 100VDC. The inspectors identified that Entergy staff did not account for control power wiring when calculating the voltage drop to certain loads including the safety related breakers.

The inspectors questioned the adequacy of the battery sizing calculation without calculating the voltage drop through the control power wiring. The inspectors specifically questioned the ability to operate the safety related breakers. Entergy staff reviewed the actual voltage drop and determined that the 31 AFW pump breaker closing relay would only have 96.3VDC available. The inspectors determined there was reasonable doubt that the battery would have been adequate under all design conditions to close the 31 AFW pump breaker; and since the battery sizing calculation was the basis for the acceptance criteria of the battery service and performance tests, there would not have been indications of inadequate capability during testing.

Entergy staff entered this issue into the corrective action program (CR-IP3-2012-01596) and contacted the breaker manufacturer to confirm that the breaker is expected to operate at 96.3VDC. Entergy staff reviewed 3-BRK-018-ELC, "Inspection, Lubrication, and Testing of Westinghouse 480V DS 532/632 Breakers," which is used for the safety related breaker maintenance. Entergy staff determined that the breaker maintenance procedure performs as-left testing of the breakers at 75VDC and as found testing of the breakers at 100VDC. Entergy staff is revising the testing procedure to perform the as found testing below 96.3VDC. Based on the input from the manufacturer and the as left testing of the breakers, Entergy staff determined that the battery was operable. The inspectors independently reviewed Entergy's basis for operability and concluded that the failure to account for control power wiring did not render the 33 battery inoperable.

The inspectors reviewed CR-IP3-2007-03086 and determined that on August 1, 2007, Entergy staff had identified that cable lengths were incorrect for various components. Entergy's evaluation in that condition report stated, in part, that the worst case example was a solenoid operated valve for a containment recirculation fan. The evaluation concluded that based on this worst case example, there were no operability concerns, but that the calculation needed to be revised. The inspectors determined that this conclusion was incorrect based on the very low current draw of a solenoid operated valve as compared to breaker closing coils. CR-IP3-2007-03086 was later closed to CR-IP3-2007-03299 which included other changes to the battery sizing calculations. On

October 29, 2010, the corrective action for revising the battery sizing calculations was closed stating, “Calculations have been physical[ly] marked up and reviewed as acceptable.” On February 27, 2012, Entergy staff determined that no calculation markups existed in the document management system corresponding to the changes credited in CR-IP3-2007-03299, and therefore CR-IP3-2007-03299 had been closed inappropriately. Although, the issue was identified in 2007, the inspectors determined that Entergy staff had multiple opportunities until February 27, 2012, to question the initial evaluation of the inadequate voltage drop for the 33 battery and to correctly evaluate for the significance and extent of condition.

Analysis: The inspectors determined that the failure to ensure that adequate design control measures existed to verify the adequacy of the design capacity for the 33 battery was a performance deficiency that was reasonably within Entergy’s ability to foresee and prevent. The performance deficiency was determined to be more than minor because it was similar to example 3.j of NRC IMC 0612, Appendix E, “Examples of Minor Issues,” in that, based on the minimum voltage available to the 31 AFW pump breaker being below the manufacturer’s rating there was reasonable doubt that the 33 battery would have adequate capacity under all design conditions. In addition, the performance deficiency was associated with the design control attribute of the Mitigating Systems cornerstone and adversely affected the cornerstone objective of ensuring the reliability and capability of systems that respond to initiating events to prevent undesirable consequences. In accordance with NRC IMC 0609, Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," a Phase 1 SDP screening was performed and the inspectors determined the finding was of very low safety significance (Green) because it was not a design or qualification deficiency, did not represent a loss of system safety function, and did not screen as potentially risk significant due to a seismic, flooding, or severe weather initiating event.

The finding has a cross-cutting aspect in the area of Problem Identification and Resolution, Corrective Action Program Component, because Entergy staff did not thoroughly evaluate the problem such that the resolution addressed causes and extent of conditions, as necessary. Specifically, Entergy staff did not accurately evaluate the inadequate voltage drop calculation for the 33 battery and the extent of condition for the affected components. (P.1.c per IMC 0310)

Enforcement: 10 CFR Part 50, Appendix B, Criterion III, Design Control, requires, in part, that design control measures shall provide for verifying or checking the adequacy of design. Contrary to the above, until May 24, 2012, Entergy’s design control measures were inadequate for verifying the adequacy of the 33 battery sizing calculation. Specifically, an incorrect methodology was used for the safety-related 33 battery voltage drop calculation which provided reasonable doubt about the ability to operate safety related breakers. Because this violation was of very low safety significance (Green) and has been entered into Entergy’s CAP (CR-IP3-2012-01596), this violation is being treated as a non-cited violation, consistent with Section 2.3.2.a of the NRC Enforcement Policy. **(NCV 05000286/2012003-02, Inadequate 33 Battery Voltage Drop Calculation)**

1R18 Plant Modifications (71111.18 – 1 sample)

Temporary Modification

a. Inspection Scope

The inspectors reviewed the temporary modifications listed below to determine whether the modifications affected the safety functions of systems that are important to safety. The inspectors reviewed 10 CFR 50.59 documentation and post-modification testing results and conducted field walkdowns of the modifications to verify that the temporary modifications did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- TMOD-36576, Temporary Modification to Valve SP-AOV-956E

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 – 8 samples)

a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities ensured system operability and functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure was consistent with the information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- 32 CCR A/C temperature control valve replacement on April 2, 2012
- Relay 62-1/6A replacement on April 18, 2012
- Relay TD/AFPR3 replacement on April 26, 2012
- 36 service water pump (SWP) following repairs on May 3, 2012
- MS-PCV-1120 positioner replacement on May 9, 2012
- 32 ABFP maintenance on May 11, 2012
- 33 SWP motor cut off (MCO) switch replacement on May 11, 2012
- 33 EDG output breaker MCO switch replacement on May 30, 2012

b. Findings

No findings were identified.

1R20 Refueling and Other Outage Activities (71111.20 – 1 sample)

a. Inspection Scope

The inspectors reviewed the station's work schedule and outage risk plan for the return-to-service of the Unit 3 unit auxiliary transformer (UAT), conducted on April 11 through April 12, 2012. The inspectors verified that risk, industry experience, previous site-specific problems, and defense-in-depth were considered in the outage plan. During the outage, the inspectors observed various station processes associated with the following activities during the recovery of the UAT:

- Configuration management, including maintenance of defense-in-depth, commensurate with the outage plan for the key safety functions and compliance with the applicable technical specifications when taking equipment out of service
- Status and configuration of electrical systems and switchyard activities to ensure that technical specifications were met
- Monitoring of decay heat removal operations
- Activities that could affect reactivity, including the shutdown and subsequent reactor startup and initial criticality
- Fatigue management
- Identification and resolution of problems related to planned outage activities

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 6 samples)

a. Inspection Scope

The inspectors observed performance of surveillance tests and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied technical specifications, the UFSAR, and Entergy procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following surveillance tests:

- 3-PT-Q120B (IST) on April 5, 2012
- 3-PC-OL05A on April 25, 2012
- 3-PT-0L3B14, 35 fan coil unit load sequencer calibration on May 1, 2012
- 3-PT-Q94C, Pressurizer Level Functional Test – Channel III on May 9, 2012
- 3-PT-OL3B3, 31 containment spray pump load sequencer calibration on June 7, 2012
- 0-SOP-LEAKRATE-001 (RCS) on June 25, 2012

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06 – 1 sample)

Training Observations

a. Inspection Scope

The inspectors observed a simulator training evolution for Unit 3 licensed operators on April 24, 2012, which required emergency plan implementation by an operations crew. Entergy planned for this evolution to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification and notification activities performed by the crew. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that Entergy evaluators noted the same issues and entered them into the corrective action program.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Occupational/Public Radiation Safety

2RS7 Radiological Environmental Monitoring Program (71124.07 – 1 sample)

a. Inspection Scope

The inspectors used the requirements in 10 CFR Part 20; 10 CFR Part 50, Appendix A, Criterion 60 - Control of Release of Radioactivity to the Environment; 10 CFR Part 50, Appendix I, Numerical Guides for Design Objectives and Limiting Conditions for Operations to Meet the Criterion As Low As is Reasonably Achievable for Radioactive Material in Light-Water – Cooled Nuclear Power Reactor Effluents; 40 CFR Part 190, Environmental Radiation Protection Standards for Nuclear Power Operations; 40 CFR Part 141, Maximum Contaminant Levels for Radionuclides; the guidance in Regulatory Guides 1.23, 4.1 and 4.15, NUREG 1301 and/or 1302, as well as, applicable industry standards and licensee procedures as criteria for determining compliance.

The inspectors reviewed the annual radiological environmental operating reports, and the results of any licensee assessments since the last inspection, to verify that the radiological environmental monitoring program (REMP) was implemented in accordance with the plant TS and the offsite dose calculation manual (ODCM). The inspectors reviewed the report 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 inspectors reviewed the ODCM to identify locations of environmental monitoring stations.

The inspectors reviewed the final safety analysis report for information regarding the environmental monitoring program and meteorological monitoring instrumentation.

The inspectors reviewed the annual effluent release report and the 10 CFR Part 61, "Licensing Requirements for Land Disposal of Radioactive Waste," report, to determine if Entergy was sampling, as appropriate, for the predominant and dose-causing radionuclides likely to be released in effluents.

The inspectors walked down air sampling stations and thermo-luminescence dosimeter (TLD) monitoring stations to determine whether they were located as described in the ODCM and to determine the equipment material condition.

For the air samplers and TLDs selected above, the inspectors reviewed the calibration and maintenance records to verify that they demonstrate adequate operability of these components. Additionally, the inspectors reviewed the calibration and maintenance records of composite water samplers as available.

The inspectors verified that Entergy had initiated sampling of other appropriate media upon loss of a required sampling station.

The inspectors observed the collection and preparation of environmental samples from different environmental media as available. Sampling observed included river water, seaweed, and river sediment. The inspectors 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 inspectors verified that the meteorological instruments are operable, calibrated, and maintained in accordance with guidance contained in the final safety analysis report, NRC Regulatory Guide 1.23, "Meteorological Monitoring Programs for Nuclear Power Plants," and Entergy's procedures. The inspectors verified that the meteorological data readout and recording instruments in the control room and at the tower were operable.

The inspectors verified that missed and or anomalous environmental samples were identified and reported in the annual environmental monitoring report. The inspectors reviewed the licensee's assessment of any positive sample results. The inspectors reviewed the associated radioactive effluent release data that was the source of the released material.

The inspectors selected SSCs that involved or could reasonably involve licensed material for which there is a credible mechanism for licensed material to reach groundwater, and verified that the licensee had implemented a sampling and monitoring program sufficient to detect leakage of these SSCs to groundwater.

The inspectors verified that records, as required by 10 CFR 50.75(g), Reporting and Recordkeeping for Decommissioning Planning, of leaks, spills, and remediation since the previous inspection were retained in a retrievable manner.

The inspectors reviewed any significant changes made by Entergy to the ODCM as the result of changes to the land census, long-term meteorological conditions (3-year average), or modifications to the sampler stations since the last inspection. The

inspectors reviewed technical justifications for any changed sampling locations. The inspectors verified that the licensee 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 inspectors verified that the appropriate detection sensitivities with respect to TS/ODCM were used for counting samples. The inspectors reviewed quality control charts for maintaining radiation measurement instrument status and actions taken for degrading detector performance.

The inspectors reviewed the results of Entergy's inter-laboratory comparison program to verify the adequacy of environmental sample analyses performed by Entergy. The inspectors verified that the inter-laboratory comparison test included the media/nuclide mix appropriate for the facility.

The inspectors verified that problems associated with the REMP were being identified by Entergy at an appropriate threshold and were properly addressed for resolution in Entergy's corrective action program. The inspectors verified the appropriateness of the corrective actions for a selected sample of problems documented by Entergy staff that involved the REMP.

The inspectors reviewed CR-IP3-2012-01507, which identified elevated concentrations of radioisotopes in monitoring wells at Indian Point during quarterly sampling. The sampling took place in February 2012. Results for tritium ranged between 2000 pCi/liter to 7000 pCi/liter, which is below the EPA drinking water standard (NOTE: water from these wells is not drinking water). One well showed between 12.6 and 16.8 pCi/liter for cesium-137, slightly above the minimum detectable concentration of 9.17 pCi/liter. This spike in results appears to be the result of normal groundwater flow from areas of higher concentration upstream, and not due to any new source of groundwater contamination.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 – 2 samples)

a. Inspection Scope

The inspectors sampled Entergy's submittals for the below listed performance indicators (PIs) for Unit 3 for the period of April 1, 2011, through March 31, 2012. To determine the accuracy of the PI data reported during those periods, the inspectors used definitions and guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 10 CFR 50.73." As applicable, the inspectors reviewed Entergy's operator narrative logs, issue reports, event reports, and NRC integrated inspection reports to validate the accuracy of the submittals.

- Safety System Functional Failures (MS05)
- Reactor Coolant System Activity (BI01)

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 2 samples)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure 71152, "Problem Identification and Resolution," the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that Entergy entered issues into the corrective action program at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the corrective action program and periodically attended condition report screening meetings.

b. Findings

No findings were identified.

.2 Semi-Annual Trend Review

a. Inspection Scope

The inspectors performed a semi-annual review of site issues, as required by Inspection Procedure 71152, "Problem Identification and Resolution," to identify trends that might indicate the existence of more significant safety issues. In this review, the inspectors included repetitive or closely-related issues that may have been documented by Entergy outside of the corrective action program, such as trend reports, performance indicators, major equipment problem lists, system health reports, maintenance rule assessments, and maintenance or corrective action program backlogs. The inspectors also reviewed Entergy's corrective action program database for the first and second quarters of 2012 to assess condition reports written in various subject areas (equipment problems, human performance issues, etc.), as well as individual issues identified during the NRCs daily condition report review (Section 4OA2.1). The inspectors also performed a focused review of a common cause analysis (CCA), conducted within a higher-tier apparent cause evaluation (ACE), which was documented in condition report CR-IP2-2012-2694. This ACE was performed based on Entergy's receipt of three (3) cross-cutting aspects in a similar area (P.1(d)), as determined by Manual Chapter 0310, within the current assessment period, and in accordance with EN-LI-125, "NRC Cross-Cutting Analysis and Trending." This review was conducted to verify that Entergy personnel were appropriately evaluating the significant contributors to the underlying performance deficiencies for the NRC-issued violations, which were dispositioned in NRC Inspection Reports since January 2011.

b. Findings and Observations

No findings were identified.

The inspectors evaluated the CCA evaluation, as well as the corrective actions and assessment conclusions that were detailed within the corrective action program under condition report CR-IP2-2012-02601, dated May 9, 2012. The inspector noted Entergy's use of a CCA as the diagnostic tool to evaluate site issues within the corrective action program, and determine if the issues shared similar common causes.

The inspectors verified that Entergy staff had appropriately identified the NRC findings that were dispositioned via NRC Inspection Reports, and further verified that the scope of the assessment and the time period were appropriate for the circumstances. This review also verified that both the CCA and the ACE were performed in accordance with the applicable site or fleet procedures.

During this review, the inspectors noted that Entergy staff had appropriately assessed issues that were entered into the corrective action program that shared similar traits to those findings under the current cross-cutting review. In particular, the inspectors assessed the identified CCA for the three cross-cutting issues, as well as relevant additional issues that were reviewed for commonality. The inspectors determined that Entergy staff had identified a reasonable common cause, which was comprised of three distinct attributes, and were verified to be appropriately addressed with distinct corrective actions within the corrective action program as either planned or already completed:

- Lack of full commitment and ownership of the corrective action process
- Less than desired peer-to-peer accountability, and
- Limited involvement by key personnel in decision-making during resolution

The inspectors noted two corrective actions, in particular, which were considered to be reasonable to address the identified common cause:

(1) The assignment of a multi-discipline team from affected departments within the organization, to perform the assessment of critical component failures during performance of higher-tier ACE's. This is intended to ensure ownership and accountability of key departments for resolution of safety significant issues.

(2) Assessment of long-term corrective action deferrals by the Unit Reliability Team, whose primary mission is resolving critical component and equipment reliability issues, and is designed to ensure improvement and ownership in issue resolution from a timeliness of corrective action standpoint. This will be accomplished primarily through an assessment by the team to assure issue prioritization and mitigation strategies for deferrals of corrective actions that affect critical components or long-standing deficiencies, which could ultimately result in safety significant equipment or plant events.

.3 Annual Sample: Time Delay Agastat Relay Failure Trending

a. Inspection Scope

The inspectors performed an in-depth review of Entergy's root corrective actions associated with multiple agastat time delay relays that had drifted outside the acceptance criteria during surveillance testing. These agastat relays were associated

with safety-related and critical mitigating equipment that utilize the relays to sequence important equipment condition onto safety buses during design basis events.

The inspectors assessed Entergy staff's problem identification threshold, applicable cause analyses, extent of condition reviews, compensatory actions, and the prioritization and timeliness of corrective actions to determine whether Entergy staff were appropriately identifying, characterizing, and correcting problems associated with this issue and whether the planned or completed corrective actions were appropriate. The inspectors compared the actions taken to the requirements of Entergy's corrective action program and 10 CFR 50, Appendix B. In addition, the inspectors observed selected surveillance testing (See sections 1R19 and 1R22 of this report), interviewed engineering and maintenance personnel, and reviewed applicable system health reports, to assess the effectiveness of the implemented corrective actions.

b. Findings and Observations

No findings were identified.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 2 samples)

.1 (Closed) Licensee Event Report (LER) 05000286/2011-005-00: Automatic Actuation of EDGs and AFW Pumps Due to Undervoltage on 480 VAC Vital Buses Due to a Loss of Offsite Power During a Severe Storm

On August 19, 2011, during a thunderstorm, emergency diesel generators (EDGs) 32 and 33 automatically actuated and loaded onto 480 volt busses 5A and 6A, due to an undervoltage condition following the loss of 138 kV offsite power feeder 95331. As a result of the 480 volt bus undervoltage, the 32 and 33 AFW pumps automatically started. All EDGs and AFW pumps operated as designed. The inspectors reviewed the LER and the associated condition report CR-IP3-2011-04045, and verified that Entergy staff's evaluation and corrective actions were adequate. The inspectors did not identify any violations during the review of the LER. This LER is closed.

.2 (Closed) LER 05000286/2012-001-00: Common Cause Inoperability of Both Trains of Motor Driven Auxiliary Feedwater (AFW) Pumps Due to Inability to Control AFW Regulating Valves After Isolation of Nitrogen Backup

On October 11, 2011, following completion of a two-year inspection/overhaul of the AFW system nitrogen backup supply pressure regulator (IA-PCV-1276), the system relief valve lifted while operators were placing the regulator back in service. The relief valve, RV-1284, was damaged during the lift and continued to leak by its seat. Entergy personnel isolated the nitrogen backup system from instrument air in preparation to remove the damaged relief valve and replace it with a new valve. After questioning by NRC inspectors, Entergy personnel determined that the two motor-driven trains of AFW were inoperable, while the nitrogen backup system was isolated and no operator was stationed locally, as a compensatory measure. The inspectors noted that the local operator was necessary for operation of the AFW pumps' discharge flow control valves, whenever the normal, non-safety related instrument air supply was lost. Entergy staff entered this issue into the corrective action program as CR-IP3-2011-04651 and CR-IP3-2012-00394.

The information described above, as documented in CR-IP3-2011-04651, was evaluated and dispositioned by the inspectors in NRC inspection report 2012-002. The subsequent LER submitted by Entergy personnel following the NRC inspection was reviewed, including associated corrective actions implemented as a result of the inspection. The inspectors verified the information in the LER was consistent with the updated corrective action documents. The inspectors did not identify any additional violations during the review of the LER. This LER is closed.

4OA6 Meetings, Including Exit

On August 2, 2012, the inspectors presented the inspection results to Mr. John Ventosa, Site Vice President, and other members of the Entergy staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Entergy Personnel

J. Ventosa, Site Vice President
V. Andreozzi, Systems Engineering Supervisor
N. Azevedo, Engineering Programs Manager
T. Beasely, Engineering
R. Burroni, Systems Engineering Manager
P. Conroy, Nuclear Safety Assurance Director
L. Coyle, General Manager, Plant Operations
G. Dahl, Licensing Specialist
M. Dechristopher, Engineering
J. Dinelli, Site Operations Manager
B. Dolansky, ISI Program Manager
J. Doroski, Plant Chemistry
R. Drake, Engineering
M. Dreis, System Engineer
J. Kirkpatrick, Assistant General manager, Plant Operations
V. Meyers, Design Engineering Supervisor
T. McCaffrey, Design Engineering Manager
R. Daley, System Engineer
J. Raffaele, Design Engineering Supervisor
B. Riggs, Project Manager
H. Robinson, Design Engineer
M. Rose, Engineering
M. Tesoriero, Programs and Components Engineering Manager
M. Troy, Engineering Supervisor
R. Walpole, Licensing Manager
W. Wittich, Engineering
M. Woodby, Engineering Director

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened/Closed

05000286/2012-003-01	NCV	Inadequate Procedures for Testing 33 Station Battery (Section 1R15.1)
05000286/2012-003-02	NCV	Inadequate Battery Voltage Drop Calculation (Section 1R15.2)

Closed

05000286/2011-005-00	LER	Automatic Actuation of EDGs and Aux Feedwater Pumps Due to Undervoltage on 480 VAC Vital Buses Due to a Loss of Offsite Power During a Severe Storm (Section 4OA3)
05000286/2012-001-00	LER	Common Cause Inoperability of Both Trains of Motor Driven Auxiliary Feedwater (AFW) Pumps Due to Inability to Control AFW Regulating Valves After Isolation of Nitrogen Backup

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures
IP-SMM-OP-104, Offsite Power Continuous Monitoring and Notification, Revision 13
OAP-048, Seasonal Weather Preparation, Revision 9

Condition Reports (CR-IP3-)

2011-04791	2011-02334	2011-05156	2011-04711	2011-04045	2012-01160
2012-01226	2012-01268	2012-01272	2012-00009	2012-01235	2012-01234
2012-00146	2012-01447	2012-00700	2012-00702	2012-00703	2012-00705
2012-00709	2012-02514	2012-01846	2012-01857		

Maintenance Orders/Work Orders

252134	277354	318152	299250

Miscellaneous
Critical Evolution Meeting (CEM), UAT Aux Transformer Alarm – Medium Risk Due to Lifting Live Wires (65 vdc)
CEM, Replace 138KV Primary Pilot Wire Monitor Relay (PMG13) For Feeder 33332 L&M

Section 1R04: Equipment Alignment

Procedures
3-COL-EL-001, 6900 and 480 Volt AC Distribution, Revision 49
3-COL-FW-2, Auxiliary Feedwater System, Revisions 29 and 30
3-COL-CC-1, Component Cooling System , Revision 28
3-COL-RW-002, Revision 44

Drawings
9321-F-20333, Sheet 2, Flow Diagram Service Water System, Revision 29
9321-F-27223, Flow Diagram Service Water System Nuclear Steam Supply, Revision 46
9321-F-20193, Flow Diagram Boiler Feedwater, Revision 60

Section 1R05: Fire Protection

Procedures
PFP-351A, A/C Equipment Room – Control Building, Revision 11
PFP-357, Upper Electrical Tunnel, Revision 5
PFP-358, Upper Electrical Penetration Area, Revision 11
PFP-359, Electrical Tunnel Exhaust Fan Room, Revision 0
PFP-390, Fire Pump House, Revision 5
EN-TQ-125, Fire Brigade Drills, Revision 1
PFP-363A, R4D4 Oil Separator, Revision 8
SMM-DC-901, Attachment 10.5, Fire Brigade, Revision 8
3-ONOP-FP-1, Plant Fires, Revision 28
IP-SMM-TQ-122, Fire Protection Training Program, Revision 3

Condition Reports (CR-IP3-)
2012-01994 2012-01121 2012-01122 2012-01123 2012-01222

Section 1R07: Heat Sink Performance

Procedures
EN-DC-316, Heat Exchanger Performance and Condition Monitoring, Revision 3
TS-MS-027, IP3 Service Water Piping and Piping Components, Revision 4

Condition Reports (CR-IP3-)
2012-01437

Maintenance Orders/Work Orders
52309268

Miscellaneous
IP3-CALC-CCW-02487, CCW/SWS – HX Tube Plugging Limit for CCW Heat Exchangers, Revision 0

Section 1R11: Licensed Operator Requalification Program

Procedures
TQF-210-DD03, LOR Simulator Crew Performance Evaluation Report, Revision 3

Miscellaneous
New York State Radiological Emergency Data Form – Part 1
I3SX-LOR-SES-38, IPEC Simulator Evaluated Scenario

Section 1R12: Maintenance Effectiveness

Procedures
3PT-R156C, Station Battery #33 Load-Profile Service Test, Revision 13
3-PT-Q001A, #31 Station Battery Surveillance, Revision 8
3-SOP-EL-002, Instrument Bus And Plant Computer Static Inverter Operation, Revision 33

Completed Procedures
3-PT-Q0001B, #32 Station Battery Surveillance, dated January 17, 2012
3-PT-W013, Station Battery Visual Inspection, dated October 9, 2011
3-PT-W013, Station Battery Visual Inspection, dated October 26, 2011
3-PT-W020, Electrical Verification – Inverters and DC Distribution in Modes 1 to 4, dated October 22, 2011
3-PT-W020, Electrical Verification – Inverters and DC Distribution in Modes 1 to 4, dated October 29, 2011
3-PT-Q028, Containment Isolation Valves PCV-1190, PCV-1191, And 1192 Pressure Relief System, Revision 18

Condition Reports (CR-IP3-)
2005-05310 2008-02533 2010-03092 2012-00876 2012-00095 2011-05506
2012-00752 2012-01163

Maintenance Orders/Work Orders
52214127 52343959 52361138 52378088 308121 299433
308933 52311296

Miscellaneous
IP3-CALC-EL-00186, 33 Battery, Charger, Associated Panels and Cables Component Sizing and Voltage Drop Calculation, Revision 4
Indian Point Energy Center Units 2 and 3 Maintenance Rule Basis Document 125V DC Power System, Revision 1
Indian Point Unit 3 DC – DC Power System Health Report, 4th Quarter 2010
Indian Point Unit 3 DC – DC Power System Health Report, 1st Quarter 2011
Indian Point Unit 3 DC – DC Power System Health Report, 2nd Quarter 2011
Indian Point Unit 3 DC – DC Power System Health Report, 3rd Quarter 2011
Indian Point Unit 3 DC – DC Power System Health Report, 4th Quarter 2011
Indian Point Unit 3 DC – DC Power System Health Report, 1st Quarter 2012
IPEC Unit 3 System Health Report – 118V Instrument Bus System
Vendor Manual 379-100166603, 7.5 KVA Inverter, Solid-state Controls, Inc. Instruction/Technical Manual

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures
EN-WM-104, On Line Risk Assessment, Revision 6

Maintenance Orders/Work Orders
254626 261519 52338438 300175 155176 318152

Miscellaneous
Equipment-Out-Of-Service Monitor, Risk Analysis Software Program

Section 1R15: Operability Determinations and Functionality Assessments

Procedures
3-BRK-018-ELC, Inspection, Lubrication, and Testing of Westinghouse 480V DS 532/632 Breakers, Revision 15
3-SOP-SI-003, Recirculation and/or Purification of the Refueling Water Storage Tank, Revision 23
3-SOP-WDS-001, Liquid Waste Disposal System Operation, Revision 24
3-OSP-CVCS-001, CVCS Outage Operations, Revision 5
3-PT-R156C, Station Battery #33 Load-Profile Service Test, Revision 13
3-PT-R156C, Station Battery #33 Load-Profile Service Test, Revision 14

Completed Procedures
3-PT-Q101, Main Steam Valves PCV-1310A, PCV-1310B, & PCV-1139 Stroke Test, dated April 5, 2012
3-PT-Q119A, 31 & 32 Auxiliary Component Cooling Pumps, dated May 15, 2012
3-PT-Q119B, 31 & 32 Auxiliary Component Cooling Pumps, dated May 15, 2012
3-PT-R172C, Station Battery 33 Modified Performance Test, dated March 19, 2007
3-PT-R156C, Station Battery #33 Load-Profile Service Test, dated March 29, 2005

Condition Reports (CR-IP3-)
2007-03086 2007-03239 2007-03299 2012-00485 2012-00984 2012-00989
2012-01432 2012-01468 2012-01019 2012-01020 2012-01024 2012-01596
2012-00659 2012-01673 2012-01086 2012-01087 2012-00533 2012-00284

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6843D01, Consolidated Edison Co Indian Point Station Low Voltage Metal Enclosed 'DS' Swgr No. 31, Revision 6
6843D02, Consolidated Edison Co Indian Point Station Low Voltage Metal Enclosed 'DS' Swgr No. 31, Revision 9
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3-PT-V059, 36 SWP Reference Test, Revision 1
3-PT-Q120B, 32 ABFP (Turbine Driven) Surveillance And IST, Revision 20
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3-PT-M62C, 480V Undervoltage/Degraded Grid Protection System Bus 6A Functional, Revision 10

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2012-01309 2011-03437 2012-01135 2012-01292 2012-01293

Maintenance Orders/Work Orders
00127111 145724 52411261 52414575 286027 144270
304890 304888 310748

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2012-00878 2012-00683 2012-01035 2012-01036 2012-01866

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305785 267407

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Section 1R22: Surveillance Testing

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3-PT-Q120B, 32 ABFP (Turbine Driven) Surveillance and IST, dated April 5, 2012
3-PC-OL05A, 6.9 KV Undervoltage Relay Calibration and Agastat Time Response, dated April 25, 2012
3-PT-Q94C, Pressurizer Level Functional Test – Channel III, dated May 9, 2012

0-SOP-LEAKRATE-001, RCS Leakrate Surveillance, Evaluation, and Leak Identification, dated June 24, 2012
0-SOP-LEAKRATE-001, RCS Leakrate Surveillance, Evaluation, and Leak Identification dated June 25, 2012
3-PT-OL3B3, Containment Spray Pump #31 Load Sequencer Calibration, Revision 4
3-PT-OL3B14, Containment Recirculation Fan #35 Load Sequencer Calibration, Revision 4

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2012-00993 2012-01235 2012-01406

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Miscellaneous
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I3SX-LOR-SES-38, IPEC Simulator Evaluated Scenario

Section 2RS7: Radiological Environmental Monitoring Program

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2012-00253 2012-00904 2012-01507 2012-02690 2012-03230 2012-03790

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2011 Radiological Environmental Monitoring Report
IPEC Snapshot Assessment Reports: IP3LO-2012-0014, Annual REMP Report; IP3LO-2011-00058, Air Particulate and Iodine Sampling

Section 4OA1: Performance Indicator Verification

Completed Procedures
EN-LI-114, Performance Indicator Process – Safety System Unavailability / Safety System Functional Failures, dated July 7, 2011
EN-LI-114, Performance Indicator Process – Safety System Unavailability / Safety System Functional Failures, dated October 4, 2011
EN-LI-114, Performance Indicator Process – Safety System Unavailability / Safety System Functional Failures, dated January 11, 2012

EN-LI-114, Performance Indicator Process – Safety System Unavailability / Safety System Functional Failures, dated April 12, 2012
EN-LI-114, Performance Indicator Process – Reactor Coolant System Specific Activity, dated July 5, 2011
EN-LI-114, Performance Indicator Process – Reactor Coolant System Specific Activity, dated October 4, 2011
EN-LI-114, Performance Indicator Process – Reactor Coolant System Specific Activity, dated January 11, 2012
EN-LI-114, Performance Indicator Process – Reactor Coolant System Specific Activity, dated April 12, 2012

Condition Reports (CR-IP3-)
2011-00697

Section 4OA2: Problem Identification and Resolution

Procedures
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EEN-LI-118-6, Common Cause Analysis (CCA), Revision 3

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IP2-2012-02601 2011-05518 IP2-2012-02694 2011-03437 2011-03035
2010-02867 2010-02237 2010-01561 2010-00438 2012-01135 2012-01147
2012-01321 2001-02443 2012-01472

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52352124 286027

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NRC Part 21 2008-27-00, dated November 25, 2008

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2011-04045 2011-04651 2012-00394

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2011-01108 2011-01115

LIST OF ACRONYMS

ABFP	auxiliary boiler feedwater pump
AC	alternating current
A/C	air conditioner
ACE	apparent cause evaluation
ADAMS	Agencywide Document Management System
AFW	auxiliary feedwater
CAP	corrective action program
CCA	common cause assessment
CCR	central control room
CEM	critical evolution meeting
CFR	Code of Federal Regulations
CR	condition report
DRA	Deputy Regional Administrator
DRP	Division of Reactor Projects
DRS	Division of Reactor Safety
EC	engineering change
EDG	emergency diesel generator
ENTERGY	Entergy Nuclear Northeast
FZ	fire zone
HPCI	high pressure coolant injection
IMC	Inspection Manual Chapter
IPEC	Indian Point Energy Center
IR	inspection report
IST	in-service test
LER	licensee event report
MCO	motor cut off
NCV	non-cited violation
NRC	Nuclear Regulatory Commission
ODCM	offsite dose calculation manual
OEDO	Office of the Executive Director for Operations (NRC)
PFP	pre-fire plan
PI	performance indicator
RA	regional administrator
RCS	reactor coolant system
REMP	radiological environmental monitoring program
RI	resident inspector
R1	Region 1
SDP	significance determination process
SRI	senior resident inspector
SSC	structure, system, and component
SWP	service water pump
TLD	thermoluminescence dosimeter
TS	technical specifications
UAT	unit auxiliary transformer
UFSAR	updated final safety analysis report
VDC	volts, direct current