

February 4, 2004

Mr. Fred R. Dacimo
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Indian Point Energy Center
295 Broadway, Suite 1
P.O. Box 249
Buchanan, NY 10511-0249

**SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT 3 - NRC INTEGRATED
INSPECTION REPORT 05000286/2003009**

Dear Mr. Dacimo:

On December 31, 2003, the US Nuclear Regulatory Commission (NRC) completed an inspection at the Indian Point Nuclear Generating Unit 3 (IP3). The enclosed report presents the results of that inspection. The results were discussed on January 8, 2004, with Mr. Schwarz 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. 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, one finding of very low safety significance (Green) was identified. This finding was determined to be a violation of NRC requirements. However, because of its very low safety significance, and because it is 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 report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001; and the NRC Resident Inspector at Indian Point 3.

Since the terrorist attacks on September 11, 2001, the NRC has issued five Orders and several threat advisories to licensees of commercial power reactors to strengthen licensee capabilities, improve security force readiness, and enhance controls over access authorization. In addition to applicable baseline inspections, the NRC issued Temporary Instruction 2515/148, "Inspection of Nuclear Reactor Safeguards Interim Compensatory Measures," and its subsequent revision, to audit and inspect licensee implementation of the interim compensatory measures required by order. Phase 1 of TI 2515/148 was completed at all commercial power nuclear power plants during calendar year 2002 and the remaining inspection activities for Indian Point 3 were completed in January 2003. The NRC will continue to monitor overall safeguards and security controls at Indian Point 3.

Mr. Fred R. Dacimo

2

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

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

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

Enclosure: Inspection Report No. 05000286/2003009
w/Attachment: Supplemental Information

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4

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 50-286

License No. DPR-64

Report No. 05000286/2003009

Licensee: Entergy Nuclear Northeast

Facility: Indian Point Nuclear Generating Unit 3

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

Dates: September 28 - December 31, 2003

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CONTENTS

| | |
|---|-----|
| SUMMARY OF FINDINGS | iii |
| SUMMARY OF PLANT STATUS | 1 |
| REACTOR SAFETY | 1 |
| 1R01 Adverse Weather Protection | 1 |
| 1R04 Equipment Alignment | 2 |
| 1R05 Fire Protection | 3 |
| 1R06 Flood Protection Measures | 4 |
| 1R07 Heat Sink Performance | 4 |
| 1R11 Operator Requalification Inspection | 5 |
| 1R12 Maintenance Effectiveness | 6 |
| 1R13 Maintenance Risk Assessment and Emergent Work Control | 9 |
| 1R14 Personnel Performance During Non-routine Plant Evolutions and Events | 9 |
| 1R15 Operability Evaluations | 10 |
| 1R16 Operator Work-Arounds | 11 |
| 1R17 Permanent Modifications | 11 |
| 1R19 Post-Maintenance Testing | 11 |
| 1R22 Surveillance Testing | 12 |
| 1R23 Temporary Modifications | 13 |
| 1EP6 Drill Evaluation | 14 |
| RADIATION SAFETY | 14 |
| 2OS1 Access Control To Radiologically Significant Areas | 14 |
| 2OS2 ALARA Planning and Control | 15 |
| 2OS3 Radiation Monitoring Instrumentation | 16 |
| OTHER ACTIVITIES | 16 |
| 4OA1 Performance Indicator Verification | 16 |
| 4OA2 Problem Identification and Resolution | 18 |
| 4OA4 Human Performance | 19 |
| 4OA5 Other Activities | 20 |
| 4OA6 Meetings | 20 |
| ATTACHMENT: SUPPLEMENTAL INFORMATION | |
| KEY POINTS OF CONTACT | A-1 |
| LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED | A-1 |
| LIST OF DOCUMENTS REVIEWED | A-2 |
| LIST OF ACRONYMS | A-7 |

SUMMARY OF FINDINGS

IR 05000286/2003009, on 09/28/2003 - 12/31/2003, Entergy Nuclear Northeast, Indian Point Nuclear Generating Unit 3. Maintenance Effectiveness.

The report covers a three-month period of inspection by resident inspectors, regional operations and project engineers, a reactor inspector, a radiation specialist, and two security inspectors. One Green Non-cited Violation (NCV) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process" Revision 3, dated July 2000.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The inspectors identified a non-cited violation of 10 CFR 50, Appendix B, Criterion III, for a failure to implement design controls for field modifications resulting from scaffolding that was mechanically anchored to safety-related equipment.

This finding is greater than minor because it was similar to Example 4.a. of Appendix E to IMC 0612, in that Entergy failed to perform engineering evaluations for multiple scaffolds attached to safety-related equipment. The finding is of very low safety significance since no equipment was rendered inoperable due to the attached scaffolding, and the scaffolding would not have caused the loss of any safety function following a seismic event. (Section 1R12)

B. Licensee Identified Violations

None

Report Details

SUMMARY OF PLANT STATUS

At the beginning of the inspection period, the IP3 reactor was at 100% power. On November 13, 2003, reactor power was reduced to approximately 91% for scheduled periodic testing of the main turbine stop and control valves. Following those tests, the reactor was returned to 100% power. The plant remained at 100% power for the remainder of the inspection period.

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

1R01 Adverse Weather Protection

a. Inspection Scope (71111.01 - 2 Samples)

The inspectors reviewed IP3 procedure OD-37, "Seasonal Weather Preparation," and the associated cold weather preparations checklists to verify that the checklists were completed in accordance with procedural requirements. The inspectors verified that the actions taken by the licensee to assure freeze protection of plant equipment were completed consistent with prevailing weather conditions for the months of October, November, and December 2003. The inspectors performed walkdowns of accessible areas inside and outside of the IP3 power plant operating and auxiliary support structures to assess the adequacy of system freeze protection measures. The inspectors also looked for any vulnerable systems or components not previously identified by Entergy.

On November 13 & 14, 2003, the inspectors walked down outside areas to evaluate the susceptibility of external plant equipment to high wind conditions with some prevailing wind gusts greater than 50 mph. The inspectors also observed areas where a potential missile hazard could have been created from items not properly stowed.

The inspectors also reviewed past Condition Reports (CRs) for any weather-related adverse trends or repeat problems to ensure Entergy had adequately addressed them through the Corrective Action Program. The inspectors reviewed Quality Assurance Surveillance Report No. 03-22, dated November 5, 2003, which assessed the implementation of the cold weather preparation programs at both IP3 and IP2. Following the onset of cold weather and the winter storm during the week of December 1, 2003, the inspectors reviewed the applicable CRs and associated corrective actions for weather-related issues.

b. Findings

No findings of significance were identified

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns (71111.04Q - 4 Samples) The inspectors performed partial system walkdowns during periods of system train unavailability in order to verify that the alignment of the available train was proper to support the availability of safety functions, and to assure that the licensee had identified equipment discrepancies that could potentially impair the functional capability of the available train.

On October 8, 2003, the inspectors performed a partial system walkdown of the service water system during and after the replacement of the No. 36 service water pump and motor. The inspectors used procedure SOP-RW-005, "Service Water System Operation," and clearance 3C13-3-SWS-36 SWP to check for correct valve and power supply alignments.

On November 26, 2003, the inspectors performed a partial system walkdown outside containment of the flow paths associated with the 31 and 32 safety injection pumps (SIPs) during a quarterly surveillance test of the 33 SIP. The inspectors used check-off list COL-SI-1, "Safety Injection System," and periodic test 3PT-Q116C, "33 Safety Injection Pump Functional Test," to perform the walkdown. On December 1, 2003, the inspectors also performed a partial system walkdown of the 31 and 33 SIPs and discharge piping when the 32 SIP was used to fill the 34 emergency core cooling system accumulator.

On December 16, 2003, the inspectors performed a partial system walkdown of the boric acid transfer system after completion of valve manipulations during 31 boric acid transfer pump functional testing. The inspectors used procedure 3PT-Q038A, "31 Boric Acid Transfer Pump Functional Test," and drawing 9321-F-27363, "Chemical Volume and Control System," during the walkdown to assess the general condition of the system and to verify the correct system alignment.

On December 23 and 24, 2003, the inspectors performed a partial system walkdown of the 31 and 32 emergency diesel generators (EDGs) when the 33 EDG was out of service to replace its air compressor unloader valve and jacket water heaters. The inspectors used clearances 3-EDG-33EDG COMP MM REV0-1 and 3-EDG-33 EDGJW HTR MELC REV0-0, as part of this review.

Complete System Walkdown (71111.04S - 1 Sample) The inspectors conducted a detailed review of the alignment and condition of the 480 VAC electrical distribution system. The inspectors used licensee procedures and other documents listed below to verify proper alignment:

- 3-COL-EL-1, "6900 and 480 Volt AC Distribution"
- 3-COL-LV-1, "Locked Valve Check-Off List"
- Drawing 9321-F-33853, "Electrical Distribution and Transmission System"

The inspectors also verified electrical power requirements, labeling, hangers and support installation, and associated support system status. Operating switchgear and motor control centers (MCCs) were examined for any noticeable degradation. The walkdowns also included evaluation of switchgear installations and supports against the following considerations:

- Interferences that could prevent operation of switchgear.
- Component foundations were not degraded.
- Potential electrical safety hazards for operators who would manipulate equipment in an emergency.

A review of outstanding maintenance work orders was performed to verify that the known deficiencies did not significantly affect the 480 VAC distribution system operation. The inspectors verified that the minor discrepancies identified during their walkdowns were entered into Entergy's corrective action program (CR-IP3-2003-05879). In addition, the inspectors reviewed the CR database to verify that other the 480 VAC distribution system alignment problems were being identified and appropriately resolved.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope (71111.05Q - 8 Samples)

The inspectors conducted fire protection tours in the fire zones listed below to ensure that the licensee was controlling transient combustibles in accordance with fire protection procedure FP-9 "Control of Combustibles"; to ensure that ignition sources were controlled in accordance with FP-8, "Controlling of Ignition Sources"; to ensure that fire protection equipment specified in the Pre-Fire Plans (PFPs) was available and functional; and to assess the general material condition of fire protection barriers and fire suppression equipment. These areas were selected for inspection based on the relative fire initiation risk or the safe shutdown equipment located in the area.

- 41-ft elevation of the primary auxiliary building (PAB) in and around the PAB ventilation system plenum (Fire Zones 1 & 1A). This tour was conducted during hot work (welding) to replace a cooling coil in the PAB ventilation system.
- 15-ft elevation of the turbine building in the area of the 31 & 32 main boiler feed pumps (MBFPs) and MBFP oil storage areas (Fire Zones 19, 20, 39A, 40A)
- 36-ft elevation of the PAB in the "Mini-containment" area (Fire Zones 5A & 62)
- 3-ft 3-in elevation of the turbine building (Fire Zones 41A)
- 15-ft elevation of the plant intake structure, service water pump enclosure (Fire Zone 22)

- 15-ft elevation of the turbine building (Fire Zone 16-19 and 37A-42A)
- 32-ft 6-in and 43-ft elevations of the auxiliary feedwater building (Fire Zones 48 and 49)
- 46-ft elevation of the PAB in the component cooling water (CCW) pump area (Fire Zone 1)

b. Findings

No findings of significance were identified

1R06 Flood Protection Measures

a. Inspection Scope (71111.06 - 2 Samples)

The inspectors toured various elevations in the control building containing equipment used to detect and mitigate a flood within the building. The plant areas selected contained risk significant equipment based on the Individual Plant Examination (IPE) for Internal Events, Appendix C, Internal Flood Analysis. Specifically, internal flood initiations from fire protection line breaks inside or just outside the control building contributed approximately eight percent of the plant's overall core damage frequency. The inspectors verified the accuracy of the descriptive text in the IPE and compared it with the actual conditions in the control building.

During and following periods of storms and high rain on November 13, 18, 24, and 25, and December 1 and 11, 2003, the inspectors walked down external areas of the plant to assess the effectiveness of normal drainage paths, and the susceptibility of external and internal equipment to water intrusion.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope (71111.07A - 2 Samples)

The inspectors performed observations of safety-related heat exchanger inspections and cleaning to assess the adequacy of the licensee's preventive maintenance to minimize the effects of biofouling on heat exchanger performance.

- WO IP3-02-21763: On September 30 and October 1, 2003, the inspectors observed the condition of the 33 EDG jacket water and lubricating oil heat exchangers after they were opened for periodic inspection and cleaning. The inspectors reviewed the licensee's photographs of the as-found condition of the HXs to compare their pre- and post-cleaning condition, and to assess the adequacy of their cleaning frequency to avoid excess fouling.

- WO IP3-02-22855: On December 16 - 19, 2003, the inspectors observed the condition of the 35 fan cooler unit (FCU) heat exchangers after they were opened for periodic inspection, cleaning, and eddy current testing. The inspectors reviewed the licensee's photographs of the as-found condition of the HXs to compare their pre- and post-cleaning condition, and to assess the adequacy of their cleaning frequency to avoid excess fouling. During the eddy current testing, test personnel identified that four previously plugged tubes had mis-matched plugs which resulted in eight tubes being blocked from flow. Test personnel also identified four additional tubes requiring plugs, which caused the HX to exceed the maximum 4% total plugging. The licensee initiated CR-IP3-2003-06412 to evaluate this condition and concluded that sufficient thermal margin existed for the fan cooler to remove its design basis heat load under accident conditions. The inspector reviewed the analysis and discussed its conclusions with system engineering. The inspectors also verified that the minor discrepancies identified during their walkdowns were entered into Entergy's corrective action program (CR-IP3-2003-06516).

b. Findings

No findings of significance were identified.

1R11 Operator Requalification Inspection

a. Inspection Scope (71111.11Q - 1 Sample)

On October 27, 2003, the inspectors observed simulator training for licensed operators on Operations Team "3B" (requalification cycle 03.05.04). The inspectors reviewed an "as-found" simulator scenario, performed under Lesson Plan No. LRQ-SES-058, "RCP Malfunction, E-0, E-1, Transition to ES-1.2," for a reactor coolant pump (RCP) seal failure and small break LOCA, to determine if the scenario contained: 1) clear event descriptions with realistic initial conditions; 2) clear start and end points; 3) clear descriptions of visible plant symptoms for the crew to recognize; and 4) clear expectations of operator actions in response to abnormal conditions.

During the simulator exercise, the inspectors evaluated the team's performance for: 1) clarity and formality of communications; 2) correct use and implementation of emergency operating procedures (EOPs) and off-normal operating procedures (ONOPs); 3) operators' ability to properly interpret and verify alarms; and 4) operators' ability to take timely actions in a safe direction based on transient conditions. In addition, the inspectors evaluated the control room supervisor's ability to exercise effective oversight and control of the crew's actions during the exercise. The inspectors verified that the feedback from the instructors was thorough, that they identified specific areas for improvement, and that they reinforced management expectations regarding crew competencies in the areas of procedure use, communications, and peer checking. The inspectors also evaluated the licensee's post-scenario critique.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectivenessa. Inspection Scope (71111.12Q - 2 Samples)

The inspectors reviewed the below listed maintenance activities, systems and components, and recent performance issues to assess the effectiveness of the licensee's Maintenance Rule program. Using 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," and Regulatory Guide 1.1.60, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," the inspectors verified that the licensee was implementing their Maintenance Rule program in accordance with NRC regulations and guidelines, properly classifying equipment failures, and using the appropriate performance criteria for Maintenance Rule systems in 10 CFR 50.65 (a)(2) status. The inspectors also reviewed work orders (WO) and associated post-maintenance test (PMT) 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. The following maintenance activities and associated documents were observed and evaluated:

- WO IP3-03-21549: On October 2, 2003, the inspectors observed the maintenance activities in the AFW pump room to perform leak repairs on steam valve MS-54. The inspectors noted that the scaffold platform erected to support this maintenance was anchored directly to pipe supports for the 32 AFW pump, and to an adjacent instrument rack. The inspectors also observed a scaffold platform inside the 33 EDG cubicle that was erected to support calibration of temperature indicator controller TIC-5012 (WO IP3-02-16221), and noted that the scaffold was anchored to a pipe support for the EDG's jacket water piping. The inspectors discussed the 33 EDG scaffolding with the shift manager, who initiated CR-IP3-2003-05227 and contacted civil engineering for an operability review.
- WO IP3-02-23916: On October 15 and 24, 2003, the inspectors observed the licensee's periodic inspections for boron deposits inside the 31 and 35 FCUs. The inspections included both of the FCU weir drains and the external surfaces of RHR valve SI-733B. The licensee had previously identified a slightly elevated concentration of boron in the 31 FCU weir drain and concluded that SI-733B had leaked during the previous plant startup, which caused borated water to deposit inside the nearby 31 FCU. The inspectors verified that all of the boron deposits on SI-733B were dry and that the valve did not continue to leak after the RHR system was isolated.

b. Findings

Introduction: The inspectors identified a Green non-cited violation of 10 CFR 50, Appendix B, Criterion III, "Design Control," involving the failure to implement design controls for the modification of plant components and systems prior to the construction of scaffolding that was mechanically anchored to safety-related equipment.

Description: On September 22, 2003, the inspectors observed a scaffold platform erected in the 33 EDG cubicle that was anchored to a pipe support for the diesel's jacket water cooling system. The scaffold modified the pipe support and added mass that could have introduced unanticipated mechanical loads on the support and jacket water piping during a seismic or other design basis event. The inspectors identified that the documentation for the scaffold (permit no. 4329) did not contain any record that a technical review had been performed to evaluate the impact of the scaffolding from the potential seismic loading on the pipe support. The scaffold's overall dimensions were such that its height was more than three times its smallest base dimension, which did not conform to the construction criteria for a seismic scaffold, as contained in procedure SYS-14-GEN, "Scaffolding Construction and Control." Also, sections of the scaffold, structure were separated from the jacket water piping by less than one inch, had only one anchor point, and was not attached to plant approved structural steel, which were contrary to the requirements of the scaffold procedure. The scaffold procedure requires that all scaffolding installed within safety-related areas shall have lateral building ties installed at both ends of the scaffold at the base and at the working platform level. The licensee initiated CR-IP3-2003-05227 to investigate this condition. No operability issues were identified; however, the scaffold was subsequently removed.

During the period from September 23, to October 5, 2003, the inspectors observed three safety-related components in the Primary Auxiliary Building (PAB) modified by scaffold platforms that had been mechanically anchored to that equipment: 1) a scaffold platform (permit no. 4311) anchored to the pedestal of the 32 containment spray (CS) pump; 2) a scaffold platform (permit no. 4330) anchored to a pipe support for the residual heat removal (RHR) suction line from the reactor coolant system to the RHR pumps; and 3) scaffold platform (permit no. 4322) anchored to the pipe support and in direct contact with the RHR suction pipe from the containment sump upstream of the first isolation valve outside containment. All three scaffolds added mass to the attached equipment, and could have altered their seismic or dynamic loads during a design basis event. In all three cases, the scaffold permit documentation did not contain any record that a technical review had been performed to evaluate the changes and to assure that the CS pump and the RHR suction piping remained within their original design limits. Procedure SYS-014-GEN requires that no scaffold within a safety-related area shall be attached or secured to system piping, manufactured pipe supports, conduits or associated supports, or instrument racks without prior engineering approval. The licensee initiated CR-IP3-2003-05375, -05458, and -05459 to investigate these conditions. No operability issues were identified; however, the CS pump scaffold was subsequently removed and both scaffolds at the RHR piping were reconfigured in accordance with engineering's direction. The inspectors also noted that the scaffold attached to the 32 CS pump changed the running vibration spectra of the pump. This was a repeat occurrence from a previously documented instance where the pump motor's horizontal vibration spectra shifted into the alert range after a scaffold was attached to the motor support (CR-IP3-2001-01758).

During the review period, the inspectors observed three additional components and systems important to safety that were modified by scaffolds mechanically anchored to the equipment: 1) a scaffold (permit no. 3899) on the 41 foot elevation of the containment pipe penetration area was anchored to a catwalk and handrail that were an integral part of an instrument rack for the reactor coolant pump (RCP) seal injection flow

transmitters. The scaffold's overall dimensions were such that its height was more than three times its smallest base dimension, which did not conform to the construction criteria for seismic scaffold contained in procedure SYS-14-GEN; 2) a scaffold (permit no. 4365) on the 41 foot elevation of the PAB was in direct contact with the demineralized water pipe supplying makeup to the backup spent fuel pool cooling system; and 3) a scaffold (permit no. 3910) anchored to the 31 main boiler feed pump pedestal. No engineering evaluations were documented for these conditions.

Analysis: Entergy's failure to apply appropriate design controls commensurate to the original equipment is a performance deficiency associated with the Mitigating Systems Cornerstone, and is contrary to NRC regulations. Traditional enforcement does not apply because an event did not occur that resulted in an actual safety consequence, the unevaluated scaffolding did not impact the NRC's regulatory function, and the lack of technical evaluations were not the result of a willful violation of NRC requirements or Entergy procedures. The finding is greater than minor because it was similar to Example 4.a. of Appendix E to IMC 0612, in that the licensee routinely failed to perform engineering evaluations of scaffolds in safety-related areas. This finding involved the Mitigating System Cornerstone and was evaluated using Phase 1 of the Significance Determination Process for Reactor Inspection Findings for At-Power Situations. The finding involved the degradation of equipment specifically designed to mitigate a seismic event, and the evaluation used the screening criteria in the Phase 1 worksheet for seismic, fire, flooding and severe weather. No operability issues were identified concerning the unevaluated scaffolding, and it would not have involved the loss of any safety function following a seismic event. Therefore, the finding was determined to be of very low safety significance (Green). This finding is also associated with the Human Performance Cross-Cutting Area.

Enforcement: 10 CFR 50, Appendix B, Criterion III, states in part that design changes, including field changes, shall be subject to design control measures commensurate with those applied to the original design. Contrary to the above, Entergy did not apply commensurate design control measures when scaffolding was mechanically anchored to the 32 Containment Spray pump, a 33 EDG jacket water pipe support, and pipe supports for the RHR suction pipe from the reactor coolant system and containment sump, which modified the original design of that equipment without an appropriate engineering review of the impact on the original design.

Because the failure to apply design control measures was entered into the licensee's corrective action program (reference CR-IP3-2003-05227, -05375, -05458, and -05459), this violation is being treated as an NCV consistent with Section VI.A. of the NRC Enforcement Policy. **(NCV 05000286/2003009-01, Lack of appropriate design controls for the installation of scaffolding around safety related equipment.)**

1R13 Maintenance Risk Assessment and Emergent Work Control

a. Inspection Scope (71111.13 - 4 Samples)

The inspectors reviewed maintenance risk assessments, work request tags (WRTs), corrective maintenance work order (WO) packages for emergent and scheduled work, observed the repair activities in the plant, and discussed the degraded conditions with

cognizant plant personnel (system engineers, technicians, and maintenance workers). The inspectors also reviewed the licensee's risk assessments for the impact of emergent work upon the existing work schedule to assure that the emergent work did not impose an unacceptable level of risk to continued plant operations. The following activities were reviewed:

- WO IP3-03-21549: Install Leak Repair on MS-54 in accordance with procedure LR-03-3-98. This valve is in the steam admission line to the turbine-driven AFW pump, and had developed a steam leak in its body-to-bonnet flange (CR-IP3-2003-05262).
- WO IP3-03-01710: Repair of a leak in Swagelok fittings on the instrument line for the 31 RCP seal flow indicator (FI-115); CR-IP3-2003-05578
- WO IP3-03-04373: 32 circulating water pump (CWP) & bearing refurbishment (CR-IP3-2003-06179). On November 24 the 32 CWP failed to start due to low flow to the pump bearing. The pump was removed for inspection and subsequently sent to a refurbishment facility offsite. The refurbished pump was reinstalled and tested on December 1, 2003.
- Risk Management and Operational Decision Making Initiative (ODMI) for potential grid disturbances during solar flares (CR-IP3-2003-05796); and the licensee's actions associated with preparations for a solar magnetic disturbance.

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.

On October 24, 2003, the inspectors observed the licensee's response to a loss of 13.8KV feeder 13W93, which is the preferred feeder for the second (alternate) source of offsite power. The electrical perturbations resulted in multiple alarms and plant equipment problems including an Appendix R Diesel Trouble Alarm, a 6900 Volt Breaker Tripped Alarm, loss of the Condensate Polisher Facility, and trip of the traveling water screen wash pumps. In an effort to restore 13.8KV power to the site, the licensee prepared to align feeder 13W92, which is the backup feeder for the second (alternate) source of offsite power and can be aligned to supply 13.8KV power by shutting breaker GT-BT. When the licensee attempted to shut breaker GT-BT, it failed to close. This left the plant with none of the Technical Specifications required sources of 13.8KV offsite power available to IP3. The licensee recognized and entered Technical Specifications Limiting Condition for Operation (LCO) 3.8.1.A for one offsite circuit inoperable. All 138KV sources remained in service, and prevented a plant transient. The licensee racked out breaker GT-BT and then racked it back in and successfully shut the breaker. This action restored 13.8KV power via feeder 13W92 and LCO 3.8.1A was exited. The licensee is investigating the cause of the breaker to fail to close on the first attempt.

b. Findings

No findings of significance were identified

1R15 Operability Evaluations

a. Inspection Scope (71111.15 - 2 Samples)

The inspectors selected operability determinations the licensee had generated that warranted review on the basis of risk. The selected samples are addressed 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 Technical Specifications (TS). The inspectors review included a verification that the operability determinations were made as specified by procedure ENN-OP-104, "Operability Determinations." The technical adequacy of the determinations was reviewed and compared to the TS, Technical Requirements Manual (TRM), the Final Safety Analysis Report (FSAR), and associated design basis documents.

- CR IP3-2003-06317: Through-wall leak on the service water discharge pipe from the 32 CCW Heat Exchanger.
- CR-IP3-2003-05455: Condensate pots for the containment pressure transmitter impulse lines were installed incorrectly.

b. Findings

No findings of significance were identified

1R16 Operator Work-Aroundsa. Inspection Scope (71111.16 - 1 Sample)

The inspectors performed a review of operator workarounds to assess the cumulative effects on system reliability, availability, and the potential for mis-operation of a system. The inspectors also toured various areas of the plant to evaluate deficient conditions and their potential impact on operators during EOP and ONOP usage. This review included the operator work-around list, central control room (CCR) deficiencies list, CCR turnover sheets, and system operating procedure SPO-SD-01, "Work Control Process." In addition, the inspectors reviewed the work control and condition reporting programs to assess the open Work Request Tags (WRTs) and Condition Reports (CRs) for potential operator work-around consideration. A minor discrepancy was identified by the inspectors and verified to have been appropriately addressed by the Entergy staff (WO IP3-03-23818).

b. Findings

No findings of significance were identified.

1R17 Permanent Modificationsa. Inspection Scope (71111.17A - 1 Sample)

The inspectors reviewed the permanent plant modification to replace the existing undervoltage relays on the 480VAC safeguards buses. An operator burden was created when alarm conditions would not clear after transitory voltage dips occurred on the buses, and operator actions were required to adjust the 6.9KV output voltage from the station auxiliary or the unit auxiliary transformers. The design change package (DCP) specified different style relays that had a time delay mechanism built-in to prevent spurious alarms on the 480VAC monitoring panel in the control room. The inspectors reviewed the DCP (03-3-058) to verify that the change would not degrade system availability, reliability, or functional capability. The inspectors also reviewed the installation work order package (WO IP3-03-18302) for scope and content; and the modification acceptance test (WO IP3-03-21331).

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testinga. Inspection Scope (71111.19 - 6 Samples)

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

instrumentation had current calibrations, range, and accuracy for the application; and 5) test equipment was removed following testing.

The selected testing activities involved components that were risk significant as identified in the IP3 Individual Plant Examination. The regulatory references for the inspection included Technical Specification 6.8.1.a and 10 CFR 50, Appendix B, Criteria XIV, "Inspection, Test, and Operating Status." The following testing activities were evaluated:

- WO IP3-02-20712: PMT to perform 3PT-M079C, 33 EDG functional test following routine 2-year preventive maintenance; performed on October 2, 2003.
- WO IP3-03-03109: PMT to Perform 3PT-Q092F, 36 service water pump functional test following pump replacement; performed on October 8, 2003.
- WO IP3-03-24010: Action Plan IDSE-APL-017; PMT on the 36 CWP following repairs for failure of the motor's power supply circuitry (CR-IP3-2003-06188); performed on December 16, 2003.
- WO IP3-03-22633: WO IP3-03-24470; PMT on the Appendix R diesel-generator following routine 2-year preventive maintenance; performed on December 18, 2003.
- WO IP3-03-03562 and WO IP3-03-01100: PMT following replacement of a jacket water heater, and replacement of the air compressor unloader valve on the 33 EDG; performed on December 19, 2003.
- WO IP3-02-19100: PMT on the 31 safety injection pump following routine 3-year preventive maintenance on the pump motor and power supply breaker; 3PT-Q116A, "31 Safety Injection Pump Functional Test"; performed on December 22, 2003.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope (71111.22 - 3 Samples)

The inspectors observed portions of the below listed surveillance tests and reviewed the test procedures to assess whether: 1) the test pre-conditioned any of the components; 2) the effect of the testing was adequately addressed in the control room; 3) the scheduling and conduct of the tests were consistent with plant conditions; 4) the acceptance criteria demonstrated system operability consistent with design requirements and the licensing basis; 5) the test equipment range and accuracy were adequate for the application, and the test equipment was properly calibrated; 6) the test

was performed in the proper sequence in accordance with the test procedure; and 7) the affected system(s) was properly restored to the correct configuration following the test.

- 3PT-Q116A, "31 Safety Injection Pump Functional Test"; performed on September 29, 2003.
- 3PT-Q117B, "32 Containment Spray Pump Functional Test"; performed on November 5, 2003.
- 3-PC-OL05B, "6.9KV Underfrequency Relay Calibrations"; performed on November 21, 2003; this activity involved a missed Technical Specification Surveillance Requirement (SR 3.3.1.10). The surveillance was normally performed on a 2-year frequency, but a portion was deferred during refueling outage No.12 in March 2003. However, the deferred portion was not formally tracked. The calibrations were completed satisfactorily within 24 hours of discovery (CR-IP3-2003-06088).

b. Findings

No findings of significance were identified.

1R23 Temporary Modifications

a. Inspection Scope (71111.23 - 1 Sample)

The inspectors reviewed the engineering documentation on Temporary Alteration (TA) No. TA-03-3-042, "Relocation of Steam Generator Level Deviation Alarm Can." The steam generator level deviation alarm is normally installed in central control room (CCR) panel SBF-1. The modification involved installation of a jumper from the terminals on the alarm relay in the back of panel SBF-1 to a spare alarm can on panel SBF-2. The modification also involved moving the annunciator face plate to the new alarm can position and modification of the simulator to reflect existing control room configuration.

The inspectors reviewed the documentation pertaining to the TA to ensure that: 1) the TA was appropriately evaluated by the licensee in accordance with 10 CFR 50.59; 2) the TA did not adversely impact the safety function or operation of the system/component modified; and 3) the TA was properly performed per administrative controls.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope (71114.06 - 1 Sample)

The inspectors observed an emergency preparedness drill conducted on October 29, 2003. The drill consisted of a total loss of offsite power and a loss of all 480VAC safeguards buses for more than four hours. The drill also included accountability for all onsite personnel. The inspectors observed the drill and conducted reviews from the participating facilities on site including the IP3 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, notification, and protective action recommendations performed by the licensee during the drill. The inspectors attended the licensee's critique of the drill held on October 30, 2003, and compared the identified weaknesses and deficiencies to those identified by the licensee to ensure that problem areas were properly identified.

b. Findings

No findings of significance were identified.

2. **RADIATION SAFETY**

Cornerstone: Public Radiation Safety (PS)

2OS1 Access Control To Radiologically Significant Areas

a. Inspection Scope (71121.01 - 4 Samples)

The inspectors reviewed radiological work activities and practices, and procedural implementation during tours and observations of the facilities and inspected procedures, records, and other program documents to evaluate the effectiveness of Entergy access controls to radiologically significant areas.

On October 8, 2003 and November 20, the inspectors toured and observed work activities in the primary auxiliary, fuel storage, and radioactive waste handling (RAMS) buildings. During these walkdowns, the inspectors observed and verified the appropriateness of the posting, labeling, and barricading of radioactive material, radiation, contamination, high radiation, and locked high radiation areas. At the routine radiologically-controlled-area (RCA) access control point, the inspectors observed radiation workers logging into the RCA on radiological work permits (RWPs) using electronic dosimeters and observed radiation workers exiting the RCA and then logging out of their RWPs. The inspectors examined the use of personnel dosimetry and the radiological briefings for radiation workers entering the RCA. Also, the inspectors reviewed procedures for and discussed with radiation protection personnel the control of high-risk, high-dose-rate high radiation areas and very high radiation areas. The inspectors observed the radiation protection group's morning plant status meetings on November 18, 19, 20, and 21, 2003.

On November 20 and 21, the inspector observed a pre-job brief given by radiation protection technicians. These briefs were for entries into the reactor containment building at 100% power for replacement of a moveable in-core detector and its cable on radiation work permit (RWP) No. 033025 and for fixing a stuck moveable in-core detector, respectively. On November 20, the inspector also observed the job planning process for fixing the stuck detector in which planning the radiation protection technicians participated. Based on these observations, the inspector determined that the radiation protection technicians were aware of the radiological conditions in their workplace and of the RWP controls/limits and that their performance was consistent with their training and qualifications with respect to the radiological hazards and work activities.

The inspectors performed a selective examination of program documents (as cited in the List of Documents Reviewed section) to evaluate the adequacy of radiological controls.

The review in this area was against criteria contained in: Title 10 of the Code of Federal Regulations (CFR) Part 19 (Notices, instructions, and reports to workers; inspection and investigations) and Part 20 (Standards for protection against radiation), including Subparts B, C, D, F, G, H, I, J, K, L, and M, Technical Specifications, and site procedures.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Control

a. Inspection Scope (71121.02 - 2 Samples)

The inspectors reviewed the effectiveness of the licensee's program to maintain occupational radiation exposure as low as is reasonably achievable (ALARA).

The inspectors discussed the actual cumulative year-to-date dose result for 2003 for IP3 with Indian Point Energy Center (IPEC) radiation protection personnel. This result was tracking at or below the projected value. The inspectors reviewed the radiation protection web page on the site local access network and noted that the cumulative annual exposure for individual radiation workers was available for review and work planning purposes.

On October 6, 8 and 9, the inspectors discussed the status of the radiation exposure reduction plan, the ALARA outage planning process, and recent ALARA planning initiatives involving resin bed sluicing and hot spot reduction with the Technical Support Manager, the Assistant Radiation Protection Manager, and the ALARA Planning Supervisor. On November 20, the inspector met with an ALARA planning specialist and reviewed the current dose estimate for 2004 at Unit 3.

The inspectors performed a selective examination of program documents (as cited in the List of Documents Reviewed section) for regulatory compliance and for adequacy of

control of radiation exposure. The review was against criteria contained in 10 CFR 20.1101 (Radiation protection programs), in 10 CFR 20.1701 (Use of process or other engineering controls), and in site procedures.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation

a. Inspection Scope (71121.03 - 2 Samples)

The inspectors reviewed the program for health physics instrumentation and for installed radiation monitoring instrumentation to determine the accuracy and operability of the instrumentation.

During the plant tours, described in Section 2OS1 of this report, the inspectors reviewed field instrumentation utilized by health physics technicians and plant workers to measure radioactivity and radiation levels. The reviewed instruments included: portable field survey instruments, hand-held contamination frisking instruments, continuous air monitors, whole body friskers, and portal monitors. The inspectors verified current calibration, source checking, and proper instrument function. Also, during the plant tours, the inspectors identified and noted the condition and operability of selected installed area and process radiation monitors and any accessible local indication information for those monitors.

The inspectors performed a selective examination of program documents (as cited in the List of Documents Reviewed section) for regulatory compliance and adequacy. The review was against criteria contained in 10 CFR 20.1501, 10 CFR 20 Subpart H, site Technical Specifications, and site procedures.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification

a. Inspection Scope (71151 - 5 Samples)

The inspectors reviewed the licensee's data submitted to the NRC for the following performance indicators (PIs), and performed an independent verification that the source data was consistent with plant records. The inspectors reviewed the licensee's collecting and reporting process for PI data as described in procedure SAO-114, "Preparation of NRC and WANO Performance Indicators." The purpose of these reviews was to determine whether the methods for reporting PI data were consistent with the guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guidelines," Rev 1 and 2. The inspection included a

review of the indicator definitions, data reporting elements, calculation methods, definition of terms, and clarifying notes for the performance indicators. Plant records and data were sampled and compared to the reported data.

Safety System Unavailability - High Pressure Injection System

The inspectors reviewed the PI data for safety system unavailability/high pressure injection system for the period of July 2002 through September 2003 (five quarters). This PI monitors the individual train unavailability of the safety injection system (three trains). This indicator compares the planned, unplanned, and fault exposure unavailable hours to the total number of hours the high pressure safety injection trains are required to be functional. The inspector reviewed operator logs, licensee event reports, and monthly operating reports to verify the accuracy and completeness of the quarterly PI data reported by Entergy.

Safety System Functional Failures

The inspectors reviewed the PI data for safety system functional failures for the period of July 2002 through September 2003 (five quarters). This PI monitors the number of events or conditions that prevented, or could have prevented the fulfillment of a safety function for the previous four quarters. The inspectors reviewed operator logs, licensee event reports, and monthly operating reports to verify the accuracy and completeness of the quarterly PI data reported by Entergy.

Fitness for Duty, Personnel Screening, and Protected Area Equipment

The inspectors performed a review of PI data submitted by the licensee on physical protection cornerstone. The review was conducted of the licensee's programs for gathering, processing, evaluating, and submitting data for the Fitness-for-Duty, Personnel Screening, and Protected Area Security Equipment PIs to verify these PIs had been properly reported to verify that all occurrences that met the NEI criteria were identified and reported as performance indicators.

The review included the licensee's tracking and trending reports, personnel interviews, and security event reports for the PI data collected from the first quarter of 2002 through the third quarter of 2003. The inspectors noted from the licensee's submittal that there were no reportable failures to properly implement the requirements of 10 CFR 73 and 10 CFR 26 during the entire reporting period. The inspectors verified that the personnel screening and the fitness-for-duty programs functioned as intended, based on the data reviewed and interviews with personnel. This inspection activity represents the completion of three samples relative to this inspection area; completing the annual inspection requirement.

Occupation Exposure Control Effectiveness

The inspectors selectively examined records used by the licensee to identify occurrences involving high radiation areas, very high radiation areas, and unplanned personnel exposures for the time period from June 2002 through September 2003. The reviewed records included selected corrective action program records and Indian Point 2 Monthly PI Data Elements records for this PI. This review and examination did not identify any significant problems with the PI accuracy or completeness and thus verified this performance indicator.

RETS/ODCM Radiological Effluent Occurrences

The inspectors selectively examined records used by the licensee to identify any occurrences involving gaseous or liquid effluent releases. The reviewed record types included monthly and quarterly gaseous and liquid effluent release data and associated records. The inspectors reviewed records covering the time period from November 2002 through the third quarter of 2003. This examination did not identify any significant problems with the PI accuracy or completeness and thus verified this performance indicator.

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

1. Daily Review

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

2. PI&R Annual Sample Reviews

a. Inspection Scope (71152 - 2 Samples)

Power Range Nuclear Instrument NI-44 - The inspectors selected four closed CRs to evaluate the effectiveness of the corrective actions associated with the identified problems. Performance deficiencies had been noted in the use of an unapproved procedure for replacing a cable connector and for post-maintenance testing on power range nuclear instrument NI-44 in January 2003.

Review of CR-IP3-2003-00195, "Chattering of reactor protection system relay P-8," and CR-IP3-2003-00196, "Channel 44 power range delta-current became negative after repairs," identified that the corrective actions to CR-IP3-2003-00196 did not fully address the extent of condition since inspections for similar conditions were not performed on the other power range instruments. Also, the CR apparent cause

evaluation referenced resistance readings from the replaced connector, but did not provide a basis for the validity of the readings. The corrective actions specified that a procedure approved by Westinghouse would be incorporated on site for field installation of NI cable connectors.

Review of CR-IP3-2003-00200, "Troubleshooting of erratic power range channel 44," determined that the WO used to replace the NI-44 cable connector (IP3-03-01583) stated that the work was performed in accordance with Westinghouse procedure NSD-EIS-99-009, Rev 5. However, Revision 5 was not approved for use by Entergy at IP3. Additionally, the data and testing specified by NSD-EIS-99-009 was not recorded in the procedure or in the WO package.

Review of CR-IP3-2003-00288, "Unauthorized procedure and lack of appropriate retest requirements in Westinghouse procedure NSD-EIS-92-009," determined that on March 20, 2003, the licensee approved the use of NSD-EIS-92-009, Rev. 6 for use at IP3. However, Revision 6 did not specify the appropriate retest requirements for cable connector replacements in the field. CR-IP3-2003-00288 was closed out based on completion of the corrective actions; however, the inspectors noted that Revision 6 did not solve the original problem of unspecified retest requirements.

The licensee subsequently initiated CR-IP3-2003-06454 to address the premature close-out of CR-IP3-2003-00288, and to assure that the appropriate retest requirements would be properly specified prior to any future use of the procedure for field repairs on NI cable connectors. No findings of significance were identified.

Radiation Protection Sample - The inspectors selected seven issues identified in the Corrective Action Program for detailed review (CR-IP3-2003-04012, -05026, -05394, -05586, -05811, -05821, and -05880). The issues were associated with stand-by rescue personnel when supplied-air hoods were in use, high noise dosimetry use, de-posting of very high radiation areas, procedural implementation, respirator condition, and missing air samples, respectively. The associated Condition Reports were reviewed to ensure that the full extent of the issues were identified, appropriate evaluations were performed, and appropriate corrective actions were specified and prioritized.

b. Findings

No findings of significance were identified.

4OA4 Human Performance

One finding of very low safety significance was identified in the inspection report which had human performance issues as either direct or related causal factors (Reference Section IR12). Additional events were reviewed that involved inadequate work control or work practices and weaknesses in the corrective action process (CR-IP3-2003-00200, 2003-00288, 2003-05227, 2003-05455, 2003-05375, 2003-05458, 2003-05459, 2003-05578, 2003-05879, 2003-06088, and 2003-06516). The inspectors evaluated these events in the aggregate and discussed the observed trends in human performance with site senior management.

4OA5 Other Activities

a. Inspection Scope (92709)

The inspectors reviewed the licensee's activities to prepare for a potential work disruption after the contract for the labor union at IP3 (Utility Workers Union of America) was due to expire on January 17, 2003. The inspectors reviewed the licensee's contingency staffing plans for operations, maintenance, security, emergency preparedness, and other plant departments; the projected work schedules; and communications with offsite law enforcement agencies.

b. Findings

No findings of significance were identified.

4OA6 Meetings

NRC Regional Management Visit

On November 20 and 21, 2003, the following NRC Regional Managers visited the Indian Point site: Hubert Miller, Regional Administrator; A. Randolph Blough, DRP Division Director; David Lew, DRP Branch Chief; Lawrence Doerflein, DRS Branch Chief. The managers conducted interviews with Entergy department managers, supervisors, and workers; and conducted tours of both IP2 and IP3. The visit concluded in an exit meeting with the Site Vice President and other senior site managers.

Exit Meeting Summary

On January 8, 2004, the inspectors presented the inspection results to Mr. Chris Schwarz 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.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION**KEY POINTS OF CONTACT**

| | |
|--------------|--|
| W. Axelson | Support Supervisor |
| J. Boccio | I&C Superintendent |
| J. Comiotes | Director, Nuclear Safety Assurance |
| F. Dacimo | Site Vice President |
| M. Dampf | Health Physics Manager |
| G. Dean | Assistant Operations Manager - Training |
| J. DeRoy | General Manager of Engineering |
| R. Deschamps | Radiation Protection Superintendent |
| R. Discensi | Technical Support Manager |
| J. Donnelly | Corrective Actions and Assessment Manager |
| F. Inzirillo | Emergency Planning Manager |
| T.R. Jones | Acting Licensing Manager |
| M. Kerns | Chemistry Manager |
| R. LaVera | ALARA/Planning Supervisor |
| J. LePere | Waste Services Engineer |
| D. Mayer | Unit 1 Project Manager |
| R. Milici | Senior Electrical Engineer |
| E. O'Donnell | IP3 Assistant Operations Manager |
| R. Penny | Manager, Engineering Programs |
| J. Perrotta | Quality Assurance Manager |
| S. Petrosi | Design Engineering Manager |
| P. Rubin | Manager, Site Planning and Outage Services |
| C. Schwarz | General Manager, Plant Operations |
| A. Vitale | Operations Manager, IP3 |
| J. Ventosa | Site Operations Manager |

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED**Opened and Closed**

| | |
|---------------------|--|
| NCV 50-286/03-09-01 | Lack of appropriate design controls for the installation of scaffolding around safety related equipment. (Section 1R12). |
|---------------------|--|

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Condition Reports

CR-IP3-2003-05710
CR-IP3-2003-06211
CR-IP3-2003-06240
CR-IP3-2003-06210
CR-IP3-2003-06058
CR-IP3-2003-06056

Section 1R04: Equipment Alignment

Procedures

| | |
|-------------|--|
| SOP-RW-005, | Service Water System Operation |
| 3-COL-EL-1 | 6900 and 480 Volt AC Distribution |
| 3-COL-LV-1 | Locked Valve Check Off List |
| PMP-012-SWS | Service Water Pump Removal and Installation |
| ENG-259M | 36 Service Water Pump Reference Test |
| 3PT-Q038A | 31 Boric Acid Transfer Pump Functional Test |
| 3-PT-Q092F | 36 Service Water Pump Train Operational Test |
| BKR-017-ELC | Current Sensor and/or Trip Unit Replacement, Setting and Testing |

Clearances

3C13-3-SWS-36 SWP

Drawings

| | |
|--------------|---|
| 9321-F-33853 | Electrical Distribution and Transmission System |
| 9321-F-27363 | Chemical Volume and Control System |

Work Request Tags

IP3-03-03109

Condition Reports

CR-IP3-2003-05032

Section 1R05: Fire Protection

Fire Pre-Plans

| | |
|--------|--|
| PFP-6 | Mini Containment and Pipe Tunnels - PAB/Fan House |
| PFP-7 | General Floor Plan - Primary Aux. Building, Elev. 41'-0" |
| PFP-8 | Component Cooling Pumps - Primary Aux. Bldg., Elev. 41'-0" |
| PFP-34 | MBFP Oil Storage Tank |
| PFP-35 | Condensate Pumps - Turbine Building |
| PFP-36 | General Floor Plan - Turbine Building |
| PFP-40 | Main Boiler Feed Pumps - Turbine Building |
| PFP-48 | Chemical Additive Room - Auxiliary Feedwater Building |
| PFP-49 | Atmospheric Steam Dumps - Auxiliary Feedwater Building |

PFP-69 Circulating & Service Water Pump Bldg. Elev. 15'-0"

Procedures

FP-12 Hot Work

Work Orders

IP3-03-01667

Section 1R06: Flood Protection

Individual Plant Examination (IPE) for Internal Events, Appendix C, Internal Flood Analysis

Section 1R07: Heat Sink Performance

Work Orders

IP3-02-21763

IP3-02-22855

Condition Reports

CR-IP3-2003-06412

CR-IP3-2003-06516

Section 1R11: Licensed Operator Requalification

Lesson Plan LRQ-SES-058 RCP Malfunction, E-0, E-1, Transition to ES-1.2

Section 1R12: Maintenance Effectiveness

Procedures

SYS-014-GEN Scaffold Construction and Control

Work Orders

IP3-03-21549

IP3-03-16221

IP3-02-23916

Condition Reports

CR-IP3-2003-05227

CR-IP3-2003-05357

CR-IP3-2003-05458

CR-IP3-2003-05459

CR-IP3-2001-01758

Section 1R13: Maintenance Risk Assessment and Emergent Work Control

Procedures

SYS-0991-GEN Temporary On-Line Leak Repair

Clearances

3C13 3-AFW-32 ABFP MMEC Rev. 0-0

Work Orders

IP3-03-03722

IP3-03-03560

IP3-03-16317

IP3-03-01710

IP3-03-04373

Condition Reports

CR-IP3-2003-05262

CR-IP3-2003-05578

CR-IP3-2003-05575

CR-IP3-2003-05562

CR IP3-2003-05796

CR-IP3-2003-06179

Miscellaneous

50.59 screening for MS-54 Leak Repair dated September 29, 2003

LR-03-3-098 Leak Repair Evaluation for MS-54

Section 1R15: Operability Evaluations

Procedures

ENN-OP-104 Operability Determinations

Condition Reports

CR IP3-2003-06317

CR-IP3-2003-05455

Section 1R16: Operator Workarounds

Procedures

SPO-SD-01 Work Control Process
E-0 Reactor Trip Response

Section 1R17: Permanent Modifications

Work Orders

IP3-03-18320

IP3-03-21331

Section 1R19: Post-Maintenance Testing

Procedures

| | |
|-------------|--|
| ENG-259M | 36 Service Water Pump Reference Test |
| 3-PT-Q092F | 36 Service Water Pump Train Operational Test |
| SOP-RW-005 | Service Water System Operation |
| PMP-012-SWS | Service Water Pump Removal and Installation |

Section 1R22: Surveillance Testing

Procedures

| | |
|-----------|---|
| 3PT-Q116A | 31 Safety Injection Pump Functional Test |
| 3PT-Q117B | 32 Containment Spray Pump Functional Test |
| 3PC-OL05B | 6.9 KV Under Frequency Relay Calibration |

Condition Reports

CR-IP3-2003-06188

Section 1R23: Temporary Modifications

TA 03-3-042

Section 1EP6: Drill Evaluation

Drill Scenario for Total Loss of Offsite Power and Loss of all Safeguards 480V Buses

Section 2OS1, Access Control to Radiologically Significant Areas:

RWP 033016, Rev. 00, Maintenance/light electrical or mechanical work/routine
RWP 033017, Rev. 04, Construction/light electrical or mechanical work/routine
IPEC common radiation protection/radioactive waste and transportation common
procedure plan
Technical support integration/improvement plan
IPEC snapshot self-assessment report for environmental programs (LOCR No. IP3-2003-
00086)
IPEC snapshot self-assessment of radiation worker training, August 30, 2003

Section 2OS2, ALARA Planning and Controls:

IP3 daily ALARA information dated October 5, 2003
Presentation package for IPEC ALARA committee meeting on September 30, 2003

Section 2OS3, Radiation Monitoring Instrumentation and Protective Equipment:

Snapshot self-assessment of OE 03-16239, "Separation of airline coupling on supplied-air
hood" and CR-IP3-2003-04012
CR-IP3-2003-05026, Use of high-noise dosimetry

Section 4OA1: Performance Indicator Verification

Procedures

SAO-114 Preparation of NRC and WANO Performance Indicators
NEI 99-02 Regulatory Assessment Performance Indicator Guidelines

Reports

Performance Indicator Report, October 2003
Performance Indicator Report, Protected Area Security Equipment Performance, 3rd Quarter
2002 - 3rd Quarter 2003

Section 40A2: Problem Identification and Resolution

Condition Reports

CR-IP3-2003-00288
CR-IP3-2003-00195
CR-IP3-2003-00200
CR-IP2-202-11129
CR-IP3-2002-04596
CR-IP3-2003-00233
CR-IP3-2003-04107

Work Orders

IP3-03-01583, Power Range Drawer Assembly
IP3-03-11713, N44 Problems During RO12

Maintenance Procedure

Acceptance of Vendor Documents, Rev. 1, 12/1/03
Westinghouse Procedure NSD-EIS-92-009, Rev. 6, NIS Crimp-On Triaxial
Westinghouse Procedure NSD-EIS-92-009, Rev. 5, NIS Crimp-On Triaxial

Apparent Cause Evaluation

For CR-IP3-2003-0200

Miscellaneous Documents

Indian Point Unit 3 FSAR
Indian Point Unit3, Technical Specifications and Bases
System Health Report IP3 Nuclear Instrumentation System, Fourth Quarter 2002
System Health Report IP3 Nuclear Instrumentation System, Third Quarter 2003
System Health Report IP2 Nuclear Instrumentation System, Third Quarter 2003
A Predictive Maintenance and Evaluation Guide for Ex-Core and In-Core Detectors used in
Westinghouse Pressurized Water Reactors, RRS-VICO-02-326, May 2002

LIST OF ACRONYMS

| | |
|-------|---------------------------------|
| AC | alternating current |
| AFW | auxiliary feed water |
| ALARA | as low as reasonably achievable |
| CAP | Corrective Action Program |
| CCR | central control room |
| CFR | Code of Federal Regulations |
| COL | check-off list |
| CR | condition report |
| CS | containment spray |
| CWP | circulating water pump |
| EDG | emergency diesel generator |
| EOP | Emergency Operating Procedure |
| EP | Emergency Preparedness |
| FCU | fan cooler unit |
| FME | foreign material exclusion |
| FP | fire protection |
| FSAR | Final Safety Analysis Report |
| HP | Health Physics |
| HRA | High Radiation Area |
| HX | Heat Exchanger |
| IMC | Inspection Manual Chapter |
| IP2 | Indian Point 2 |
| IP3 | Indian Point 3 |
| IPE | Individual Plant Examination |
| IPEC | Indian Point Energy Center |
| kV | kilo volts |
| MBFP | main boiler feedwater pump |
| NCV | Non-cited Violation |
| NEI | Nuclear Energy Institute |
| NI | nuclear instrument |
| NRC | Nuclear Regulatory Commission |
| OA | Other Activities |
| OD | operability determination |
| ONOP | off-normal operating procedure |
| OS | Occupational Radiation Safety |
| PAB | primary auxiliary building |
| PFP | Pre-Fire Plan |
| PI | performance indicator |
| PM | preventive maintenance |
| PMT | post-maintenance test |
| RAMS | Radioactive Material Storage |
| RCA | Radiologically Controlled Area |
| RCP | reactor coolant pump |
| RHR | residual heat removal |
| RWP | Radiation Work Permit |
| SG | steam generator |
| SI | safety injection |
| SOP | system operating procedure |

| | |
|-----|-----------------------------|
| SW | service water |
| TA | temporary alteration |
| TM | temporary modification |
| TS | Technical Specifications |
| VAC | volts - alternating current |
| WO | work order |
| WRT | work request tag |