November 12, 2002

Mr. Robert J. Barrett
Vice President, Operations
Entergy Nuclear Operations, Inc.
Indian Point Nuclear Generating Unit 3
295 Broadway, Suite 3
Post Office Box 308
Buchanan, NY 10511-0308

SUBJECT: INDIAN POINT 3 NUCLEAR POWER PLANT - NRC INTEGRATED INSPECTION REPORT NO. 50-286/02-05

Dear Mr. Barrett:

On September 28, 2002, the NRC completed an inspection at the Indian Point 3 Nuclear Power Plant. The enclosed report presents the results of that inspection. The results were discussed on October 23, 2002, with you and members of your staff.

The inspection was an examination of 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. On the basis of the results of this inspection, no findings of significance were identified.

The NRC has increased security requirements at Indian Point 3 in response to terrorist acts on September 11, 2001. Although the NRC is not aware of any specific threat against nuclear facilities, the NRC has issued an Order and several threat advisories to commercial power reactors to strengthen licensees' capabilities and readiness to respond to a potential attack. The NRC continues to inspect Entergy's security controls and its compliance with the Order and current security regulations.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room **or** from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room). Should you have any questions regarding this report, please contact me at (610)337-5234.

Sincerely,

/RA by
William A. Cook
Acting For/

Peter W. Eselgroth, Chief
Projects Branch 2
Division of Reactor Projects

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

Enclosure: Inspection Report No. 50-286/02-05

Attachment 1: Supplemental Information

cc w/encl: J. Yelverton, Chief Executive Officer
M. Kansler, Senior Vice President and Chief Operating Officer
J. DeRoy, General Manager of Plant Operations
D. Pace, Vice President - Engineering
J. Knubel, Vice President Operations Support
F. Dacimo, Vice President - Operations
J. Kelly, Director - Licensing
C. D. Faison, Manager - Licensing
H. P. Salmon, Jr., Director of Oversight
J. Comiotes, Director, Nuclear Safety Assurance
J. McCann, Manager, Nuclear Safety and Licensing
Mayor, Village of Buchanan
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J. M. Fulton, Assistant General Counsel
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S. Lousteau, Treasury Department, Entergy Services, Inc.
Chairman, Standing Committee on Energy, NYS Assembly
Chairman, Standing Committee on Environmental Conservation, NYS Assembly
Chairman, Committee on Corporations, Authorities, and Commissions

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 50-286

License No. DPR-64

Report No. 50-286/02-05

Licensee: Entergy Nuclear Operations, Inc.

Facility: Indian Point 3 Nuclear Power Plant

Location: Buchanan, NY 10511-0308

Dates: June 30 - September 28, 2002

Inspectors: P. Drysdale, Senior Resident Inspector
W. Cook, Senior Project Engineer
S. Barber, Senior Project Engineer
T. Jackson, Project Engineer
L. Cheung, Senior Reactor Engineer
J. Jang, Senior Health Physicist
J. McFadden, Radiation Specialist

Approved by: Peter W. Eselgroth, Chief
Projects Branch 2
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000286/02-05, on 06/30 - 09/28/2002, Entergy Nuclear Northeast, Indian Point 3 Nuclear Power Plant. Resident inspection report.

The inspection was conducted by resident and regional inspectors. No significant findings were identified. 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. Inspector Identified Findings

None

B. Licensee Identified Violations

A violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspector. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and the licensee's corrective action tracking number are listed in Section 4OA7 of this report.

TABLE OF CONTENTS

Report Details

SUMMARY OF PLANT STATUS

The reactor operated at full power for most of the inspection period.

On July 20, 2002, the 36 Circulating Water Pump (CWP) was removed from service to replace a motor cooling coil due to a leak. During the replacement, a high river temperature caused the main condenser vacuum to decrease below normal, and the licensee reduced reactor power to approximately 96% to restore vacuum. Following the cooling coil repair on July 21, the plant was returned to 100% power.

On August 30, 2002, reactor power was automatically reduced to approximately 75% as a result of a main turbine runback signal. The cause of the runback was a failed power rate of change circuit card in power range nuclear instrument NI-43 which generated a false dropped rod signal. Following troubleshooting and installation of a temporary modification (reference Sections 1R14, 1R15, and 1R23) to remove the rate circuit card runback signal from the NI-43 protective circuitry, reactor power was returned to 100% the same day.

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

1R04 Equipment Alignment (Quarterly)

Inspection Scope (71111.04Q)

- During the week of July 8, 2002, the inspectors conducted a partial system walkdown of the containment spray (CS) system using check-off list COL-CS-1, “Containment Spray System,” to verify proper equipment alignment, and to identify any equipment discrepancies which could adversely impact the system’s safety function or availability.

- During the week of September 2, the inspectors conducted a partial walkdown of the 32 and 33 emergency diesel generator (EDG) air start systems to verify their proper standby alignment while the 31 EDG air start system was out of service due to a degraded condition.

- On September 6, the inspectors performed a partial system walkdown of the 31 and 33 safety injection (SI) pump trains using COL-SI-1, “Safety Injection System,” to confirm the alignment for automatic operation during the quarterly surveillance test of the 32 SI pump.

- On September 19, the inspectors observed performance of test procedure 3PT-M62, “480V Undervoltage/Degraded Grid Protection System Functional.” The inspectors observed Instrumentation & Control personnel perform the test and evaluated their communication practices and attention to detail. The inspectors verified the as-left restoration alignment of the 480V protection circuits at the completion of test steps.

- On September 24, the inspectors performed a verification walkdown of the 32 component cooling water (CCW) heat exchanger while the 31 CCW heat exchanger

was isolated for service water pipe repairs. The inspectors used Tagout Clearance No. 3-02-1 to confirm that system component tags were correctly installed, to verify the 31 heat exchanger was properly isolated, and to confirm that CCW flow was properly aligned to the 32 heat exchanger.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (Semi-annual)

a. Inspection Scope (71111.04S)

The inspectors performed comprehensive system walkdowns of the 31, 32, and 33 EDGs and their sub-systems. The EDGs were selected because of the increase in core damage frequency that could result from their unavailability. The inspectors reviewed the most recently performed system check-off lists (COLs) and related system flow diagrams to verify that the configuration of the related sub-system components would support automatic operation of the EDGs. The following documents were referenced: COL-EL-5, "Diesel Generators"; COL-RW-2, "Service Water System"; and COL-RW-2A, "Service Water Header Realignment"; 9321-F-27223, "Service Water System"; 9321-F-21193, " Lube Oil to Diesel Generators"; 9321-F-20303, "Fuel Oil to Diesel Generators"; 9321-H-20293, "Starting Air to Diesel Generators"; and 9321-H-20283, "Jacket Water to Diesel Generators."

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope (71111.05Q)

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 the licensee had been controlling ignition sources in accordance with FP-8, "Controlling of Ignition Sources"; to ensure that the licensee had provided the fire protection equipment specified in the Pre-Fire Plans (PFPs) listed below; and to assess the general material condition of the fire protection equipment and fire protection barriers. These areas were selected for inspection based on the their relative fire initiation risk and the safe shutdown equipment located in the areas.

- Fire Zones 2, 2A, 3, 4, 4A, 5, 6, 7, 8A, 9, 9A, 12A,13A, 14A, 17A, 19A, 22A, 27A, 58A, and 69A: On July 10, 2002, the inspectors performed a comprehensive walk-through of all elevations of the primary auxiliary building (PAB), using Pre-Fire Plans PFP-05, -06, -07, -08, -09, -10, -11, -12, and -13.

- Fire Zones 10, 101A, and 102A: During the week of August 5, the inspectors performed a fire protection walkdown of the 31, 32, & 33 EDG rooms using PFP-29

- Fire Zone 36A: During the week of August 5, the inspectors performed a fire protection walkdown of the EDG valve room using PFP-29.

- Fire Zone 57A: On September 27, the inspectors performed a fire protection inspection of the atmospheric relief valve (ARV), the main steam isolation valve (MSIV), and the safety relief valve (SRV) areas of the auxiliary feedwater building using PFP-49.

- Fire Zone 8: On September 27, the inspectors performed a fire protection inspection of the work area surrounding the weld repair of the 31 CCW heat exchanger inlet service water pipe, with particular attention on the work package requirements for welding protection, portable fire extinguishers, and portable ventilation.

- Fire Zones 52 & 57A: On September 27, the inspectors performed walk-throughs of the auxiliary feedwater building, including the feedwater regulating valves area and the chemical additive room using PFP-47, -48 and -49.

b. Findings

No findings of significance were identified.

1R07 Heat Sink

b. Inspection Scope (71111.07A)

The licensee opened the 31 CCW heat exchanger on September 24, 2002, in order to drain the inlet service water (SW) piping near the heat exchanger. This was necessary to perform repairs on the SW piping (see section 1R13). The inspectors observed the licensee inspect the internal surfaces of the heat exchanger's lower plenum and tube sheet, and also reviewed the licensee's photographs to evaluate the extent of potential fouling.

During the inspection, the licensee discovered foreign material inside the lower plenum (a torn strip of rubber approximately one by nine inches). The licensee initiated CR-IP3-2002-03882 and investigated the most likely source of the material. Investigation determined that the torn fragment was likely to have originated from an internal SW pipe joint seal installed during the last refueling outage. Based upon the size of the material and the large number of tubes in the heat exchanger, the licensee concluded that the heat exchanger flow and efficiency was not significantly degraded. The inspector conducted an independent assessment of the heat exchanger's operability which was consistent with the licensee's determination.

c. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope (71111.11)

On September 23, 2002, the inspectors observed supervisor evaluated scenarios (SES) during simulator training for licensed operators (Crew "A") in their third requalification cycle for 2002. Prior to the exercises, the inspectors reviewed the Plant Issues Matrix (PIM) for Indian Point 3 to identify potential weaknesses in operator performance. The inspectors also reviewed the planned scenarios documented in Lesson Plan LRQ-SES-04, "Loss of Heat Sink/RCP Seal Failure," and LRQ-SES-35 "SGTR/Faulted SG," to determine if they contained: clear event descriptions with realistic initial conditions; clear start and end points; clear descriptions of visible plant symptoms for the crew to recognize; and clear expectations of operator actions in response to abnormal conditions.

During the exercises, the inspectors evaluated the "Critical Crew Tasks," which included: 3-way communications; command and control; procedure adherence; place keeping; and operator self-checking. The inspectors also observed operator: use and implementation of emergency operating procedures (EOPs) and off-normal operating procedures (ONOPs); ability to properly interpret and verify alarms and to exercise timely control board manipulation; and ability to take timely actions in a safe direction based on transient simulator conditions. The inspectors evaluated the control room supervisor's exercise oversight and control of the crew's actions, and the operations and training staff's post-scenario critiques.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope (71111.12)

The inspectors reviewed the below listed 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 performance of maintenance work 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 were observed and evaluated:

- WR IP3-010473800: 33 EDG quarterly preventive maintenance (PM) inspection; and 3PT-M079C, monthly functional test; August 6, 2002

- WR IP3-02-17314: Annual PM and PMT for the diesel fire pump; August 12.

- WR IP3-02-01043: Repair of the 33 Static Inverter.

  On September 15, the 33 static inverter lost its normal power supply and automatically transferred to its maintenance source (motor control center MCC-39). The cause of the automatic transfer was a control circuit card failure which caused the normal power supply fuses to fail (CR-IP3-2002-03734). Both the card and fuses were replaced and the inverter returned to service following a PMT. This was a repeat occurrence for the 33 static inverter.

- WRs IP3-02-01213, -01214, and -01215: Instrument air system leakage.

  On September 24, the licensee initiated troubleshooting of the instrument air compressors and system components. The system had experienced higher than normal leakage, and the 33 compressor had experienced low discharge flow due to filter blockage. The inspectors reviewed the licensee's Action Plan for troubleshooting the system and the follow-up actions to address known system leaks, including CR-IP3-2002-03883 (air leaks in main feedwater regulating valve FCV-417), and CR-IP3-2002-03117 (leaks on air operators for heater drain level control valves HD-LCV-1127B, C, & D).

- WR IP3-02-01009: 32 CCW pump shaft seal replacement.

  On September 26, the licensee disassembled the 32 CCW pump to replace the inboard shaft seal after discovering a 12 gallon per hour leak (CR-IP3-2002-03891). During the pump disassembly, the licensee discovered foreign material fragments (plastic and stainless steel) imbedded in the pump's impeller (CR-IP3-2002-03936). A subsequent investigation revealed that the fragments were apparently part of a small hand tool that could have been left in the pump's suction piping during refueling outage No. 9, when several system valves were opened for maintenance. The inspectors reviewed the licensee's operability determination (OD 02-32) and extent of condition review, which evaluated past system performance for potential tube plugging or flow blockage from the foreign material. The inspectors also observed the installation of a new pump impeller and seals, and the subsequent pump performance baseline testing (per ENG-619C) before the pump was returned to service.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessment and Emergent Work Control

a. Inspection Scope (71111.13)

The inspectors reviewed the maintenance risk assessments and corrective maintenance work packages for the following emergent and scheduled work, and discussed the degraded conditions with cognizant plant personnel (system engineers, maintenance workers and technicians):

- WR IP3-02-00149: 32 EDG governor malfunctions identified during the monthly surveillance test on July 8, 2002, (CR-IP3-2002-02585 and -02588).

- WRs IP3-02-0119, -0159, -0160, -0161, and -0162: 32 boric acid storage tank recirculation line flow obstruction on July 11, (CR-IP3-2002-02638).

- WRs I3-020088400, -020222100, -020026800, -020088300, -010404500, -010440700, -010484200, and -02018951: 31 EDG air regulator (West) and air start motor (East) failures.

  The inspectors reviewed the work orders and maintenance procedures associated with the 12-year PM activities performed on the 31 EDG during September 3 - 4. During the post-maintenance testing for the PMs, the West air start pressure regulator valve failed to regulate properly (CR-IP3-2002-3563) and the East air start motor failed to start the EDG (CR-IP3-2002-3572). The inspectors reviewed these failures with the licensee and discussed their action plan for troubleshooting. Neither the regulator nor the air start motor was worked on during the PM; however, both components were subsequently replaced. Following repairs, testing was completed satisfactorily and the EDG was returned to service. Recently performed monthly tests of the 32 and 33 EDGs demonstrated satisfactory operation of their respective air start systems.

- WR IP3-02-19038: Repair of the 18-inch service water piping upstream of valve SWN-34-1.

  On September 9, the licensee identified a pin hole leak in a weld on the 18-inch service water pipe near the inlet to the 31 CCW heat exchanger. On September 10 and 11, the licensee completed radiographic and ultrasonic testing of the degraded areas. The licensee developed an action plan, prepared a work request and tagging orders, and initiated actions to repair the leak. The repair was completed in accordance with American Society of Mechanical Engineers (ASME) Section XI to meet the original American National Standards Institute (ANSI) B31.1 piping design code which required a weld build-up repair followed by surface examinations. On September 25, the final acceptance testing was completed by conducting a system operational pressure test in accordance with ASME Code Case N-416, which allows a system operational pressure test and surface examination of the root and final pass welds, in lieu of a hydrostatic test.
- WR I3-000460500: 31 charging pump motor replacement; and IEE Evaluation NYPA-02-0045: Replacement item equivalency evaluation for the 31 charging pump.

During the month of July 2002, the licensee identified elevated vibration of the 31 charging pump motor. Consequently, the original pump motor was replaced with a motor from a different vendor that had been evaluated by the licensee for equivalency with the original motor. The inspectors reviewed the evaluated differences in the motor critical characteristics and the licensee's justification for the differences. The inspector also observed portions of the motor replacement, performed on September 23.

b. Findings

No findings of significance were identified.

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

a. Inspection Scope (71111.14)

On August 30, 2002, the plant experienced a main turbine automatic runback to 75% power following the failure of the rate of change circuit in nuclear instrument NI-43 (CR-IP3-2002-3514). The rate circuit was designed to reduce plant power in the event of a dropped control rod; however, no dropped rod actually occurred in this case. Shortly after this occurrence, the inspectors interviewed control room personnel to evaluate their immediate response and their actions to maintain the plant stable following the runback. The inspectors also reviewed plant data records to confirm that plant systems responded to the event as expected, and within design basis limits.

Shortly after the runback, the licensee formed a Post Transient Review Group (PTRG), which conducted interviews of all control room operators who responded to the event. The PTRG also gathered all of the pertinent plant system data in order to analyze the plant's response. The inspectors reviewed PTRG Report No. 02-01, which confirmed that all systems responded within their design limits.

The inspectors also reviewed the licensee's root cause analysis for the event, documented in CR-IP3-2002-03514. The analysis confirmed that the event resulted from a failed rate circuit card. However, the licensee was not able to identify the precise cause of the card failure. The analysis also evaluated other similar runback events, but there were no similarities to previous incidents. The licensee's corrective actions include plans for a detailed failure analysis of the rate circuit card.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope (71111.15)

The inspectors reviewed various CRs on degraded or non-conforming conditions that raised questions on equipment operability. The inspectors reviewed the associated operability determinations (ODs) for technical adequacy, whether or not continued operability was

warranted, and to what extent other existing degraded systems adversely impacted the affected system or compensatory actions. The following CRs and ODs were evaluated:

- CR-IP3-2002-03174, 3PT-W019 Failed Overall Acceptance Criteria; August 13, 2002.

  During the week of August 5, the inspectors noted several instances where the voltage indication for 6.9kV buses No. 5 and No. 6, displayed on control room instruments, exceeded the normal maximum of 7.2kV. The licensee closely monitored these voltages and issued the above mentioned CR when both voltages remained high for an extended period. Engineering and I&C personnel performed troubleshooting on the voltage sensing relay for the load tap changer in the station auxiliary transformer (SAT) and concluded that the relay was not responding to maintain the SAT output voltage within the correct range.

  OD 02-25: Station Auxiliary Transformer Tap Changer Relay.

  The licensee conducted detailed measurements of the No. 5 and No. 6 bus voltages using an accurate voltmeter and found that the 6.9kV bus voltage sensing relay was not maintaining the SAT voltage output within its normal range. Although the SAT output voltage was higher than desired, it did not exceed the maximum short circuit ratings for the 6.9kV loads on the buses and could be tolerated for periods of less than two hours in duration. In addition, the degraded voltage sensing relay and SAT tap changer did not compromise the relay's bypass circuit that causes the SAT tap changer to go to its maximum setting (7.450kV) following a safety injection signal.

- CR-IP3-2002-03620: On September 9, the licensee identified a service water leak in the flange to pipe weld upstream from valve SWN-34-1, inlet to the 31 component cooling water heat exchanger.

  OD 02-29: Engineering performed a preliminary inspection and concluded that the pipe appeared to be operable based on the small size of the leak. The licensee also performed a radiographic test (RT) examination of the weld to better characterize the flaw, and initiated an engineering evaluation of the weld joint using ASME Code Case N-513. The licensee's pipe stress calculation (IP3-CALC-SWS-03678) concluded that the pipe would remain seismically qualified and operable if the circumferential flaw did not exceed 5.57 inches in length and the minimum wall thickness of 0.113 inches was maintained.

  The inspectors reviewed RT Report 02R017, which documented that the flawed areas were less than 5 inches in total defect length, and that the pipe was operable based upon the length being less than the acceptance criteria. The RT records indicated that several weld areas were degraded by more than 20% of the minimum wall thickness. Consequently, those areas required an ultrasonic test (UT) examination for a more detailed characterization. The inspectors reviewed UT Report 02UT030, which concluded that the total defect length was 4-1/4 inches. This data further confirmed that the pipe was operable.

- CR-IP3-2002-03304: On September 4, 2002; the licensee discovered that the 33 Auxiliary Boiler Feedwater Pump (ABFP) motor had excess grease evident on the

outboard end bell resulting from the application of more grease than required. The motor end bell had been greased every six months. The follow-up investigation revealed that the licensee had not correctly specified the vendor's recommended volume of grease in the lubrication procedure.

CR-IP3-2002-03305, On September 4, the licensee discovered that the 31 ABFP motor still had the original bearing grease plugs installed (for shipping), and that there was no evidence the motor had been greased since original installation on September 24, 1999. This condition was contrary to the vendor's recommendations which was to lubricate the motor every 24 months (for motors in standby service). The licensee's follow-up investigation indicated that the motor installation instructions did not include steps to remove the plugs, and that the motor had not been placed into the lubrication program at Indian Point 3.

OD 02-27: The inspectors reviewed the licensee's evaluation of the over-greased condition of the 33 ABFP, which concluded that there was no evidence that excess grease had collected on the motor windings, and that the motor and bearings were not affected in an adverse way. The follow-up evaluation of the 31 ABFP concluded that the pump was operable and that there was no physical evidence that the motor bearings were degraded. This conclusion was based upon: 1) no negative trends were evident in the pump/motor vibration data since the motor's original installation; 2) no negative trends were evident in motor thermography performed twice a year since installation; and, 3) no abnormalities were seen when the pump was run continuously during two refueling outages and all surveillance tests since its original installation. The inspectors confirmed that the licensee's lubrication program was amended to specify the correct lubrication frequency and volume for both pumps.

- CR-IP3-2002-03515: Numerous Alarms After the Runback Event with the Plant Stable at 75% power.

  OD 02-28: The inspectors reviewed operability determination No. 02-28 involving the main turbine-generator runback from the failed NI-43 circuit. The analysis noted that the degradation did not occur on the control side of the power range NI drawer circuitry, and consequently did not affect the reactor safety protective functions of the NI system. The licensee had previously evaluated the removal of the runback function (Safety Evaluation 93-3-223) and concluded that the absence of the runback feature did not adversely affect safe plant operation. In addition, the accident analysis section of the Final Safely Analysis Report (FSAR) did not credit the runback function as performing any safety function.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope (71111.17)

Entergy issued Design Change Package (DCP) 02-3-077 on August 15, 2002, to replace a degraded voltage regulating relay in the load tap changer of the station auxiliary transformer (SAT) with a similar relay with a different time-delay range. The original relay had caused the regulated voltage of the SAT to go up to 7.3 kilovolts (kV), which exceeds the normal range of 6.9 to 7.2 kV. Since the original relay was obsolete, it had to be replaced with a new design. The inspectors selected DCP 02-3-077 for review because the voltage sensing relay is important for the reliable operation of the SAT in maintaining the 138kV offsite power line as the preferred source.

The inspectors reviewed the relay's design features, such as voltage setting range and voltage circuit burden to verify that the functional capability of the replacement relay was compatible with the SAT tap changer. The inspectors also reviewed the modified schematic diagram, with the addition of the manual switch, and the vendor's type-test report of the replacement relay to verify the adequacy of the new design. In addition, the inspectors reviewed the post-modification testing, functional testing, and relay calibration record to confirm readiness for operation.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope (71111.19)

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 following PMT activities were observed and evaluated:

- 3PT-M42B: "Diesel Fire Pump Test," following the monthly PM inspection, performed on September 12, 2002.

- ENG-619C: "32 CCW Pump Reference Test," performed on September 28, 2002, following replacement of the motor impeller.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope (71111.22)

The inspectors observed portions of the following surveillance tests and reviewed the test procedures to assess whether: 1) the test preconditioned the components; 2) the scheduling and conduct of the tests were consistent with plant conditions; 3) the acceptance criteria demonstrated system operability consistent with design calculations and the licensing basis; 4) the test equipment range and accuracy were adequate for the application and the test equipment was properly calibrated; 5) the test was performed in the proper sequence; and, 6) the affected system(s) was properly restored to the correct configuration following the test.

- 3PT-M79A & B: "31& 32 Emergency Diesel Generator (EDG) Functional Tests," performed on July 9, 2002, to confirm operability of the 31 and 32 EDGs. The testing was performed in accordance with Technical Specifications to ensure there was no potential common cause failure mechanism, following testing and identification of a problem with the 32 EDG mechanical and electrical governor.

- 3PT-W019: "Electrical Verification, Offsite Power Sources and AC Distribution"; performed July 9.

- 3PT-M42A: "Electric Fire Pump Test," performed July 10.

- 3PT-M079A: "31 EDG Functional Test," performed August 9.

- 3PT-Q116B: "Quarterly functional test of the 32 safety injection pump," performed September 6.

- 3PT-OL101D: "Rod Position Indication Analog System Functional Control Bank A and Control Bank C," performed September 13.

- 3PT-Q120C: "33 Auxiliary Boiler Feedwater Pump," performed September 27.

b. Findings

No findings of significance were identified.

1R23 Temporary Modifications (TMs)

a. Inspection Scope (71111.23)

TM No. 02-3-085: Defeat of the nuclear instrument (NI) system rod drop turbine runback.

As discussed in Section 1R14, the plant experienced an automatic turbine runback to 75% power after the failure of a rate circuit card in nuclear instrument NI-43. Prior to returning to full power, the licensee implemented a temporary modification to NI-43 to defeat the runback function. On September 17, the licensee installed the same temporary modification on the other three nuclear instrument channels (NI-41, -42, and -44). The inspector determined that the licensee had planned to implement a permanent modification in 1994 to defeat this runback

feature. However, the modification was not performed due to concerns with installation with the plant at power and it became a low priority issue.

The inspectors reviewed the licensee's nuclear safety evaluation (NSE 93-3-223) that was completed in October 1994, to justify this plant design change. The NSE concluded that full reactor power operations, without the runback feature, did not reduce the safety margins for any analyzed accident. The removal of the runback signal did not affect any NI reactor safety protective function, as the runback was designed for operational convenience only.

b. Findings

No findings of significance were identified

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Control To Radiologically Significant Areas

a. Inspection Scope (71121.01)

The inspectors reviewed radiological work activities and practices, and procedural implementation during observations and tours of the facilities. Procedures, records, and other program documents were inspected to evaluate the effectiveness of Entergy's access controls to radiologically significant areas at Indian Point 3.

On September 10, 2002, the inspectors toured the radiologically controlled area (RCA) including: the health physics (HP) access control point and various elevations of the primary auxiliary building (PAB); the fuel storage building (FSB); and the radioactive machine shops (RAMS). During these observations and tours, the inspectors reviewed the posting, labeling, barricading, and level of radiological access control for locked high radiation areas (LHRAs), high radiation areas (HRAs), radiation and contamination areas, and radioactive material areas for regulatory compliance. The inspectors also observed activities at the main RCA access control point to verify compliance with requirements for RCA entry and exit, wearing of dosimetry, and issuance and use of alarming electronic radiation dosimeters. In addition, the inspectors observed plant work activities for compliance with the applicable radiation work permit (RWP) requirements.

On September 10, the inspectors observed a pre-job briefing for an entry into the PAB to perform radiography using an Iridium-192 source to examine a weld on service water piping on the 55-foot elevation. The inspectors reviewed the boundary verification activities during radiography and checked for compliance with procedure RE-REA-4-8, "Radiography and X-Ray Testing." The inspectors also reviewed RWP 02-0034, which contained the radiological information and controls for the work.

On September 11, the inspectors observed a pre-job briefing for entry into the vapor containment (VC) by four work groups for boron leakage inspections on the three work elevations. The pre-job briefing covered radiation safety, confined space entry, and heat stress

considerations associated with the work. The inspectors reviewed RWP 02-0028, which contained the radiological information and controls for the VC entry. The inspectors also accompanied a work group onto the 46-foot elevation of the VC and observed the work there for compliance with the RWP and pre-job briefing radiation safety requirements. The inspectors performed a selective examination of RWPs, procedures, and other program documents to evaluate the adequacy of radiological controls.

The reviews in this area were 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 Specification 5.7, "High Radiation Area"; and associated site procedures.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Control

a. Inspection Scope (71121.02)

The inspectors reviewed the effectiveness of the licensee's program to maintain occupational radiation exposure as low as is reasonably achievable (ALARA). The inspectors noted that the plant's cumulative year-to-date exposure (as of September 2, 2002), was 5.047 person-rem, and that this was below the estimated cumulative year-to-date exposure of 6.041 person-rem.

On September 10, the inspectors met with an HP Operations Supervisor and discussed Entergy's efforts in addressing radioactive hot spots in the plant. On September 11, the inspectors met with the ALARA Specialist and discussed current ALARA program activities and plant source term reduction activities.

The inspectors performed a selective examination of procedures, records, and documents 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," 10 CFR 20.1701, "Use of Process or Other Engineering Controls," and associated site procedures.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation

a. Inspection Scope (71121.03)

The inspectors reviewed the effectiveness of HP instrumentation, installed radiation monitoring instrumentation, and the program to provide a self-contained breathing apparatus (SCBA) to occupational workers.

During tours of the plant on September 10 and 11, the inspectors reviewed field instrumentation utilized by HP technicians and plant workers to measure radioactivity and radiation levels, including portable field survey instruments, hand-held contamination frisking instruments, and continuous air monitors. The inspectors conducted a selective review of the instruments observed to specifically verify current calibration status, performance of appropriate source checks, and proper instrument function.

The inspectors reviewed the current operability status of two installed radiation monitors (R-11 and R-12), including a review of related Condition Reports and discussed these with the Senior Radiological Engineer responsible for tracking the performance of installed radiation monitoring instrumentation.

On September 10 and 11, the inspectors met with the Waste Management Supervisor, responsible for the respiratory protection program. The discussion covered the training currently provided for use of SCBAs and the training provided to personnel who operate the SCBA air compressor. The inspectors also verified that maintenance and repair on vital SCBA components was performed by personnel who had received manufacturer certified training.

The inspectors performed a selective examination of procedures, records, and documents (listed in Attachment 1) for regulatory compliance and adequacy. The review was against criteria contained in 10 CFR 20, Subpart F, “Surveys and Monitoring,” 10 CFR 20, Subpart H, “Respiratory Protection and Controls to Restrict Internal Exposure in Restricted Areas,” Technical Specifications, and associated site procedures.

b. Findings

No findings of significance were identified.

2PS1 Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope (71122.03)

During the week of July 8, 2002, the inspectors reviewed the below listed documents to evaluate the effectiveness of the REMP. The requirements of the REMP were specified in the Technical Specification/Offsite Dose Calculation Manual (TS/ODCM).

- The 2000/2001 Annual REMP Reports, including selected analytical data for 2002 REMP samples;
- Analytical results of 2000/2001/2002 for the on-site well water samples (Sample Station: IP3 Trailer Well);

- The most recent ODCM (Revision 15, December 14, 2001) and technical justifications for ODCM changes, including sampling locations;
- The most recent calibration results of the primary (10-m, 60-m, and 122-m) and the secondary (10-m) meteorological monitoring instruments for wind direction, wind speed, and delta temperature;
- Weekly meteorological monitoring program surveillance log;
- 2002 Meteorological Monitoring Program Self-Assessment (IP-RES-2002-050);
- Availability of the meteorological monitoring instruments from January 1, 2001 to December 31, 2001;
- the most recent calibration results for all TS required air samplers;
- implementation of the environmental thermoluminescent dosimeters (TLDs) program;
- The licensee's quality control evaluation of the inter-laboratory and intra-laboratory comparison program and the corrective actions for any deficiencies;
- Condition Reports and Deviation/Event Reports (CRs and DERs) and associated corrective actions (CR-2002-02624; CR-2001-12661; CR-2001-12641; CR-2001-12633; and DER-01-04595);
- 2001 QA Audit Number A01-07I, Review of the REMP and the Meteorological Monitoring Program implementations;
- Quarterly REMP/RETS Meeting Minutes (Second Quarter 2001 to First Quarter 2002);
- Self-Assessment (IP-HPS-2001-053) for the implementation of the REMP;
- The Land Use Census procedure and the 2000/2001 results; and,
- Associated REMP procedures, including vendor analytical procedures.

The inspectors toured and observed the following activities to evaluate the effectiveness of the REMP.

- Operability of the primary and secondary meteorological instruments;
- Charcoal cartridge and filter sampling techniques; and
- Walk-down for determining whether air samplers and 25% of the TLDs were located as described in the ODCM (including control and indicator stations) and for determining the equipment material condition.

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Control Program

a. Inspection Scope (71122.02)

The inspectors reviewed the following documents and observed activities to ensure that the licensee's surveys and controls were adequate to prevent the inadvertent release of licensed material to the public domain:

- The methods used for control, survey, and release from the Radiologically Controlled Area (RCA);
- The most recent calibration results for the radiation monitoring instrumentation (small articles monitor, SAM-9 or SAM-11), including the (a) alarm setting, (b) response to the alarm, (c) the sensitivity, and (d) alarm failure rate;

- The use of SAM-9 or SAM-11 by employees;
- The most recent calibration results for the gamma measurement system use for the material control program;
- The licensee's criteria for the survey and release of potentially contaminated material;
- Associated procedures and records to verify for the lower limits of detection; and
- Review of CR Nos. IP3-2001-01135; IP3-2001-01495; IP3-2001-02215; IP3-2002-00315; IP3-2002-00365; and IP3-2002-01254).

The inspectors' review was against criteria contained in: (1) NRC Circular 81-07, "Control of Radioactively Contaminated Material"; (2) NRC Information Notice 85-92, "Surveys of Waste before Disposal from Nuclear Reactor Facilities"; (3) NUREG/CR-5569, "Health Position Data Base (Positions 221 and 250)"; and, (4) the licensee's procedures and technical justifications for ODCM changes, including sampling locations.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Cornerstone: Physical Protection (PP)

3PP1 Response to Contingency Events

a. Inspection Scope (71130.03)

The Office of Homeland Security (OHS) developed a Homeland Security Advisory System (HSAS) to disseminate information regarding the risk of terrorist attacks. The HSAS implements five color-coded threat conditions with a description of corresponding actions at each level. NRC Regulatory Information Summary (RIS) 2002-12a, dated August 19, 2002, "NRC Threat Advisory and Protective Measures System," discusses the HSAS and provides additional information on protective measures to licensees.

On September 10, 2002, the NRC issued a Safeguards Advisory to reactor licensees to implement the protective measures described in RIS 2002-12a in response to the OHS declaration of threat level "Orange." Subsequently, on September 24, 2002, the OHS downgraded the national security threat condition to "Yellow" and a corresponding reduction in the risk of a terrorist threat.

The inspectors interviewed site personnel and security staff, observed the conduct of security operations, and assessed licensee implementation of the threat level "Orange" protective measures.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator (PI) Verification

Occupation Exposure Control Effectiveness

a. Inspection Scope (71151)

During June 24 - 27, 2002, the inspectors selectively examined records used by the licensee to identify occurrences involving high radiation areas, very high radiation areas, and unplanned personnel exposures. The inspectors compared those occurrences in the time period from mid-April 2002 to late June 2002, against the applicable criteria specified in Nuclear Energy Institute (NEI) 99-02, Regulatory Assessment Performance Indicator Guideline, to verify that all conditions that met the criteria were recognized and identified as Performance Indicators, where appropriate. The reviewed records included corrective action program records (Deviation/Event Reports and Condition Reports) and issues captured by procedure RE-UOE-14-4, "Radiological Event Classification and Investigation." In conjunction with the reviews documented in previous inspection reports, which covered the intervening period back to late October 2001, this investigation did not find any problems with the PI accuracy or completeness.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

a. Inspection Scope (71152)

.1 The inspectors selected six CRs for evaluation, and reviewed the corrective actions associated with these CRs to determine whether they addressed the identified causes and were completed in a timely manner. The CRs selected for review were:

CR-IP3-2001-04264: Modification missed updating ITS bases and FSAR.
CR-IP3-2002-00968: MS-108-1 and MS-108-2 were removed by design changes, still in Check-off List.
CR-IP3-2001-04197: Mod 90–03-030 incorrectly canceled, actually installed, never updated to reflect changes.
CR-IP3-2002-01825: CCW leakage coming from the 33 SI pump outboard oil cooler, Zinc anodes were used.
CR-IP3-2001-04583: Many engineers lost specific task qualifications.
CR-IP3-2002-00417: 10 CFR 50.59 Qualification Matrix is not updated properly.

.2 The occupational radiation exposure inspection (reference Section 2OS2 of this report) included a review for the appropriateness and adequacy of event categorization, immediate corrective actions, corrective actions to prevent recurrence, and timeliness of corrective actions for the following CRs:

CR-IP3-2002-02541: RCA entry without an electronic dosimeter.
CR-IP3-2002-02728: Shoe contamination in the RAMS building.
CR-IP3-2002-02766: Gate into RAMS building pen #1 left unlocked.

CR-IP3-2002-03415: RCA postings difficult to read at the refueling water storage tank.
CR-IP3-2002-03452: Worker in the RCA with electronic dosimeter not turned on.

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

a. Inspection Scope (71153)

On August 30, 2002, the plant experienced an automatic turbine runback to 75% power. Inspection Procedure 71153 guidance was used by the inspectors to assess Entergy's response to this event. Inspector observations are documented in Section 1R14 of this report.

b. Findings

No findings of significance were identified.

4OA4 Licensee Event Report Reviews

a. Inspection Scope

(Closed) LER 2002-001-00: Operation in a Condition Prohibited by Technical Specifications Due to an Inoperable Service Water Pipe Caused by a Leak that Exceeded the Allowed Outage Time

On July 5, 2002, the licensee submitted LER 2002-001-00 to the NRC to report a leaking service water (SW) pipe that required longer than the allowed SW system outage time specified in the Technical Specifications. This condition caused the licensee to seek enforcement discretion from the NRC prior to the repair. This matter was dispositioned with a Notice of Enforcement Discretion (NOED 2002-01-01; June 13, 2002) and was addressed in NRC inspection report 50-286/02-04. This LER is closed

(Closed) LER 2002-002-00: Inoperable Isolation Valve Seal Water System Due to a Mispositioned Valve is Outside Technical Specifications and is a Safety System Functional Failure

On July 29, 2002, the licensee submitted LER 2002-002-00 to the NRC to report the discovery on June 1, 2002, of a mispositioned vent valve in the isolation valve seal water system (IVSWS) that rendered the system inoperable for approximately 17 days. This time exceeded the maximum allowed outage time permitted by Technical Specifications (seven days). This was a licensee identified violation of Technical Specifications 3.6.9 (see 4OA7 below). This LER is closed.

b. Findings

No findings of significance were identified.

4OA6 Meetings

Exit Meeting Summary

On October 23, 2002, the inspectors presented the inspection results to Mr. R. Barrett and other members of the Entergy staff who acknowledged the inspection results presented. The inspectors verified with Entergy personnel that no materials evaluated during the inspection were considered proprietary.

4OA7 Licensee-identified Violations

The following violation is of very low safety significance, was identified by the licensee, and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being treated as a Non-Cited Violation.

On June 1, 2002, the licensee identified a violation of Technical Specifications, Section 3.6.9, which requires that the isolation valve seal water system (IVSWS) be operable when the reactor coolant system average temperature (Tave) is greater than 200F. The Technical Specifications allow the IVSWS to be out of service for seven days. However, the licensee determined that the system was not operable for approximately 15 days between May 17 and June 1, 2002, when Tave was greater than 200F. This event was entered into the corrective action system under CR-IP3-2002-01978. The root cause of the event was determined to be a human error, failure to follow the procedure for restoring the IVSWS to operability following a system leak test. The incident was reported to the NRC on September 17, 2002, in accordance with 10 CFR 50.73 (LER 2002-002-00).

If you deny this Non-Cited Violation, you should provide a response with the basis for your denial, within 30 days of the receipt of this letter, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-001; with copies to the Regional Administrator, Region 1; the Director, Office of Enforcement; and the NRC Resident Inspector at the Indian Point 3 facility.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

a. Key Points of Contact

R. Barrett	Vice President, Operations - IP3
R. Cavalieri	Site Planning and Outage Services Manager
R. Christman	Assistant Operations Manager, Operations Staff
J. Comiotes	Director, Nuclear Safety Assurance
J. DeRoy	General Manager of Plant Operations
R. Deschamps	Radiation Protection Manager
M. Devlin	Work Control Superintendent
R. Discensi	Technical Support Manager
J. Donnelly	Corrective Actions and Assessment Manager
M. Gillman	Operations Manager
R. LaVera	Senior Radiological Engineer
J. LePere	Waste Management General Supervisor
J. McCann	Licensing Manager
E. O'Donnell	Assistant Operations Manager, Operating Crews
J. Perrotta	Quality Assurance Manager
D. Thompson	Security Manager
A. Vitale	Maintenance Manager
J. Wheeler	Training Manager

b. List of Items Opened, Closed, and Discussed

Opened

None

Closed

LER 2002-001-00	Operation in a Condition Prohibited by Technical Specifications Due to an Inoperable Service Water Pipe Caused by a Leak that Exceeded the Allowed Outage Time
LER 2002-002-00	Inoperable Isolation Valve Seal Water System Due to a Mispositioned Valve is Outside Technical Specifications and a Safety System Functional Failure

Opened/Closed

None

c. List of Documents Reviewed

Section 2OS1, Access Control to Radiologically Significant Areas:

- RWP 020028, Rev. 39, Containment entry with reactor critical-outside crane wall
- RWP 020034, Rev. 2, Radiography inside radiologically controlled areas
- Procedure AP-7, Rev. 24, Radiation protection plan
- Procedure RE-REA-4-1, Rev. 18, Radiation work permit (RWP)
- Procedure RE-REA-4-6, Rev. 14, Containment entry at power or initially after shutdown
- Procedure RE-REA-4-8, Rev. 9, Radiography and x-ray testing
- Procedure RE-SUR-6-2, Rev. 10, Contamination surveys, postings, and assessment
- Procedure RE-CON-3-5, Rev. 4, Hot particle control
- Procedure RE-DOS-8-11, Rev. 12, Administrative radiation exposure guidelines and extensions
- Procedure RE-DOS-8-24, Rev. 3, Authorization for planned special exposure
- Procedure RE-UOE-14-4, Rev. 16, Radiological event reporting and investigation
- Procedure ENN-LI-102, Rev. 2, Corrective action process
- Technical information document No. 96-001, Rev. 0, Dosimetry practices for entry into containment at power
- Hot spot tracking list

- The ProRad access control procedure/How to log in and out of a radiological control area
- Self-assessment on Condition Report initiation, IP-RES-2002-058, July 9, 2002
- Second quarter RES corrective action review committee minutes, IP-RES-02-063, July 29, 2002

Section 2OS2, ALARA Planning and Controls:

- Procedure AP-7, Rev. 24, Radiation protection plan
- Procedure RE-REA-4-1, Rev. 18, Radiation work permit (RWP)
- ALARA Committee Meeting Minutes for June 26, 2002
- ALARA focused self-assessment learning organization condition report 2002-00001, July 31, 2002

Section 2OS3, Radiation Monitoring Instrumentation and Protective Equipment:

- Procedure RE-CON-3-4, Release of Material from the Radiologically Controlled Area, Rev. 10
- Procedure RE-INS-7CC-7, Rev. 8, Calibration of Eberline PING-1A
- Procedure AP-7.2, Rev. 24, Respiratory protection program
- Procedure RE-RP-10-12, Rev. 15, Evaluation and selection of respiratory protection equipment
- Procedure FP-2, Rev. 3, SCBA air compressor operation procedure
- Laboratory lesson plan IP3-SCB-01, Rev. 8, Self-contained breathing apparatus

- Certified Air Mask Repair Education (CARE) certification for authorized repair center

Section 2OS1, Access Control to Radiologically Significant Areas:

- RWP 02-0018, Valves, Flanges, and Fittings (CH-AOV-142 and CH-109), Rev. 2
- RWP 02-0028, Containment Entry - Reactor Critical - OCW, Rev. 29
- RWP 02-0044, Sump Tank Clean and Inspect, Rev. 00
- RWP 02-0150, Service Water Pipe Leak Repair, Rev. 01
- Procedure RE-ADM-1-7, Health Physics Access Key Control, Rev. 7
- Procedure RE-ADM-1-9, Contractor Personnel Selection, Qualification, and Training, Rev. 2
- Procedure RE-ACC-5-2, Instructions to Control Point Personnel, Rev. 15
- Procedure RE-UOE-14-4, Radiological Event Reporting and Investigation, Rev. 16
- Dose Projection for Week 2-25 (06/23-29/02)
- Year 2001 Area Monitoring TLD Summary, IP-RES-2002-044, May 28, 2002
- Review of the Indian Point Unit 3 Radiation Protection Program, January 2001-December 2001, IP-RES-2002-032, April 19, 2002
- RER Summary Report - 1st Quarter 2002, IP-RES-2002-030, April 11, 2002
- Year 2002 RES Self-Assessment Schedule
- Health Physics Watch Duties Semi-Annual Assessment, IP-HPS-2002-037, June 20, 2002
- Assessment of Radiochemistry Labs, IP-HPS-2002-036, June 18, 2002
- Benchmarking Plan for RES Training-2002
- Radworker Practices Coaching Card
- Interoffice Correspondence IP-HPS-2002-038, Temporary RCA Entry and Egress, June 26, 2002

Section 2OS2, ALARA Planning and Controls:

- IP3 Daily ALARA Information Sheet, June 23, 2002
- RWP Activity Summary Between June 17 to 23, 2002
- IP3 Weekly Exposure Trend (mrem) from January 1 to June 15, 2002
- Dose Estimate/Budget ALARA Plan for RWP 02-018 for valves, flanges, and fittings (CH-AOV-142 and CH-109), Rev. 2
- Dose Estimate/Budget ALARA Plan for RWP 02-0150 for Service Water Leak, June 7, 2002
- Year 2002 1st Quarter Review of Station ALARA Program, IP-HPS-2002-027, April 16, 2002
- Benchmarking Plan for Outage ALARA Program-2002
- ALARA Committee Meeting Briefing Package for June 26, 2002
- ALARA HIT Team RO12 Readiness Review Plan, April 15, 2002
- Memo, Insulation Removal (for reactor head inspection), May 10, 2002
- Draft Bench Marking Report on Comparison with Seabrook's Outage ALARA Program

Section 2OS3, Radiation Monitoring Instrumentation and Protective Equipment:

- Procedure RE-CON-3-4, Release of Material from the Radiologically Controlled Area, Rev. 10
- Calibration Procedure and Record 3PC-R14A, Test, Calibration, and Radiation Source Check for ARMs (Monitors R34 A, B, and C (CVCS Hold Up Tanks #31, 32, 33), Monitors R38 A, B, and C (Waste Hold Up Tanks #31, 32, and 33), and Monitor R38 D (Waste Hold Up Tank Pump Room))(Calibration performed on June 15, 1999)
- Indian Point 3 Nuclide Mix Evaluation - 1998, TID-99-002, Rev. 0, dated April 14, 2000
- FP-13, Inspection and Testing of SCBA, Rev. 11

d. List of Acronyms

AC	Alternating Current
ABFP	Auxiliary Boiler Feedwater Pump
ALARA	As Low As Reasonably Achievable
ANSI	American National Standards Institute
ARV	Atmospheric Relief Valve
ASME	American Society of Mechanical Engineers
CCW	Component Cooling Water
CFR	Code of Federal Regulations
COL	Check-Off List
CR	Condition Report
CS	Containment Spray
CVCS	Chemical and Volume Control System
CWP	Circulating Water Pump
DER	Deficiency/Event Report
DCP	Design Change Package
EDG	Emergency Diesel Generator
EOP	Emergency Operating Procedure
FP	Fire Protection
FSAR	Final Safety Analysis Report
HP	Health Physics
HRA	High Radiation Area
HSAS	Homeland Security Advisory System
I&C	Instrument and Control
IVSWS	Isolation Valve Seal Water System
IR	Inspection Report
kV	Kilo Volts
LER	Licensee Event Report
LHRA	Locked High Radiation Area
MCC	Motor Control Center
MSIV	Main Steam Isolation Valve
NEI	Nuclear Energy Institute
NI	Nuclear Instrument
NRC	Nuclear Regulatory Commission
OD	Operability Determination
ODCM	Offsite Dose Calculation Manual
OHS	Office of Homeland Security

ONOP	Off-Normal Operating Procedure
OS	Occupational Radiation Safety
PAB	Primary Auxiliary Building
PFP	Pre-Fire Plan
PIM	Plant Issues Matrix
PM	Preventive Maintenance
PMT	Post-Maintenance Test
PTRG	Post Transient Review Group
RAMS	radioactive machine shops
RCA	radiologically controlled area
RCP	reactor coolant pump
RCS	reactor coolant system
REMP	Radiological Environmental Monitoring Program
RIS	Regulatory Information Summary
RT	radiographic test
RWP	radiation work permit
SAT	station auxiliary transformer
SCBA	Self-Contained Breathing Apparatus
SES	Supervisor Evaluated Scenarios
SI	safety injection
SRV	safety relief valve
SW	service water
TLD	thermoluminescent dosimeter
TM	temporary modification
TS	Technical Specifications
UT	ultrasonic test
VC	vapor containment
WR	work request