November 6, 2002

Mr. Fred Dacimo
Vice President - Operations
Entergy Nuclear Operations, Inc.
Indian Point Nuclear Generating Units 1 & 2
295 Broadway, Suite 1
Post Office Box 249
Buchanan, NY 10511-0249

SUBJECT: INDIAN POINT 2 - NRC INTEGRATED INSPECTION REPORT 50-247/02-06

Dear Mr. Dacimo:

On September 28, 2002, the NRC completed an inspection at the Indian Point 2 Nuclear Power Plant. The enclosed report presents the results of that inspection. The results were discussed on October 2, 2002, with 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. The inspection also reviewed security physical protection. 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 this inspection, the inspectors identified one non-cited violation of very low safety significance which was entered into the licensee's corrective action system.

The NRC has increased security requirements at Indian Point 2 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.

The inspectors identified one finding of very low safety significance (Green) that was determined to be a violation of NRC requirements. However, because of its very low safety significance and because the issue has been addressed and entered into your corrective action program, the NRC is treating this issue as a Non-Cited Violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. 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 2 facility.

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 Mr. Peter Eselgroth at 610-337-5234.

Sincerely,

/RA/

Brian E. Holian, Deputy Director
Division of Reactor Projects

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

Enclosure: Inspection Report 50-247/02-06

Attachment 1 - Supplemental Information

cc w/encl: J. Yelverton, Chief Executive Officer
M. R. Kansler, Senior Vice President and Chief Operating Officer
J. Herron, Senior Vice President
R. J. Barrett, Vice President - Operations
C. Schwarz, General Manager - Operations
D. Pace, Vice President - Engineering
J. Knubel, Vice President Operations Support
J. McCann, Manager, Nuclear Safety and Licensing
J. Kelly, Director of Licensing
C. Faison, Manager - Licensing, Entergy Nuclear Operations, Inc.
H. Salmon, Jr., Director of Oversight, Entergy Nuclear Operations, Inc.
J. Fulton, Assistant General Counsel, Entergy Nuclear Operations, Inc.
W. Flynn, President, New York State Energy, Research and Development Authority
J. Spath, Program Director, New York State Energy Research and Development Authority
P. Eddy, Electric Division, New York State Department of Public Service
C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
T. Walsh, Secretary, NFSC, Entergy Nuclear Operations, Inc.
D. O'Neill, Mayor, Village of Buchanan
J. G. Testa, Mayor, City of Peekskill
R. Albanese, Executive Chair, Four County Nuclear Safety Committee
S. Lousteau, Treasury Department, Entergy Services, Inc.
M. Slobodien, Director Emergency Programs
B. Brandenburg, Assistant General Counsel
cc w/encl: P. Rubin, Operations Manager

(cont.) Assemblywoman Sandra Galef, NYS Assembly
County Clerk, Westchester County Legislature
A. Spano, Westchester County Executive
R. Bondi, Putnam County Executive
C. Vanderhoef, Rockland County Executive
E. A. Diana, Orange County Executive
T. Judson, Central NY Citizens Awareness Network
M. Elie, Citizens Awareness Network
D. Lochbaum, Nuclear Safety Engineer, Union of Concerned Scientists
Public Citizen's Critical Mass Energy Project
M. Mariotte, Nuclear Information & Resources Service
F. Zalcman, Pace Law School, Energy Project
L. Puglisi, Supervisor, Town of Cortlandt
Congresswoman Sue W. Kelly
Congressman Ben Gilman
Congresswoman Nita Lowey
Senator Hilary Rodham Clinton
Senator Charles Schumer
J. Riccio, Greenpeace
A. Matthiessen, Executive Director, Riverkeepers, Inc.
M. Kapolwitz, Chairman of County Environment & Health Committee
A. Reynolds, Environmental Advocates
M. Jacobs, Director, Longview School
D. Katz, Executive Director, Citizens Awareness Network
P. Gunter, Nuclear Information & Resource Service
P. Leventhal, The Nuclear Control Institute
K. Copeland, Pace Environmental Litigation Clinic
R. Witherspoon, The Journal News

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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 50-247

License No. DPR-26

Report No. 50-247/02-06

Licensee: Entergy Nuclear Operations, Inc.

Facility: Indian Point 2 Nuclear Power Plant

Location: Buchanan, New York 10511

Dates: August 11 - September 28, 2002

Inspectors: Peter Habighorst, Senior Resident Inspector
Lois James, Resident Inspector
W. Cook, Senior Project Engineer
G. Scott Barber, Senior Project Engineer
P. Frechette, Security Inspector
A. Dimitriadis, Security Inspector

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

SUMMARY OF FINDINGS

IR 05000247-02-06, on 8/10-9/28/2002, Entergy Nuclear Operations, Inc.; Indian Point 2 Nuclear Power Plant. Mitigating Systems

The report covered a seven week period of inspection by resident and region-based inspectors. One finding of very low safety significance was 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.

Cornerstone: Mitigating Systems

GREEN. Abnormal Operating Instruction (AOI) 27.1.1, "Loss of Normal Station Power," was deficient, in that no steps were provided in the procedure to identify that the lockout relays for the component cooling water (CCW) pumps were required to be reset following a loss and restoration of power to the motor supply breakers. This deficient procedure is being treated as a Non-Cited Violation of Technical Specification (TS) 6.8, "Procedures and Programs," in accordance with the NRC Enforcement Policy. The consequence of this finding was that the pump lockout relays would have prevented the 21 and 23 CCW pumps from starting automatically on low CCW system header pressure, for 12 days and 21 days, respectively. This finding represented a partial loss of the CCW system function and would reasonably have been corrected by operator action. (1R15)

Licensee Identified

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 corrective action tracking number are listed in Section 4OA7 of this report.

Report Details

SUMMARY OF PLANT STATUS

The plant operated at full power for the majority of this inspection period. On September 10, 2002, Entergy decided to reduce thermal power by five percent after isolation of the 22B hydrogen cooler and evidence of increased hydrogen gas temperatures. Between September 11 and September 13, 2002, the turbine was taken offline to replace the hydrogen coolers. The reactor remained critical during this period.

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

1R04 Equipment Alignment

.1 Partial System Walkdowns

a. Inspection Scope (71111.04)

On August 28, 2002, the inspector performed a partial system walkdown of the 22 and 23 component cooling water systems, while the 21 component cooling water pump was unavailable. The purpose of this walkdown was to verify equipment alignment and identify any discrepancies that could impact the function of the component cooling system, thereby, potentially increasing risk. The inspector observed the physical condition of the system pumps and valves, reviewed the operations logs, and observed the operating parameters to check for adverse conditions that could potentially impact the component cooling water system function. The inspector used check-off list (COL) 4.1.1, Component Cooling Water, for this walkdown and reviewed system operating procedure 4.2.1, Component Cooling System Operation, design basis document for the component cooling water system, and Technical Specification Section 3.3.E to verify the valve positions, as defined in the COL, were appropriate.

On September 23, 2002, the inspector performed a partial system walkdown of the gas turbine auxiliary systems while gas turbine No. 3 was out of service for repairs to the over-crank circuit. The purpose of the walkdown was to verify equipment alignment and identify any discrepancies that could potentially impact the function of gas turbine No. 1, thereby, potentially increasing risk. The inspector observed the physical conditions of auxiliary support systems for gas turbine No. 1, reviewed the operations logs and observed system conditions to ensure no discrepancies could adversely impact the safety function of gas turbine No. 1. The inspector used: COL 31.1, Gas Turbine 1; abnormal operating instruction (AOI) 27.1.9, Control Room Inaccessibility Safe Shutdown Control; AOI 31.1, Gas Turbine 1; system operating procedure (SOP) 27.5.3, Black Start of Gas Turbine 1, 2, or 3; SOP 31.1.2, Gas Turbine 1 Local Operations; and SOP 31.1.1, Gas Turbine 1 Remote Operations. The inspector also reviewed: Technical Specification Section 3.7.C; plant drawing Nos. 312901-05, One Line Diagram GT-1; B260588-00, GT Flow Diagram/Pressure Switch Alignment; and A260586-10, GT-1 Flow Diagram Fuel Forwarding System.

b. Findings

No significant findings were identified.

1R05 Fire Protection

a. Inspection Scope (71111.05)

The inspector toured the areas important to plant safety and risk based upon a review of Section 4.0, “Internal Fires Analysis,” and Table 4.6-2, “Summary of Core Damage Frequency Contributions from Fire Zones,” in the Indian Point 2 Individual Plant Examination for External Events (IPEEE). The objective of this inspection was to determine if the licensee had adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, and adequately established compensatory measures for degraded fire protection equipment. The inspector evaluated conditions related to: (1) licensee control of transient combustibles and ignition sources; (2) the material condition, operational status, and operational lineup of fire protection systems, equipment and features; and (3) the fire barriers used to prevent fire damage or fire propagation. The areas reviewed were:

- Fire Zone 23, Auxiliary Feedwater Pump Room.
- Fire Zone 9, Safety Injection Pump Room.
- Fire Zone 14, 480 Volt Switchgear Room.

Reference material consulted by the inspector included: the Fire Protection Implementation Plan; Pre-Fire Plan; Station Administrative Orders (SAOs)-700, Fire Protection and Prevention Policy; SAO-701, Control of Combustibles and Transient Fire Load; SAO-703, Fire Protection Impairment Criteria and Surveillance; and Calculation PGI-00433, Combustible Loading Calculation. The inspector identified a minor item related to the authorization of work and the control of transient combustibles for painting activities in Fire Zone 23, the Auxiliary Feedwater Pump Room. The licensee documented the work authorization and transient combustible issues in Condition Report (CR-IP2-2002-07936).

b. Findings

No significant findings were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope (71111.11)

On September 10, 2002, the inspector observed the performance of a staff crew during Licensed Operator Requalification training. Specifically, the inspector observed simulator exams. The inspection was conducted to assess the adequacy of the training, licensed operator performance, emergency plan implementation, and the adequacy of the licensee’s critique.

b. Findings

The inspector observed that the licensee's critique was thorough, identified areas for improvement, and re-enforced management written guidance regarding operator competencies in the areas of procedure use, communications, and peer checking. In addition, the inspector verified that the scenarios met the attributes outlined in Attachment 11 of Inspection Procedure 71111. All operators passed the examination witnessed by the inspector and the inspector's evaluation of licensed operator examination performance agreed with the facility examiners' evaluation.

No significant findings were identified.

1R12 Maintenance Rule Implementation

.1 480 and 440 Volt Systems

a. Inspection Scope (71111.12)

The inspector reviewed risk significant equipment problems that were associated with the 480 and 440 volt electrical distribution systems. The inspector reviewed licensee follow-up actions to assess the effectiveness of maintenance activities. Issues selected for review included licensee identification of any functional failures, maintenance preventable functional failures, and repetitive failures, as well as problem identification and resolution of any maintenance related issues. The inspector also reviewed system availability, system reliability monitoring, and system engineering involvement. The inspector reviewed the maintenance rule basis documents. The inspector verified that the performance criteria were appropriate and the systems were appropriately classified as Maintenance Rule (a)(2). The inspector used the following reference material and discussed system performance issues with the system engineer:

- IP2 Maintenance Rule Basis Document, 480 VAC Electrical System, Rev. 2.
- IP2 Maintenance Rule Basis Document, 440 VAC Electrical Distribution System, Rev. 1.
- Second Quarter 2002, System Health Report, 480V System.
- Second Quarter 2002, System Health Report, 440V System.
- Numerous Condition Reports associated with the 440V and 480V electrical distribution systems (see Attachment 1 for complete list).

b. Findings

No significant findings were identified

1R13 Maintenance Risk Assessment and Emergent Work Activities

a. Inspection Scope (71111.13)

The inspector observed selected portions of emergent maintenance work activities to assess the licensee's risk management in accordance with 10 CFR 50.65 (a)(4). The inspector verified that the licensee took the necessary steps to plan and control emergent work activities, took actions to minimize the probability of initiating events, and maintained the functional capability of available redundant or back-up mitigating systems. The inspector discussed the risk management with maintenance and operations personnel for the following activities:

- WO IP2-02-54346, Troubleshoot and return control rod shutdown bank C to full out position (step 223), on August 27, 2002.
- WO IP2-02-44234, Functional testing of 480 volt under-voltage alarms and degraded voltage circuit, on September 23, 2002.

b. Findings

No significant findings were identified.

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

a. Inspection Scope (71111.14)

On August 28, 2002, Entergy observed an increase in the make-up rate of hydrogen cooling gas to the main generator. The normal make-up rate of hydrogen was approximately 600 standard cubic feet per day (SCFD). The make-up rate of hydrogen increased to approximately 4,000 SCFD by September 10, 2002. The inspector observed chemistry technicians sampling areas of the turbine building to confirm that an explosive mixture did not exist, and verified through periodic tours of the turbine building that no welding, cutting, or grinding was being conducted that could result in an ignition source for any potential hydrogen concentration build-up in the turbine building.

On September 10, 2002, the inspector observed Entergy's unsuccessful attempt to isolate the suspected leaking hydrogen cooler, in accordance with system operating procedures (SOP) 26.2.2, Increase in Hydrogen Leakage, and SOP 24.1, Service Water System Operations. Prior to Entergy's attempt to isolate the hydrogen leak, the NRC and Entergy staffs, via a telephone conference call, discussed the hydrogen cooling gas leakage trend, vendor recommendations, monitoring efforts for detection of potential hydrogen explosive mixture build-up, historical main generator hydrogen leakage problems and resolution methods, and the near-term Entergy corrective action plan.

Following the unsuccessful attempts to isolate the hydrogen leak, Entergy decided to take the unit off-line to implement a repair. On September 11, the inspectors observed control room operators reduce power to approximately 10% and take the generator off-line. After replacing all four generator hydrogen coolers, the unit was restored to full power operations on September 13, 2002. During observations in the control room, the inspectors verified operators were appropriately following plant operating procedures

(POP) 3.1, “Plant Shutdown From Full Power Operation to Zero Power Condition,” and POP 1.3, “Plant Start-Up from Zero Power to Full Power Operations.”

The inspector reviewed a number of Condition Reports (CRs) associated with the hydrogen cooling gas leakage issue to assess the licensee’s efforts to properly document, evaluate, and resolve the identified problems. The CRs reviewed included Nos. IP2-2002-8092, -8618, -8617, -8420, -8417, and -8601.

b. Findings

No significant findings were identified

1R15 Operability Evaluations

a. Inspection Scope (71111.15)

The inspectors reviewed selected operability determinations to assess the adequacy of the evaluation, the use and control of compensatory measures, compliance with Technical Specifications, and the risk significance of the issue. The purpose of this review was to ensure that operability was properly justified and that the degraded component or system did not result in any significant increase in risk or reduction in safety margin. The inspectors used the Technical Specifications, Technical Requirements Manual, Updated Final Safety Analysis Report, and associated Design Basis Documents as references. The specific issues reviewed included:

- CR-IP2-2002-07423, 21 component cooling water (CCW) pump failure to start.
- CR-IP2-2002-05091, Operability Determination (OD) No. 02-002, Revision 0.
- CR-IP2-2001-00327, OD No. 01-002, Revision 0.
- CR-IP2-2000-09088, OD No. 00-019, Revision 0.
- CR-IP2-2000-07999, OD No. 00-017, Revision 0.

The inspector also reviewed selected CRs to determine if the initial operability evaluation performed by the on-shift operating crew was consistent with station guidance and that the system of concern was appropriately assessed for operability. The following CRs were reviewed by the inspectors:

- CR Nos. 2002-00048, 2002-00181, 20002-07161, 2002-08280, 2002-08296, 2002-08300, 2002-07373, 2002-07576, 2002-07631, 2002-07715, 2002-08172, 2002-08194, and 2002-08273.

b. Findings

GREEN. Abnormal Operating Instruction (AOI) 27.1.1, “Loss of Normal Station Power,” was deficient, in that no steps were provided in the procedure to identify that the lockout relays for the component cooling water (CCW) pumps were required to be reset following a loss and restoration of power to the motor supply breakers. This deficient procedure is considered a violation of Technical Specification (TS) 6.8, “Procedures and Programs.” The consequence of this finding was that the pump lockout relays would have prevented the 21 and 23 CCW pumps from starting automatically on low CCW system header

pressure, for 12 days and 21 days, respectively. This finding did not represent a total loss of the CCW system function and would reasonably have been corrected by operator action. This finding is being treated as a Non-Cited Violation, consistent with the NRC Enforcement Policy.

On July 19, 2002, the plant experienced a temporary loss of the offsite 138kV power supply (reference NRC inspection report 50-247/2002-05, Section 1R14). The operators appropriately entered AOI 27.1.1 to mitigate and recover from the event. Subsequently on July 31, during a quarterly surveillance on the CCW system, the 21 CCW pump failed to start upon a manual start attempt from the control room panel. The 21 CCW pump started satisfactorily on a second attempt (after the pump switch was taken to the STOP position), and Entergy declared the pump operable without identification of the actual cause of the initial failure to start. Entergy's apparent cause determination concluded either operator error or variable contact resistance in the starting circuit for the 21 CCW pump. However, a Condition Report was initiated to have the systems engineering staff conduct a more thorough analysis of the cause.

On August 9, follow-up by the CCW system engineer revealed that the loss of the 138 kV offsite power lines on July 19, caused the non-operating 21 and 23 CCW pumps' lockout relays to actuate (would prevent an automatic start on low CCW pressure). To reset the lockout relays, the control panel switches have to be taken to the STOP position. Operators were not aware of this design characteristic and AOI 27.1.1 was deficient in not identifying the operator action to reset the lockout relays upon a loss and restoration of electrical power. The inspectors concluded that the initial operability evaluation lacked appropriate support to prove operability of the 21 CCW pump. Inspector review of the licensee's corrective action program identified that Entergy had prior opportunities to have identified that AOI 27.1.1 instructions were deficient with respect to instructions to reset the CCW pump lockout relays.

The potential safety consequence of the lack of procedural guidance or operator training on this CCW pump protection design feature is that a CCW pump failure to run scenario could result in a loss of CCW system cooling to the reactor coolant pumps (RCPs), necessitating RCP tripping (loss of forced circulation at power) and an avoidable plant transient (reactor trip). This finding was evaluated using Appendix A to NRC Manual Chapter 0609, and was determined to be of very low safety significance (Green) because there was no actual loss of safety function. The July 19 loss of the 138kV power supply did not affect the 22 CCW pump, it remained operable throughout the duration of this condition (21 and 23 CCW pump lockout relays actuated and not capable of an automatic start). Additionally, operator action could reasonably be credited for a successful manual start of a standby CCW pump.

TS 6.8 Procedures and Programs requires that adequate procedures be established, implemented, and maintained for abnormal or off-normal conditions and for combating emergencies such as a loss of electrical power. Contrary to TS 6.8, AOI 27.1.1did not identify that the lockout relays in the CCW system pump protection circuitry required resetting following a loss and restoration of electrical power to the CCW pump motor supply breakers. This violation is being treated as a Non-Cited Violation in accordance with NRC Enforcement Policy and has been entered into the licensee's corrective action program as Condition Report IP-2002-07423. **(NCV 05000247/2002-006-01)**

1R19 Post Maintenance Testing

a. Inspection Scope (71111.19)

The inspector reviewed post-work test (PWT) procedures and associated testing activities to assess whether: 1) the effect of testing in the plant had been adequately addressed by control room personnel; 2) testing was adequate for maintenance work order (WO) performed; 3) acceptance criteria were clear and adequately demonstrated operational readiness consistent with design and licensing documents; 4) test instrumentation had current calibrations, range, and accuracy for the application; and, 5) test equipment was removed following testing.

The selected testing activities involved components that were risk significant as identified in the IP2 Individual Plant Examination. The regulatory references for the inspection included Technical Specification 6.8.1.a. and 10 CFR 50, Appendix B, Criterion XIV, "Inspection, Test, and Operating Status." The following test activities were evaluated:

- WO IP2-02-53188, Perform troubleshooting to determine cause of level perturbation, August 12, 2002.
- WO IP2-02-41996, Post work test stroke of flow control valve FCV-437 per PT-V24, September 12, 2002.
- WO IP2-02-55114, Perform gross air leak test of the replacement hydrogen coolers, September 12, 2002.

b. Findings

No significant findings were identified.

1R20 Refueling and Outage Activities

a. Inspection Scope (71111.20)

On September 17, 2002, the inspectors observed Entergy and contractor personnel performing inspections of new fuel in the fuel storage building. The inspector verified actions by workers were consistent with procedure IP-SMM-MP-124, "Fuel Assembly Receipt Inspection." The inspectors also confirmed spent fuel pool conditions and location of the new fuel were consistent with Technical Specifications 3.8.C.2 and 3.8.D.

b. Findings

No significant findings were identified.

1R22 Surveillance Testing

a. Inspection Scope (71111.22)

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

- PT-Q26E, 25 Service Water Pump, September 17, 2002.
- PT-V24, In-Service Valve Tests Data Sheets 44 and 45, for 23 and 24 Main Feedwater Regulating Valves, September 11, 2002.

b. Findings

No significant findings were identified

1EP6 Drill Evaluation

a. Inspection Scope (71114.06)

The inspectors observed the emergency plan (E-Plan) drill on September 5, 2002, to evaluate drill conduct and the adequacy of the licensee's critique of performance, with respect to the self-identification of weaknesses and deficiencies. The inspectors verified the timing and location of classification, the notification of offsite entities, and the development of protective action recommendations. The inspectors attended the post-drill critique to ensure that the items independently identified by the inspectors were also identified through the licensee's critique and properly entered into the corrective action program.

On September 16, 2002, the inspector observed annual operator re-qualification exams for Crew E. The inspector verified that operators initiated timely and appropriate emergency action level classifications. The simulator scenarios were ESR-024-013 and ESR-024-010.

b. Findings

No significant findings were identified

3. SAFEGUARDS

Cornerstone: Physical Protection

3PP1 Response to Contingency Events

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.

a. Inspection Scope (71130.03)

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," consistent with an assessed reduction in the potential risk of a terrorist threat.

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

b. Findings

No significant findings were identified.

3PP3 Response to Contingency Events

a. Inspection Scope (71130.03)

The following activities were conducted to determine the effectiveness of IP2 response to contingency events, as measured against the requirements of 10 CFR 73.55 and the Indian Point Nuclear Station Safeguards Contingency Plan.

On August 26, 2002, a review of documentation associated with the licensee's force-on-force exercise program was conducted. The review included the examination of critique reports for exercises conducted since the first quarter of 2002, when the exercises were resumed post-September 11, 2001.

On August 27, 2002, performance testing of the intrusion detection and alarm assessment systems was conducted. This testing was accomplished by one inspector who toured the entire perimeter and selected areas of potential vulnerability in the intrusion detection system. Concurrently, a second inspector observed the alarm assessment capabilities from the Central Alarm Station. During the walk-down of the intrusion detection system, nine specific locations were selected for testing. Observations were made of a security force member performing crawl, jump, and run testing at these nine locations. Also, on August 27, the inspectors reviewed the site defensive strategy, response time-lines, target sets, and relevant implementing procedures.

Firearms proficiency was observed by the inspectors on August 28, 2002. The course of fire for stress firing was observed. Five security officers demonstrated their proficiency on this course of fire. In addition, a selected review of ten firearms qualification training records was performed.

On August 28, 2002, four table-top exercises were conducted. The mock adversary was provided entry location and target set information by the inspector. The response force was directed by a Central Alarm Station Operator. A senior member of the Indian Point 2 operations staff provided relevant operations information during the conduct of the table-top exercises.

b. Findings

No significant findings were identified.

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems

.1 Baseline Inspection Problem Identification and Resolution

a. Inspection Scope (71151)

As part of the baseline inspection procedures, the inspectors reviewed Condition Reports (CRs) to verify that the licensee was identifying issues at an appropriate threshold and entering them into the corrective action program (see Attachment 1 for the list of the CRs reviewed). The inspectors reviewed the following attributes, as appropriate, for the CRs reviewed:

- Complete and accurate identification of the problem, in a timely manner.
- Evaluations and disposition of performance issues, operability/reportability issues, extent of condition, generic implications, common cause, and previous occurrences.
- Identified corrective actions were focused to address the problem.
- Completion of corrective actions in a timely manner, commensurate with the safety significance.

b. Findings

No significant findings were identified.

.2 Inspection Sample of Identification and Resolution of Problems

a. Inspection Scope (71152)

The inspector conducted a problem identification and resolution (PI&R) sample inspection to review Entergy's actions to address communication inadequacies between the ConEd system operator (SO) and the IP2 Central Control Room (CCR) regarding the removal of a 138 kV feeder for planned work. These communication weaknesses caused a late entry into a Technical Specification limiting condition for operation. As a result, SO procedure SO3-27-2, dated July 1, 2002, step 4.7, has been revised to require independent notification of both IP2 and IP3 CCRs prior to removing any 138 kV feeder circuit (Nos. 95891, 96951, 96952, 95331 or 95332) from service. In addition, similar notifications have been incorporated for any 13.8 kV outages. The inspector verified the corrective actions and sampled other related CRs for similar circumstances.

b. Findings

No significant findings were identified.

4OA3 Event Follow up (71153)

(Closed) LER 05000247/2001-003-00: Operation in Excess of Rated Thermal Power. The inspector reviewed the information the licensee provided to describe and analyze this event. The LER accurately summarized the event. Entergy's corrective actions were appropriately identified and trended in Condition Report Nos. 200108052, 200109908, 200109909, 200109910 and 200109911. The event risk and regulatory significance were previously evaluated in NRC Inspection Report 50-247/2001-09. This LER is closed.

(Closed) LER 05000247/2002-002-00: Improperly Isolated Portion of Weld Channel and Containment Penetration Pressurization System. The inspector reviewed the information the licensee provided to describe and analyze this event. The LER accurately summarized the event. The event involved a minor violation of Technical Specifications, in that the licensee improperly retired weld zone W-11 in March 2000. The violation of Technical Specifications is considered minor, in that no consequence existed between March 2000 and June 2002, that would have challenged the containment liner or welds which this zone serviced. Further, the containment liner welds were verified to be leak-tight when the zone was re-pressurized on June 8, 2002. Technical Specification 3.3.D.2.c. allows Entergy to retire portions of the system if deemed impracticable to repair. Entergy identified that weld zone W-11 was retired improperly, based upon an inadequate evaluation of the W-11 weld zone testing results. On June 8, 2002, weld zone W-11 was placed back in service and returned to an operable condition. This LER is closed.

(Closed) LER 05000247/2002-003-00: 138 Kilovolt Ground Protection Trip Results in Automatic Start of Emergency Diesel Generators. The inspector reviewed the

information the licensee provided to describe and analyze this event. The inspector concluded, after further review with responsible IP2 representatives, that LER 2002-003 documented overly conservative risk assumptions for the event. Specifically, Entergy used the results of their on-line Safety Monitor, which conservatively assumed that, with the station auxiliary transformer out-of-service, all of the 6.9 kilovolt buses were de-energized and the reactor had tripped. Further, by inputting a failure of the 21 emergency diesel generator into the safety monitor software, no credit for recovery can be achieved. During the actual event, two of the six 6.9 kv buses were de-energized, no plant trip occurred, and the 21 emergency diesel generator was recovered within 15 minutes. NRC inspection report 02-05 documented the risk and regulatory significance of this condition using NRC Manual Chapter 0609 Appendix A. Entergy acknowledged the potentially confusing risk characterization using the IP2 Safety Monitor vice industry accepted Significance Determination Process methodology and initiated CR No. IP2-2002-08734 to document corrective actions. At the end of the inspection period, Entergy had initiated an update to LER 2002-003. This LER is closed.

4OA6 Meetings, Including Exit

The inspectors met with Indian Point 2 representatives at the conclusion of the security inspection on August 28, 2002. At that time, the purpose and scope of the inspection were reviewed, and the preliminary findings were presented. The licensee acknowledged the preliminary inspection findings.

On October 2, 2002, the inspectors presented an overall summary of the inspection results to Mr. Schwarz, and other members of the licensee staff, who acknowledged the findings. No material examined during the inspection should be considered proprietary.

4OA7 Licensee-Identified Violation

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

10 CFR 73.55(b)(1)(i) requires all licensees to maintain safeguards in accordance with Commission regulations and the licensee's Security Plan. Indian Point 2 License Condition 2.E, "Physical Security," requires, in part, the licensee to fully implement and maintain in effect all provisions of the Security Plan previously approved by the Commission, and all amendments and revisions to such plan. Section 1.3.7 of the Indian Point 2 Physical Security Plan states that armed responders will be available onsite at all times for response to safeguards events. On September 28, 2002, an armed responder was inattentive to duty, as described in the licensee's corrective action program (reference Condition Report No. IP2-2002-08784). Although this matter involved a vulnerability to the Security Plan, in this case, no actual intrusion occurred and there have not been more than two similar findings in the last four quarters. Accordingly, this matter is being treated as a Non-Cited Violation.

SUPPLEMENTAL INFORMATION

1. **KEY POINTS OF CONTACT**

V. Andreozzi	System Engineer
T. Barry	Security Superintendent
T. Burns	Environmental Supervisor
R. Burroni	I&C Maintenance Manager
J. Cambigianis	System Engineer
M. Cheskis	System Engineer
J. Comiotes	Director, Safety, Quality, and Licensing
F. Dacimo	Vice President, Operations
G. Dahl	Fire Protection System Engineer
R. Decensi	Radiological Protection/Chemistry Manager
R. Depatie	System Engineer
T. Foley	System Engineer
F. Inzurillo	Emergency Planning Manager
W. James	Maintenance and Construction Manager
T. Jones	Licensing Engineer
J. McCann	Manager, Nuclear Safety and Licensing
B. Meeks	System Engineer
K. Naku	I&C Maintenance Supervisor
P. K. Parker	Maintenance Manager
J. Reynolds	Corrective Action Group
W. Rudolph	Security Guard
P. Rubin	Operations Manager
C. Schwarz	General Manager of Plant Operations
G. Schwartz	Director of Engineering
P. Speedling	Fire Protection Specialist
D. Thompson	Security Manager
M. Vasely	System Engineering Section Manager
J. Ventosa	System Engineering Manager
M. Wood	Project Manager, Wackenhut Corporation

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

50-247/2001-003-00	LER	Operation in Excess of Rated Thermal Power
50-247/2002-002-00	LER	Improperly isolated portion of Weld Channel and Containment Penetration Pressurization System.
50-247/2002-003-00	LER	138 Kilovolt Ground Protection Trip Results in Automatic Start of Emergency Diesel Generators.

Opened and Closed

50-247/2002-006-01	NCV	Non-Cited Violation of TS 6.8. involving deficient guidance in procedure AOI 27.1.1.

3. LIST OF DOCUMENTS REVIEWED

Condition Reports

2001-00218; 2001-00245; 2001-00808; 2001-01006; 2001-01204; 2001-06531; 2001-06533; 2001-06774; 2001-03262; 2001-03374; 2001-03389; 2001-10449; 2001-10533; 2001-10593; 2001-11336; 2001-11624; 2001-12201; 2002-07979; 2002-08265; 2001-02383; 2001-04360; 2001-08105; 2002-05439; 2002-06567; 2002-07521

Security Documents

Safeguards Event Reports for the last three quarters of 2002
Indian Point 2 Training and Qualifications Plan
Indian Point 2 Contingency Plan
Indian Point 2 Physical Security Plan
Selected personnel training records

Document Reviewed for Section 2OS1, Access Control to Radiologically Significant Areas

RWP No. 020207, Vapor containment entries at power, Rev. 03
Procedure SAO-301, Personnel dose monitoring program, Rev. 15
Procedure SAO-302, Radiation work permits (RWP) program, Rev. 17
Procedure HP-SQ-3.002, Equipment and material release requirements, Rev. 16
Procedure HP-SQ-3.011, Radiation and contamination survey techniques, Rev. 17
Procedure HP-SQ-3.109, Control of HR, LHR, Special LHR, and VHR Areas, Rev. 27
Procedure DOS-6.126, Voluntary declaration of pregnancy, Rev. 1
Procedure DOS-6.130, Operation and calibration of the CDM 21 calibrator for use with electronic dosimeters, Rev. 1
RES Self-Assessment Schedule for 2002
ALARA focused self-assessment report dated July 31, 2002
Trip Report for NEI Health Physics Forum on July 15 - 17, 2002

Documents Reviewed for Section 2OS2, ALARA Planning and Controls

Procedure SAO-303, ALARA Program, Rev. 11
Procedure SAO-305, Station ALARA Committee, Rev. 10
ALARA review no. 02-005, Fuel moves and associated work during non-outage in the fuel storage building
Detailed HP outage (2R15) preparation task list and schedule
Outage (2R15) assignment chart for Radiation Protection personnel
Meeting minutes for Station ALARA Committee meeting on June 24, 2002
Proposed agenda for ALARA Committee meeting scheduled for August 13, 2002

Documents Reviewed for Section 2OS3, Radiation Monitoring Instrumentation and Protective Equipment

Procedure SAO-700, Fire protection and prevention policy, Rev. 9
Procedure SAO-706, Fire brigade organization, operation, and training, Rev. 8
Procedure SAO-707, Fire emergency, Rev. 9
SCBA inventory record for July 2002
Spare SCBA tank inventory record for July 2002
Spare mask inspection/inventory record for July 2002
Inspection record of SCBA face piece with communicator for July 2002

4. LIST OF ACRONYMS

ALARA	As Low As Reasonably Achievable
AOI	Abnormal Operating Instruction
CCR	Central Control Room
CCW	Component Cooling Water
CFR	Code of Federal Regulations
COL	Check Off list
CR	Condition Report
DBD	Design Basis Document
EDG	Emergency Diesel Generator
FCV	Flow Control Valve
HSAS	Homeland Security Advisory System
IPEEE	Individual Plant Examination for External Events
IR	Inspection Report
kV	Kilovolt
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
PWT	Post-Work Test
RCPs	Reactor Coolant Pumps
RIS	Regulatory Information Summary
RWP	Radiation Work Permit
SAO	Station Administrative Order
SCBA	Self-Contained Breathing Apparatus
SOP	System Operating Procedure
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report
WO	Work Order