September 23, 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 50-247/02-05

Dear Mr. Dacimo:

On August 10, 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 August 21, 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, radiological environmental monitoring, and occupational radiation safety. 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 four issues of very low safety significance, including two non-cited violations that were 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 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 monitor overall security controls and will issue temporary instructions in the near future to verify by inspection the licensee's compliance with the Order and current security regulations.

The inspectors identified four findings of very low safety significance (Green). Two of the four findings were determined to be violations of NRC requirements. However, because of their very low safety significance and because the issues have been addressed and entered into your corrective action program, the NRC is treating these issues as non-cited violations, in accordance with Section VI.A.1 of the NRC's Enforcement Policy**.** If you deny these non-cited violations, 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 50-247/02-05

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.
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

P. Rubin, Operations Manager
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
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M. Kapolwitz, Chairman of County Environment & Health Committee
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 50-247

License No. DPR-26

Report No. 50-247/02-05

Licensee: Entergy Nuclear Operations, Inc..

Facility: Indian Point 2 Nuclear Power Plant

Location: Buchanan, New York 10511

Dates: June 30 - August 10, 2002

Inspectors: Peter Habighorst, Senior Resident Inspector
Lois James, Resident Inspector
William Raymond, Senior Resident Inspector, Pilgrim
John McFadden, Radiation Specialist
Jason Jang, Radiation Specialist
Paul Frechette, Security Inspector (In-office review)

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

SUMMARY OF FINDINGS

IR 05000247-02-05, on 6/30 - 8/10/2002, Entergy Nuclear Operations, Inc.; Indian Point 2 Nuclear Power Plant. Initiating Events, Mitigating Systems, Physical Protection, and Cross-Cutting

The report covered a six week period of inspection by resident and region-based inspectors. Four findings of very low safety significance 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.

Cornerstone: Initiating Events

GREEN. On July 19, 2002, a contractor worked outside his established job scope for landscaping activities. The consequences of this human performance error were the accidental electrocution of the individual and an offsite power electrical transient (loss of the 138 kilovolt station auxiliary transformer for approximately seven hours). This partial loss of offsite power event was more than minor, in that it impacted the reactor safety cornerstone with respect to the initiating event objective of limiting the likelihood of an event that upsets plant stability and challenges the critical safety function of the on-site emergency diesel generators.

Notwithstanding the loss of life (which the Department of Labor, Occupational Safety and Health Administration is reviewing), this electrical transient event was of very low safety significance because it did not contribute to the likelihood of: loss of coolant accidents, a reactor trip and the unavailability of accident mitigation equipment or functions being unavailable; or of a fire or internal/external flood. No violations of NRC requirements were identified. (1R14)

Cornerstone: Mitigating System

GREEN. On July 19, 2002, operators did not identify the applicability of a shutdown Technical Specification (TS) associated with the planned removal from service of the 22 emergency diesel generator (EDG), while the 138 kilovolt off site power system was still out-of-service. This finding was associated with the reactor safety cornerstone with respect to the mitigating systems objective of ensuring the availability, reliability, and capability of the EDG to respond to initiating events, such as a loss of offsite power, to prevent undesirable consequences.

No violation of NRC requirements was identified, since Entergy restored the 22 emergency diesel generator prior to exceeding the allowed outage time per TS 3.0.1. This finding was of very low safety significance since it did not represent a total loss of emergency power safety function. (1R14)

Cornerstone: Physical Protection

GREEN. On July 29, 2002, a member of the Unit 2 security response force was found inattentive to assigned duties. This inspector identified finding was treated as a non-cited violation of 10 CFR 73.55(b)(1)(i), and the Indian Point 2 Physical Security Plan.

Summary of Findings (cont'd)

The security response force officer's inattentiveness to duties was determined to have very low safety significance, using the Interim Physical Significance Determination Process. The finding did not involve a significant compromise of the Physical Security Plan; no actual intrusion occurred; and, there have not been greater than two similar findings in the past four quarters. (3PP3)

Cross-Cutting Issues:

GREEN. On July 23, 2002, Entergy did not appropriately evaluate and implement short-term actions associated with Condition Report (CR) IP2-2002-07253. The consequence of the finding was the relocation of spent fuel assembly G-28 without the appropriate handling tools and precautions. The finding is more than minor since it could be reasonably viewed as a precursor to a significant event (dropped spent fuel assembly in the spent fuel pool).

The Significance Determination Process is not modeled for a finding of this type. However, in accordance with NRC Manual Chapter 0612, this finding was reviewed by NRC risk analysts and management and has been determined to be of very low safety significance because no actual consequence existed and there was no unintended radiation worker exposure. The finding was determined to be a violation of 10 CFR 50, Appendix B, Criterion V, and is being treated as a non-cited violation. (1R20)

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Report Details

SUMMARY OF PLANT STATUS

The plant operated at full power during the inspection period, except for July 19, when operators reduced power (two percent) as a result of the loss of the station auxiliary transformer.

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

1R01 Adverse Weather Protection

a. Inspection Scope (71111.01)

The inspector reviewed the licensee's methods for ensuring ambient temperatures in the emergency diesel generator (EDG) building, the cable spreading room, the auxiliary feedwater (AFW) room, and the 480 volt switchgear room are maintained within the design basis analysis. The purpose of this review was to verify that the plant design operating characteristics are being maintained and that the licensee is protecting mitigating systems from adverse weather effects such as extreme heat or cold. The inspection included tours of the EDG building, the cable spreading room, the AFW room, and the 480 volt switchgear room to observe the material condition of the ventilation systems; reviews of maintenance history, including surveillance testing and preventive maintenance records; and reviews of design basis documents, including Updated Final Safety Analysis Report, Individual Plant Examination for External Events, and maintenance rule implementation documents.

In addition, the inspector reviewed Operations Administrative Directive (OAD) 22, "Seasonal Weather Preparation," Operations Administrative Checklist (OASL) 15.90, "Inclement Weather," and Station Administrative Order (SAO)-404, "Seasonal Weather Preparations," to evaluate the licensee's preparation and monitoring of hot weather conditions. The inspector reviewed the Summer Reliability Plan for Summer 2002, including the licensee's evaluation of the ventilation system readiness for the rooms of interest.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns

a. Inspection Scope (71111.04)

On July 10 and 16, 2002, the inspector performed a partial system walkdown of the 21 containment spray pump. During this time frame, the 22 containment spray pump was out of service due to surveillance testing of the train B safety injection logic and corrective maintenance to flush and replace the pump oil. The purpose of the walkdown was to verify equipment alignment and identify any discrepancies that could adversely

impact the safety function of the available train of the containment spray system. The inspector observed the physical condition of the 21 pump and associated valves and piping, reviewed the operations logs, and observed material conditions to verify no discrepancies would adversely impact the containment spray system. The inspector used Checkoff List (COL) 10.2.1, Containment Spray System, Revision 14, for this review.

On July 11, 2002, the inspector performed a partial system walkdown of the 21 and 23 auxiliary feedwater pumps, while the 22 auxiliary feedwater pump was out of service for testing. The purpose of this walkdown was to verify equipment alignment and identify any discrepancies that could adversely impact the function of the auxiliary feedwater system. The inspector observed the physical condition of the 21 and 23 pumps and associated valves and piping, reviewed the operations logs, and observed material conditions to verify no discrepancies would adversely impact the containment spray function. The inspector used COL 23.1, Steam Generator Water Level and Auxiliary Boiler Feedwater, Revision 22, for this review.

b. Findings

No findings of significance were identified.

.2 Full System Walkdown

a. Inspection Scope (71111.04S)

The inspector performed a walkdown of accessible portions of the essential service water system to verify equipment alignment and identify any discrepancies that may impact the function of the service water system and to verify that the licensee has properly identified and resolved equipment alignment problems that could impact the availability and functional capability of an important mitigating system. The inspector selected the essential service water system based upon its importance to plant safety and risk. Failure of the essential service water system is one of the top events based upon risk achievement worth. The Technical Specifications for the essential service water system are identified in Section 3.3.F. The inspector also reviewed Updated Final Safety Analysis Report (UFSAR) section 9.6.1 on design criteria associated with the system. Minor observations of component material condition deficiencies were discussed with Entergy and the following Condition Reports (CRs) were initiated: CR-IP2-2002-07688, -07689, -07691, and -07692. The inspector referenced the following procedures and drawings to confirm the system was appropriately aligned:

- Check off list (COL) 24.1.1, Service Water and Closed Cooling Water Systems, Revision 34.
- Abnormal Operating Instruction 24.1, Service Water Malfunction, Revision 11.
- System Operating Procedure (SOP) 24.1, Service Water System Operation, Revision 49.
- SOP 24.1.1, Service Water Hot Weather Operations, Revision 7.
- Drawing 9321-F-2722-105, Flow Diagram Service Water System Nuclear Steam Supply.

- Drawing A209762-63, Flow Diagram Service Water System Nuclear Steam Supply Plant.
- Drawing 9321-F-2033-75, Flow Diagram Service and Cooling Water River Water and Fresh Water.

The inspector noted there were no outstanding temporary facility changes or operator work-arounds on the system. The inspection verified that the licensee appropriately identified and resolved deficiencies associated with the essential service water system (also see report detail 4OA2). In addition, the inspector reviewed selected issues associated with the service water design basis document (DBD).

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope (71111.05)

The inspector toured plant areas important to plant safety, 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," of 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 ensured adequate compensatory measures were taken 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 6A, Drumming and Storage Area
- Fire Zone 5, 21 Charging Pump Room
- Fire Zone 6, 22 Charging Pump Room
- Fire Zone 361, 13.8 Kilovolt Light and Power Auxiliary Bus Room

Reference material used by the inspector included the Fire Protection Implementation Plan, Pre-Fire Plan, and 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."

b. Issues and Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope (71111.06)

The inspector reviewed the licensee's flooding mitigation plans and equipment for the emergency diesel generator (EDG) building to ensure consistency with the licensee's design requirements and the risk analysis assumptions. The inspector toured the emergency diesel generator (EDG) building to inspect flood protection barriers and to review procedures for coping with internal flooding. The EDG building was selected based on the three EDGs being located in one building and the potential for flood water to propagate into the electrical tunnel in the control building. The inspection verified that the detection capabilities and drainage pathways were as assumed in the Individual Plant Examination for External Events (IPEEE), and that procedures were adequate to identify and isolate potential service water leaks in the EDG building. In addition, the inspector reviewed the IPEEE, alarm response procedures, and abnormal operating procedures, which included actions to identify and isolate the leak and to identify mitigation equipment rendered inoperable by isolation of the leak. The procedures reviewed are listed in Attachment 1.

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 mitigating systems. The inspector discussed the risk management with maintenance and operations personnel for the following activities:

- Loss of the 138/6.9 KV station auxiliary transformer on July 19, 2002.
- No. 22 emergency diesel generator failure during surveillance testing on July 18, 2002.

b. Findings

No findings of significance were identified.

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

.1 Background

On July 19, 2002, a landscaping work team was performing brush and tree trimming activities at Indian Point 2. At approximately 2:13 p.m., one of the workers was electrocuted when a tree branch cut by the individual contacted one of the three incoming phases to the 138 kilovolt station auxiliary transformer. Electrical ground fault protection circuitry actuated to de-energize the station auxiliary transformer, resulting in two of the four plant 480 volt safety buses being de-energized. Two of the three emergency diesel generators (EDGs) started, by design, and operators restored power to the one safety bus within five minutes. The second EDG that started, by design, operated unloaded throughout the transient. The third emergency diesel was tagged-out for maintenance at the time. As a precautionary measure, operators cleared the protective tags, started, and restored power to the second bus within 16 minutes.

a. Inspection Scope (71111.14)

The inspectors monitored operations crew response and medical emergency rescue efforts. The inspectors also evaluated Entergy's Event Investigation Team activities and management response to the event. The inspectors confirmed that plant equipment response was within design limitations and parameters.

b. Findings

GREEN. On July 19, 2002, a contractor worked outside his established job scope for landscaping activities. The consequences of this human performance error were the accidental electrocution of the individual and an electrical power transient. The electrical transient event involved a loss of the 138 kilovolt station auxiliary transformer for six hours and 54 minutes. This event was more than minor, in that it impacts the reactor safety cornerstone with respect to the initiating event objective of limiting the likelihood of an event that upsets plant stability (offsite electrical power source) and challenges critical safety functions (on-site emergency diesel generators) during power operations.

At the close of the inspection period, the circumstances involving the fatality and Entergy's emergency response were still being evaluated against the Occupational Safety and Health Administration Act, by the United States Department of Labor, Occupational Safety and Health Administration (OSHA). OSHA is the governmental agency with regulatory responsibility and authority for industrial accidents of this nature.

The electrical transient event was characterized as very low risk significance (Green), consistent with NRC Manual Chapter 0609, Appendix A. Specifically, the loss of the station auxiliary transformer did not contribute to the likelihood of: loss of coolant accidents, a reactor trip and the unavailability of accident mitigation equipment or functions being unavailable; or of a fire or internal/external flood. At the end of the inspection period, Entergy was preparing a licensee event report for which the NRC will review when issued.

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No violations of NRC requirements were identified since the landscaping work was not a regulated activity. Entergy initiated Condition Report No. IP2-CR-2002-7157 (highest priority Category A) and initiated a comprehensive investigation of the circumstances surrounding the fatality. Short-term actions included: station work stand-downs for all employees to reinforce expectations that workers understand their job scope prior to work being authorized; emphasis on personnel accountability to established work controls; and, installation of consistent postings for entry into high voltage areas and senior station management approval prior to access.

.2 GREEN. On July 19, 2002, operators did not identify the applicability of a shutdown Technical Specification (TS) associated with the planned removal from service of the 22 emergency diesel generator, while the 138 kilovolt system was still out-of-service. This finding was associated with the reactor safety cornerstone with respect to the mitigating systems objective of ensuring the availability of systems (EDGs) to respond to initiating events (loss of offsite power) to prevent undesirable consequences. No violation of NRC requirements was identified, since Entergy restored the 22 emergency diesel generator prior to exceeding the allowed outage time per TS 3.0.1. The safety determination process, as outline in NRC Manual Chapter 0609, Appendix A, concluded that this issue is of very low safety significance since it did not represent a total loss of emergency power safety function and it would not have degraded equipment specifically designed to mitigate external events.

The human performance (post-event) issue involves an operator knowledge deficiency with respect to a lack of recognition that the unit was in TS 3.0.1 for one hour and 53 minutes, while the 138 kilovolt station auxiliary transformer was out-of-service. System operating procedure (SOP) 27.1.3, “22 Emergency Diesel General Manual Operations,” Revision 12, states that following test or maintenance of an emergency diesel generator, the unit should be operated (loaded) in parallel with offsite power. The system engineer recommended the performance of this evolution since the 22 emergency diesel generator operated unloaded for approximately four hours following the lost of the station auxiliary transformer.

The inspector notes that voluntary entry into TS 3.0.1 is addressed in Operations Administrative Step List (OASL) 15.0.6, “Limiting Conditions for Operation/Allowed Outage Times,” and Operations Administrative Directive (OAD)-15, “Policy for Conduct of Operations.” No violation of NRC requirements was identified, since Entergy restored the 22 emergency diesel generator prior to exceeding the 38-hour allowed outage time per TS 3.0.1. This licensed operator performance issue is documented in Condition Report IP2-2002-07157. Operator knowledge weaknesses have been the subject of previous inspector findings (reference NRC inspection reports 50-247/2002-004 and 2002-003) and continue to be identified as a common theme to a substantive cross-cutting issue (reference NRC Mid-Cycle Performance Review letter, dated August 28, 2002).

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 the Technical Specifications, and the risk significance of the issue. The purpose of this review was to ensure that operability is properly justified and that the component or system remains available, such that no unrecognized increase in risk has occurred. The inspectors used the Technical Specifications, Technical Requirements Manual, Updated Final Safety Analysis Report, and associated design basis documents as references. During this inspection period, the inspectors reviewed the licensee's operability evaluation involving CR-IP2-2002-07037, Refueling Water Storage Tank High Level Alarm in the Control Room.

b. Findings

No findings of significance were identified.

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 the 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. Additional references for this inspection included Technical Specification 6.8.1.a. and 10 CFR 50, Appendix B, Criterion XIV, "Inspection, Test, and Operating Status." The following testing activities were evaluated:

- PWT IP2-02-25768, Perform Replacement of FC-417, per MSAP-01-00618-FIX, Install NUS Controllers, observed on August 6 and 8, 2002.
- PWT IP2-02-00629, SWN-66, the flexible heat exchanger coupling for 21 emergency diesel generator has developed a pinhole leak, observed on July 24, 2002.

b. Findings

No findings of significance were identified.

1R20 Refueling and Outage Activities

Background

On May 29, 2002, the NRC approved Technical Specification, Amendment 227, "Credit for Soluble Boron and Burn-up in Spent Fuel Pit." The amendment, in part, incorporated changes to the Spent Fuel Pool rack layout by dividing it into four sub-regions and specifying requirements for fuel assembly burn-up and soluble boron concentration for various loading configurations. The reason for the change was based upon Boraflex neutron absorber degradation in the high-density storage racks. To comply with the amendment, Entergy had to relocate 471 spent fuel assemblies. Sixteen of the 471 fuel assemblies were susceptible to top nozzle separation, as documented in NRC Information Notice 2002-09, "Potential For Top Nozzle Separation and Dropping of a Certain Type of Westinghouse Fuel Assembly."

a. Inspection Scope (71111.20)

Inspectors performed a review to verify that fuel handling operations were being performed in accordance with Technical Specifications and approved procedures and to verify that the location of fuel assemblies was being tracked during the fuel movement. The inspection involved periodic observations of spent fuel moves, attendance at pre-job briefings, participation in an NRC/Entergy telephone conference call on July 24, 2002, and observations of the Site Nuclear Safety Review Board on June 27, 2002, that approved the work step instructions for inspection of the 16 fuel assemblies that were susceptible to top nozzle separation. The inspector reviewed Updated Final Safety Analysis Report, Section 14.2.1.1, "Fuel Handling Accident in Fuel Handling Building." A number of inspector discussions occurred with cognizant Entergy personnel. A complete list of documents reviewed is detailed in Attachment 1 of this report.

b. Findings

GREEN. On July 23, 2002, Entergy did not appropriately evaluate and implement short-term actions associated with Condition Report (CR) IP2-2002-07253. The consequence of the findings was the relocation of spent fuel assembly G-28 without the appropriate handling tools and precautions (to prevent a possible dropped spent fuel assembly accident). Special handling tools were designed to address recent industry experience involving top nozzle separation on susceptible spent fuel assemblies. Spent fuel assembly G-28 is a susceptible fuel assembly associated with top nozzle separation. This finding is a violation of 10 CFR 50, Appendix B, Criterion V, and is being treated as a non-cited violation.

Condition report CR-IP2-2002-07253 documented that fuel assembly G28 was not relocated in the location recorded on the fuel move sheets on July 8, 2002. Compounding this record-keeping error, contract personnel did not use the special anchor and tooling device for movement of fuel assembly G28 when it was discovered in the wrong location on July 23, 2002 . These performance deficiencies could be reasonably viewed as a precursor to a significant event. Specifically, NRC Information Notice 2002-09, documented a failure of the top nozzle at another facility in 2001. The controls Entergy had established (i.e., inspect susceptible spent fuel, and use of a

special tool for moving the assembly) were to minimize the potential of dropping a spent fuel assembly. However, the fuel assembly requiring special handling was moved with normal handling tools thereby creating a potential of dropping the assembly and causing unnecessary exposure to radiation workers in the spent fuel pool.

The Significance Determination Process is not modeled for a finding of this type. However, in accordance with NRC Manual Chapter 0612, this finding was reviewed by NRC risk analysts and management and was determined to be a finding of very low significance (Green). No actual consequence or unintended exposure for either the radiation workers or the public existed for this performance deficiency. Entergy analysis identified that if fuel assembly G28 had separated at the top nozzle grid on July 23, 2002, the estimated potential radiation worker exposure may have been 15.3 rem skin dose and 190 millirem whole body for an assumed stay time of 10 minutes in the spent fuel building. The potential consequences and assumptions were bounded by Updated Final Safety Analysis Report section 14.2.1.1, "Fuel Handling Accident in Fuel-Handling Building."

10 CFR 50 Appendix B, Criterion V, in part, states that activities affecting quality shall be prescribed by documented procedures and shall be accomplished in accordance with those procedures. Maintenance procedure RXC-B-019-A, "Technical Operating Procedure for the Fuel Anchor Installation Tool for Indian Point Unit 2 Nuclear Power Plant", Revision 0, prerequisite step 4.12 requires that the plant staff has identified and located all fuel assemblies to receive fuel anchors. On July 8, 2002, fuel assembly G-28 failed three visual criteria for top grid sleeves susceptible to stress corrosion cracking. The assembly had evidence of cracking and corrosion on one of the four faces. Contrary to the above, on July 23, 2002, Entergy moved fuel assembly G28 without the specially designed fuel anchor assembly and tooling. This violation is being treated as a non-cited violation in accordance with NRC Enforcement Policy. **(NCV 50-247/2002-005-01)**.

Corrective actions included stand-downs with the fuel handling personnel to reinforce expectations on procedural controls, random verification of other recent fuel moves, and performance of a 100% verification of the spent fuel within the spent fuel pool. The underlying cause was improper independent verification of fuel moves by the contractor on July 8 that was compounded by poor Entergy engineering assessment on July 23 that failed to consider the visual inspection results of the fuel assembly.

1R22 Surveillance Testing

a. Inspection Scope (71111.22)

The inspector reviewed surveillance test procedures and observed testing activities to assess whether: 1) the test pre-conditioned the component tested; 2) the effect of the testing was adequately addressed in the control room; 3) the acceptance criteria demonstrated operational readiness consistent with design calculations and licensing documents; 4) the test equipment range and accuracy 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 tests observed were chosen based upon risk significant

components as identified in the Indian Point 2 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-2M5, Safety Injection Logic Testing Channel 2, performed on July 10, 2002.
- PT-Q30B, 22 Component Cooling Water Pump, performed on July 31, 2002.

b. Findings

No findings of significance were identified

2. RADIATION SAFETY

(Cornerstones: Occupational Radiation Safety (OS) and Public Radiation Safety (PS))

2OS1 Access Control to Radiologically Significant Areas

a. Inspection Scope (71121.01)

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

The inspector observed activities at the routine radiologically controlled area (RCA) access control point on several occasions to verify compliance with requirements for RCA entry and exit, dosimetry placement, and issuance and use of electronic dosimeters. On August 6, 2002, the inspector attended a pre-job briefing for Radiation Work Permit (RWP) No. 020207 (Rev. 03) for a non-outage vapor containment entry at full power and observed one of the work teams during their entry and work activities. Also, on August 6, the inspector met with a radiation protection technician in the Maintenance and Outage Building to observe and discuss the new centralized remote monitoring station for radiological control using multiple cameras, wireless voice communications, and teledosimetry. On August 7, 2002, the inspector toured and observed work activities in Unit 1 in the fuel handling and chemical systems buildings and made independent dose-rate measurements with a radiation survey meter. During these observations and tours the inspector reviewed, for regulatory compliance, the performance of the radiation workers and radiation protection technicians and 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. Also, on August 7, the inspector met with the dosimetry supervisor and discussed the personnel dosimetry program and the status of accreditation from the National Voluntary Laboratory Accreditation Program (NVLAP) of the National Institute of Standards and Technology.

The inspector performed a selective examination of RWPs, procedures, records, and other program documents (as listed in Attachment 1) to evaluate the adequacy of radiological controls. The review was against criteria contained in 10 CFR 19.12, 10 CFR 20 (Subpart D, F, G, H, I, and J), site Technical Specifications, and site procedures.

b. Findings

No findings of significance were identified.

2OS2 ALARA Planning and Controls

a. Inspection Scope (71121.02)

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

The inspector noted that, at the time of this inspection, the actual year-to-date person-rem cumulative exposure was consistent with that projected and that the non-outage and outage dose goals remained at 16 and 120 person-rem, respectively. The inspector also noted that the new organizational arrangement for ALARA and planning responsibilities was being implemented. During the period of August 5 - 8, the inspector had daily discussions with either the ALARA supervisor, the coordinator, the radiation protection technician, or one of the two contracted consultants concerning their planning and preparation activities for the upcoming refueling outage.

The inspector performed a selective examination of procedures and records (as listed in Attachment 1) 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 site procedures.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

a. Inspection Scope (71121.03)

The inspector reviewed the effectiveness of health physics instrumentation and the program to provide self-contained breathing apparatus (SCBA) to occupational workers. The inspector reviewed the program for health physics instrumentation to determine the accuracy and operability of the instrumentation. During plant tours on August 6 and 7, the inspector reviewed field instrumentation utilized by health physics technicians and plant workers to measure radioactivity and radiation levels, including portable field survey instruments and hand-held contamination frisking instruments. The inspector conducted a review of the instruments observed in the toured areas, specifically verification of current calibration, of appropriate source checks, and of proper function.

The inspector reviewed the adequacy of the program to provide SCBA for entering and working in areas of unknown radiological conditions. The inspection included a review of the status and surveillance records of SCBA air bottles and of SCBA with air bottles attached, all staged and ready for use in the plant.

The inspector performed a selective examination of procedures, records, and documents (as listed in Attachment 1) for regulatory compliance and adequacy. The review was against criteria contained in 10 CFR 20.1501, 10 CFR 20 Subpart H, site Technical Specifications, and site procedures.

b. Findings

No findings of significance were identified.

2PS1 Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope (71122.03)

The inspector reviewed a number of documents to evaluate the effectiveness of the licensee's REMP (see Attachment 1). The requirements of the REMP were specified in the Technical Specification/Offsite Dose Calculation Manual (TS/ODCM).

The inspector also reviewed the analytical results for three water sampling stations (i.e., on-site well, New Croton Reservoir, and Amicus Reservoir). These water samples are not required by the TS/ODCM, and analytical results are not included in the Annual Report. The on-site well and two reservoir water locations are monitored monthly to check for ground water contamination, if any. The analytical results will be included in the Annual Report.

The inspector toured and observed the following activities to evaluate the effectiveness of the licensee's REMP:

- operability of the primary and secondary meteorological instruments.
- charcoal cartridge and filter sampling techniques.
- walk-down for determining whether air samplers and 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 inspector reviewed the following documents and observed licensee 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 RCA.
- the most recent calibration results for the radiation monitoring instrumentation (Eberline TCM-2-Tool Contamination Monitor), including: (a) alarm setting, (b) response to the alarm; (c) the sensitivity; and, (d) alarm failure rate.
- the use of Eberline TCM-2-Tool Contamination Monitor by employees.
- the most recent calibration results for the gamma measurement system to use 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 CRs (Nos. 2001-07701; 2001-09223; and 2001-12261).

The 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.

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Cornerstone: Physical Protection (PP)

3PP3 Response to Contingency Events

a. Inspection Scope (71130.03)

The inspector conducted an in-office review of the circumstances involving a Response Force Member inattentive to duty, on July 29, 2002. The following documents were reviewed:

- Condition Report CR-IP2-2002-07370, July 30, 2002;
- Condition Report CR-IP2-2002-07126, July 19, 2002
- Condition Report CR-IP2-2002-01476, March 18, 2002
- Condition Report CR-IP2-2001-12570, December 20, 2001
- Condition Report CR-2001-11305, December 21, 2000
- Condition Report CR-IP2-2001-07671, August 6, 2001
- NRC Approved Physical Security Plan, Revision 21A, July 16, 2002
- NRC Approved Contingency Response Plan, Revision 4, March 30, 1986

The review was against applicable requirements contained in 10 CFR 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage," and the Entergy Corporation's Indian Point 2 Physical Security Plan, Revision 21A, effective July 16, 2002.

b. Findings

GREEN. The inspector identified a finding having very low safety significance involving an Indian Point 2 response force officer inattentive while on duty July 29, 2002. This finding was determined to have very low safety significance, using the Interim Physical Significance Determination Process. This finding was considered a non-cited violation of Entergy Corporation's Physical Security Plan for the Indian Point 2 facility and 10 CFR 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage."

At approximately 9:45 a.m. on July 29, 2002, the Senior Resident Inspector and Senior NRC Management representative, observed that an armed security response force officer was inattentive to duty while on post. Inspector follow-up identified that the individual had appropriately responded to the last radio dispatch at 9:08 a.m. Therefore, the maximum time the individual may have been inattentive was approximately 37 minutes.

The security response officer's failure to meet specific conditions of the Indian Point 2 Physical Security Plan, relative to assuring that armed responders will be available onsite at all times for response to safeguards events, constitutes a performance deficiency. The cause of this event was reasonably within Entergy's ability to foresee and correct; and should have been prevented. This finding is more than minor in that the issue was associated with the Response to Contingency Events attribute of the Safeguards cornerstone. The objective of this cornerstone is to provide adequate assurance that the physical protection system and guard force personnel can protect against the design basis threat of radiological sabotage.

The response force officer's inattentiveness to duty, in accordance with the Physical Security Plan, was determined to have very low safety significance (Green) using the Interim Physical Protection Significance Determination Process (Appendix E, Manual Chapter 0609). Specifically, the finding involved a Vulnerability of Safeguards Systems or Plans. However, in this case, no actual intrusion occurred; and there have not been greater than two similar findings in the last four quarters.

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. Contrary to the above, one of the required armed response force officers was found inattentive to duty while posted in a response position. Accordingly, the individual was not available at all times for response to safeguards events. This issue, documented in Condition Report IP2-2002-07370, is being treated as a non-cited violation in accordance with the NRC Enforcement Policy. **(NCV 50-247/02-05-02)**

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification

The inspector reviewed the licensee's performance indicator (PI) data collecting and reporting process as described in procedure SAO-114, "Preparation of NRC and WANO Performance Indicators." The purpose of the review was to determine whether the methods for reporting PI data are consistent with the guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revisions 1 and 2. The inspection included a review of the indicator definitions, data reporting elements, calculation methods, definition of terms, and clarifying notes for the performance indicators. Plant records and data were sampled and compared to the reported data. The inspector reviewed the licensee's actions to address discrepancies in the performance indicator measurements to verify problems were satisfactorily resolved.

.1 Safety System Unavailability - High Pressure Safety Injection

a. Inspection Scope (71151)

The inspector reviewed maintenance rule tracking, control room logs, and CRs associated with the safety injection system. The inspector reviewed plant data from the 2nd quarter of 2001 through the 1st quarter of 2002 for all three trains of safety injection. The inspector also reviewed condition reports related to the safety injection system to verify whether the licensee appropriately resolved problems with the collection of performance indicator data. No PI data reporting issues were identified.

b. Findings

No findings of significance were identified

.2 Unplanned Power Changes

a. Inspection Scope (71151)

The inspectors performed a periodic review of the 4th quarter 2001 and the 1st and 2nd quarters of 2002 performance indicator data submitted by the licensee for the unplanned power changes greater than 20% over 7000 critical hours to determine accuracy and completeness. The inspectors researched the control room operating logs and the condition reporting system, to identify power reductions greater than 20% during the 4th quarter 2001 and the 1st and 2nd quarters of 2002. The inspectors used the "Regulatory Assessment Performance Indicator Guidance," Nuclear Energy Institute (NEI) Report 99-02, Revision 1, to calculate the ratio of unplanned power changes per 7000 critical hours.

b. Issues and Findings

No findings of significance were identified.

.3 Occupation Exposure Control Effectiveness

a. Inspection Scope (71151)

The inspector selectively examined records used by the licensee to identify occurrences involving high radiation areas, very high radiation areas, and unplanned personnel exposures for the time period of May 2002 to early August 2002, against the applicable criteria specified in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 1, to verify that all conditions that met the NEI criteria were recognized and identified as Performance Indicators. The reviewed records included corrective action program records and Performance Indicator Data and Technique Sheets for April, May, and June 2002. This examination, in conjunction with the reviews documented in previous inspection reports which covered the intervening period back to mid July 2001, did not find any problems with the PI accuracy or completeness and thus verified this performance indicator.

b. Findings

No findings of significance were identified.

4OA2 Problem Identification and Resolution

.1 Baseline Inspection Problem Identification and Resolution

a. Inspection Scope (71151)

As part of the baseline inspection procedures, the inspectors reviewed 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 a list of CRs reviewed). The inspectors used the following criteria, as appropriate, during the CR reviews:

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

b. Issues and Findings

No findings of significance were identified.

4OA4 Inspection Item Follow-up

(Closed) URI 50-247/2002-02-02: Evaluation of Hydrogen Storage Locations. This issue concerned bulk hydrogen storage at two locations on site and the potential impact on safe shutdown equipment. The licensee evaluated this matter in CR Nos. 200203336 and 200203337. The licensee determined that the locations and methods used for hydrogen storage would not impact the ability to safely shutdown Indian Point 2, and that the safe-shutdown capability credited in support of License Condition 2.k was not affected. The inspector independently verified that the safe shutdown capability would be assured. The licensee identified additional corrective actions (reference the CRs) to assure ventilation systems would not be impacted as required by the National Fire Protection code. The inspector also reviewed the NRC Safety Evaluation and the licensee's submittal dated April 15, 1977, to support License Amendment 46, dated January 31, 1979. No violations were identified. This item is closed.

(Administrative Closure) URI 50-247/2001-03-02: Review changes to the Facility per 10 CFR 50.59. Unresolved Item (URI) 50-247/2001-03-02 was incorrectly closed in Inspection Report (IR) 50-247/2001-09 as 50-247/2001-03-06. The technical issues associated with URI 50-247/2001-03-02 were reviewed and closed in Inspection Report (IR) 2001-09, however, the tracking number in IR 50-247/2001-09 was incorrectly cited as 50-247/2001-03-06.

4OA6 Meetings, Including Exit

On July 11, 2002, the inspector presented the results of the Radiological Environmental Monitoring Program inspection to licensee management and other staff who acknowledged the findings. The inspection, however, was completed on July 12, 2002.

On August 8, 2002, the inspector presented the results of the Occupational Radiation Safety inspection to licensee management and other staff who acknowledged the inspector findings.

On August, 21, 2002, the inspector 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.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

R. Allen	Manager, Regulatory Affair
S. Baer	HP Supervisor
T. Barry	Security Superintendent
T. Burns	Environmental Supervisor
R. Burroni	I&C Maintenance Manager
J. Cambigianis	System Engineer
F. Dacimo	Vice President, Operations
G. Dahl	Fire Protection System Engineer
M. Dampf	Health Physics Manager
J. Danielle	HP Technician
R. Decensi	Radiological Protection/Chemistry Manager
R. Depatie	System Engineer
T. Foley	System Engineer
R. Fucheck	HP Supervisor
D. Gately	Radiation Protection Coordinator
L. Glander	Dosimetry Supervisor
J. Hendrickson	HP Technician
W. James	Maintenance and Construction Manager
R. Majes	Radiological Support Health Physicist
J. McCann	Manager, Nuclear Safety and Licensing
M. Miele	Manager Unit 1
K. Naku	I&C Maintenance Supervisor
V. Nutter	Radiological Support Manager
P. K. Parker	Maintenance Manager
J. Reynolds	Corrective Action Group
R. Richards	HP Supervisor
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
R. Zolotas	HP Technician

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

50-247/2002-02-02	URI	Evaluation of Hydrogen Storage Locations.
50-247/2001-03-02	URI	Review changes to the Facility per 10 CFR 50.59.

Open/Closed

50-247/02-05-01	NCV	Fail to use the appropriate tooling device for movement of fuel assembly G28 on July 23, 2002.
50-247/02-05-02	NCV	Failure to maintain safeguards in accordance with 10 CFR 73.55(b)(1)(i) and Entergy's Indian Point 2 Physical Security Plan.

LIST OF DOCUMENTS REVIEWED

Condition Reports

CR-IP2-2002-07370	A member of the Security force was observed being inattentive to his assigned duties
CR-IP2-2002-07361	fuel assembly was moved without anchors.
CR-IP2-2002-07253	Fuel assembly K06 was to be moved to from location CN50 to BJ56
CR-IP2-2002-07126	A member of the Security Force was found inattentive to duty by Entergy management.
CR-IP2-2002-07049	LT-920 was found out of tolerance for the entire range on July 17, 2002
CR-IP2-2002-07037	Received RWST high level alarm in CCR on July 16, 2002
CR-IP2-2002-06449	Adverse trend in ability to resolve tracking of respirator qualifications
CR-IP2-2002-06290	22 Main Transformer Liquid Temperature was high out of spec
CR-IP2-2002-06282	Auxiliary Transformer Winding Temperature was high out of spec
CR-IP2-2002-05828	OE 13674 self-contained breathing apparatus have rust inside the bottles
CR-IP2-2002-05733	Lack of communication on availability of electronic dosimeters used in high noise environments
CR-IP2-2002-05566	Inappropriate storage of compressed gas cylinders
CR-IP2-2002-04879	Zebra Mussel Monitor Upstream Pressure Degraded on May 10, 2002
CR-IP2-2002-04763	Independent Oversight Assessment 02-13-RP, "REMP and MET Monitoring"
CR-IP2-2002-04583	Review formal reporting process for radioactive release program
CR-IP2-2002-03801	Missing Guide Pin and Guide Pin Bushing on 26 Service Water Vacuum Breaker on April 11, 2002
CR-IP2-2002-03134	SOP 24.1 procedure changes due to risk assessment input on March 25, 2002
CR-IP2-2002-02791	small amount of oil around the oil level gauge indicator for charging pump
CR-IP2-2002-01476	Security force member failed to respond
CR-IP2-2002-01015	LI-921 was found out of spec on January 28, 2002
CR-IP2-2002-00820	Discrepancies noted during PT-2M5

CRP2-2001-12636	REMP/NEM self-Assessment Audit # IP-HPS-2001-052.
CR-IP2-2001-12570	A Member of the Security Force was reported to be inattentive to duty.
CR-IP2-2001-12342	Mussel growth within the service water system and the river on December 14, 2001
CR-IP2-2001-11770	Catch 22 situation in SOP4.1.2 regarding when to start the 3rd CCW pump - prior to or after placing the 2nd RHR heat exchanger in service
CR-IP2-2001-11305	A Security Force Member intentionally deviated from performing their duties as per written guidelines
CR-IP2-2001-11056	LI-921, RWST local level indicator, is reading high out of spec on November 9 2001
CR-IP2-2001-10884	LI-921 was found out of speck, LT-920 was also found out of spec on November 6, 2001
CR-IP2-2001-10056	23 Service Water Pump in Alert Status on October 21, 2001
CR-IP2-2001-09048	22 CCW pump inboard mechanical seal leaks about 1 drop a second
CR-IP2-2001-08445	The analysis of QC samples for the IP-2/3 REMP program does not meet the intent of Regulatory Guide 4.15 sections 6.3.1 (intra-lab) and 6.3.2 (inter-lab)
CR-IP2-2001-08444	QA Audit {A01-07] of the REMP
CR-IP2-2001-07777	This CR documents administrative (find and fix) discrepancies in ODCM and SAO-412 (revised 6/8/01)
CR-IP2-2001-07601	25 Service Water Pump Vacuum Breaker Not Seating on August 2, 2001
CR-IP2-2001-07471	A Security failed to conduct a routine inspection round
CR-IP2-2001-07025	meteorological data is not called out by this Attachment as a required collected item.
CR-IP2-2001-05946	22 CCW pump outboard seal has a small oil leak about 1 drop per 63 sec
CR-IP2-2001-05561	CR 200005689 has been closed with conditions adverse to quality remaining
CR-IP2-2001-05180	Alarm response procedure list the set point for the CCW HX outlet high
CR-IP2-2001-04440	PWT for Work Order NP-01-20971 could not be performed as written
CR-IP2-2001-02972	Oil sample from the 22 CCW pump came back from the lab as "abnormal"
CR-IP2-2000-05689	CR 199902528 was inappropriately closed without performing actions
CR-IP2-1999-02527	Discrepancies between as-found EDG and UFSAR

Work Orders

Work Step List, "North Anna" Type Fuel Assembly Inspection Criteria
Work Order IP2-02-50433, Troubleshoot to determine the extend of damage in 22 EDG control cabinet
Work Order IP2-02-50475, EDG 22 wiring and termination upgrades

Procedures

Abnormal Operating Instruction, 17.0.2, Irradiated or New Fuel Drop in Fuel Storage Building, revision 5
RXC-B-019-A, Technical Operation Procedure for the Fuel Anchor Installation Tool for IP2 Nuclear Power Plant
Alarm Response Procedure SJF, Cooling Water and Air, Window 4-6 - Service Water Header High/Low Pressure
Abnormal Operating Instruction 24.1, Service Water Malfunction, Revision 11

Surveillance Procedure PI-V17, Penetration Fire Barrier Seal Inspections, completed February 26, 2001
Surveillance Procedure PT-M96, Monthly Test of the EDG building HVAC fans
Surveillance Procedure PT-EM29, Monthly Test of the Electrical Tunnel Exhaust fans
Surveillance Procedure PT-M16, Monthly Air Flow Test for the Electrical Tunnel Exhaust fans

10 CFR 50.59 Evaluations

EVAL-02-093, Indian Point Unit 2 Fuel Anchors

Engineering Calculations

CN-NFPE-01-50, Fuel Assembly Drop Height Calculation

Other Documents

Individual Plant Examination of External Events for Indian Point Unit No. 2, December 1995
NRC Approved Physical Security Plan, Revision 20, August 2, 2000
NRC Approved Contingency Response Plan, Revision 4, March 30, 1986
10 CFR 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage."

Documents Reviewed associated with sections 2PS1 and 2PS2

2000/2001 Annual REMP Reports, including selected analytical data for 2002 REMP samples;
Analytical results of 2000/2001/2002 for the on-site well (Station IP3 Trailer Well), New Croton Reservoir, and Amicus Reservoir water samples;
Recent ODCM (Revision 6, October 28, 1999) and technical justifications for ODCM changes, including addition of ground and surface water sampling stations for the REMP
ODCM updating process using NUREG-1301,"ODCM Guidance: Standard Radiological Effluent Controls for Pressurized Water Reactors"
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 tower surveillance log
2002 Meteorological Monitoring Program Self-Assessment (IP-RES-2002-050)
Availability of meteorological monitoring instruments from January 1 to December 31, 2001
Recent calibration results for all TS required air samplers
Implementation of the environmental thermoluminescent dosimeters (TLDs) program
Quality control evaluation of the inter-laboratory and intra-laboratory comparison program and the corrective actions for any deficiencies
2002 Quality Assurance Audit (Audit Number: 02-AR-13-RP) for the REMP and the Meteorological Monitoring Program implementations
Quarterly REMP/RETS Meeting Minutes (Second Quarter 2001 to First Quarter 2002)
Self-Assessments (IP-HPS-2001-053) for the implementation of the REMP
Land Use Census procedure and the 2000/2001 results
REMP procedures, including vendor's analytical procedures

Documents reviewed associated with 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
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

LIST OF ACRONYMS

AFW	auxiliary feedwater
ALARA	As Low As Reasonably Achievable
CCW	Component Cooling Water
CFR	Code of Federal Regulations
COL	check off list
CR	condition report
DBD	design basis document
EDG	emergency diesel generator
HRA	High Radiation Area
HVAC	heating, ventilation and air conditioning
HX	heat exchanger
IPEEE	individual plant examination for external events
IR	inspection report
KV	kilovolt
LHRA	Locked High Radiation Area
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
NVLAP	National Voluntary Laboratory Accreditation Program
OAD	Operations Administrative Directive
OASL	operations administrative step list
ODCM	offsite dose calculation manual
OS	Occupational Safety
PARS	publicly available records
PI	performance indicator
PS	Public Radiation Safety
PWT	post-work test
RCA	radiologically controlled area
REMP	radiological environmental monitoring program
RWP	Radiation Work Permit
SAO	station administrative order
SCBA	Self-Contained Breathing Apparatus
SOP	system operating procedure
TLD	thermoluminescent dosimeter
TS	Technical Specifications
TS/ODCM	Technical Specification/Offsite Dose Calculation Manual
UFSAR	Updated Final Safety Analysis Report
URI	unresolved item
WO	work order