Mr. Robert J. Barrett Vice President, Operations - IP3 Entergy Nuclear Operations, Inc. Indian Point 3 Nuclear Power Plant P. O. Box 308 Buchanan, NY 10511

SUBJECT: INDIAN POINT 3 NUCLEAR POWER PLANT - NRC INSPECTION REPORT 50-286/01-07

Dear Mr. Barrett:

On August 18, 2001, the NRC completed an inspection at the Indian Point 3 nuclear power plant. The enclosed report presents the results of that inspection. The results were discussed on September 10, 2001, with you and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations, and with the conditions of your license. Within these areas, the inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the inspectors identified two issues of very low safety significance. These findings were determined to be violations of NRC requirements. However, because of their very low safety significance and because they have been entered into your corrective action program, the NRC is treating these issues as Non-Cited Violations (NCVs) in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny any of these Non-Cited Violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Indian Point 3 Nuclear Power Plant.

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 <u>or</u> 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/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Peter W. Eselgroth, Chief Projects Branch 2 Division of Reactor Projects Docket No. 50-286 License No. DPR-64

Enclosure: Inspection Report 50-286/01-07

Attachment 1 - Supplemental Information

cc w/encl: J. Yelverton, Chief Executive Officer

M. Kansler, Senior Vice President and CEO J. Knubel, Vice President Operations Support

F. Dacimo, Vice President - Operations H. P. Salmon, Jr., Director of Oversight D. Pace, Vice President - Engineering

J. Kelly, Director - Licensing
C. D. Faison, Director - Licensing

J. Donnelly, Licensing Manager

A. Donahue, Mayor, Village of Buchanan

J. McCann, Manager - Nuclear Safety and Licensing

C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law

Chairman, Standing Committee on Energy, NYS Assembly

Chairman, Standing Committee on Environmental Conservation, NYS Assembly

R. Albanese, Executive Chair, Four County Nuclear Safety Committee Chairman, Committee on Corporations, Authorities, and Commissions

The Honorable Sandra Galef, NYS Assembly

P. D. Eddy, Electric Division, New York State Department of Public Service

W. Flynn, President, New York State Energy Research and Development Authority

J. Spath, Program Director, New York State Energy Research and Development Authority

C. Hehl, SRC Consultant

C. Terry, Niagara Mohawk Power Corporation

R. Toole, SRC Consultant

R. Schwarz, SRC Consultant

County Clerk, Westchester County Legislature

A. Spano, Westchester County Executive

R. Bondi, Putnam County Executive

C. Vanderhoef, Rockland County Executive

J. Rampe, Orange County Executive

T. Judson, Central NY Citizens Awareness Network

M. Elie, Citizens Awareness Network

Distribution w/encl: H. Miller, RA/J. Wiggins, DRA (1)

D. Loveless, RI EDO Coordinator E. Adensam, NRR (ridsnrrdlpmlpdi)

P. Milano, PM, NRR

G. Vissing, Backup PM, NRR

P. Eselgroth, DRP S. Barber, DRP L. Harrison, DRP R. Junod, DRP R. Martin, DRP

P. Drysdale, SRI - Indian Point 3

Region I Docket Room (with concurrences)

DOCUMENT NAME: G:\Branch6\Indian Point 3\IR2001-007\IP30107.WPD
After declaring this document "An Official Agency Record" it <u>will</u> be released to the Public.
To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RI/DRP		RI/DRP	
NAME	Pdrysdale/SB for PDD		PEselgroth/PWE	
DATE	09/28/01		10/01/01	

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No. 50-286

License No. DPR-64

Report No. 50-286/01-07

Licensee: Entergy Nuclear Northeast

Facility: Indian Point 3 Nuclear Power Plant

Location: P.O. Box 308

Buchanan, New York 10511

Dates: July 1 - August 18, 2001

Inspectors: Peter Drysdale, Senior Resident Inspector

Lois James, Resident Inspector Keith Young, Reactor Inspector

Javier Brand, Resident Inspector, Seabrook Kenneth Jenison, Senior Project Engineer

Gregory Smith, Senior Physical Security Inspector

Paul Frechette, Physical Security Inspector

Approved by: Peter W. Eselgroth, Chief

Projects Branch 2

Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000286-01-07, on 07/01-08/18/2001, Entergy Nuclear Northeast; Indian Point 3 Nuclear Power Plant.

The inspection was conducted by resident and regional inspectors. The inspectors identified two Green issues. The significance of most findings is indicated by their color (Green, White Yellow, Red) using IMC 0609 "Significance Determination Process" (SDP). Findings for which the SDP does not apply are indicated by "No Color" or by the severity level of the applicable violation. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described at its Reactor Oversight Process website at http://www.nrc.gov/NRR/OVERSIGHT/index.html.

A. Inspector Identified Findings

Cornerstone: Physical Protection

Green. During an NRC inspection, it was discovered that the submittal of Revision 20, April 4, 2001, of the Physical Security Plan did not meet the requirements of 10 CFR 50.54(p)(2), which permits only changes that do not decrease the effectiveness of the plan. This finding is considered a non-cited violation of 10 CFR 50.54 (p)(2). Corrective measures were initiated upon identification.

The finding was of very low safety significance because, although it indicated a vulnerability of safeguards systems or plans, no actual intrusion occurred; and there have not been greater than two similar findings in the past four quarters. (Section 3PP1)

 Green. During the conduct of the inspection, issues associated with contingency response equipment were identified. Specifically, the number of rounds of ammunition immediately available to some responders, and the lack of a non-lethal weapon, did not fully conform to the requirements of 10 CFR 73, Appendix B, paragraphs V.A.4(a)(3), and V.A.5.8. The vulnerability was detected through a table-top drill, and consequently is not considered a violation of NRC requirements. Notwithstanding, corrective measures were initiated upon identification.

This issue was of very low safety significance because, although it indicated vulnerabilities in the safeguards program, no actual intrusion occurred, and there have not been greater than two similar findings in the past four quarters. (Section 3PP1)

B. Licensee Identified Violations

There were no licensee identified violations

TABLE OF CONTENTS

SUMMARY OF FINDINGS	i
TABLE OF CONTENTS	ii
Report Details	
SUMMARY OF PLANT STATUS	
1R01 Adverse Weather Protection 1R04 Equipment Alignment 1R05 Fire Protection 1R11 Licensed Operator Requal 1R12 Maintenance Rule Implement 1R13 Maintenance Risk Assessr 1R14 Personnel Performance Du 1R15 Operability Evaluations 1R17 Permanent Plant Modificat 1R19 Post Maintenance Testing 1R22 Surveillance Testing	fication
	11 Events11
4OA1 Performance Indicator Ver 4OA2 Identification and Resolution 4OA4 Licensee Event Report Re	13 ification

ATTACHMENT

Attachment 1 - Supplemental Information

Report Details

SUMMARY OF PLANT STATUS

The plant was at 100% power at the beginning of the inspection period. On July 21, 2001, a circulating water pump motor failed due to insufficient cooling and had to be replaced. As a result, the licensee reduced plant power on July 27, 2001, to approximately 95% to provide an additional margin of vacuum above the minimum required for plant operation. After the pump motor was replaced, the plant was returned to 100% power on July 28, and remained there for the remainder of the inspection period.

1. REACTOR SAFETY

(Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness)

1R01 Adverse Weather Protection

a. <u>Inspection Scope</u> (71111.01)

The Indian Point site experienced unusually high ambient air temperatures during the week of August 6 - 10, 2001. The inspectors evaluated the licensee's implementation of their adverse weather procedures and their compensatory measures for the affected conditions during periods of high ambient temperatures. The temperature of the Hudson River steadily increased from ~82F on Monday to ~86F on Friday (maximum design temperature for plant operation is 95F). During the subject week, the plant remained at 100% power, and no local grid instabilities occurred. However, due to record level electricity demands, the area system operators requested that all plant trip risk activities be suspended or deferred into the evening hours each day until the peak load demand had passed. The licensee complied with this request. The inspectors reviewed Attachment 8 to operations directive OD-37, "Seasonal Weather Protection," to verify that actions taken to preclude heat buildup in plant spaces had been completed, and that operator actions were defined in the procedure to maintain readiness of essential systems.

The inspectors also selected for inspection the 480 volt-alternating current (VAC) system and the emergency diesel generators (EDGs) as two risk-significant systems that must be protected from adverse weather. These systems are required to function during a reactor shutdown, and their functionality could have been challenged by the unusually high ambient temperatures. The inspectors performed system walkdowns inside plant spaces to assess the functionality of these systems, and verified that they would be available for performance of their shutdown functions. During the walkdowns, the inspectors noted that temperatures above 95F in the 480 VAC Switchgear Room caused control room alarms, and required operators to closely monitor equipment performance.

On August 9, the room temperature exceeded 104F and operators entered alarm response procedure ARP-13 (Panel SKF: "High Room Temp, Control Building, El. 15ft"). The procedure required operators to open all doors into the room, to disable the $\rm CO_2$ fire suppression system and establish a fire watch, and to assure that active ventilation was maintained inside the room. The room air temperature eventually reached ~108F; however, no equipment performance problems were noted and the room temperature remained below the maximum of 117F. The highest safeguard bus input transformer

winding temperature remained <210F (maximum limit = 347F) and the room temperature returned to <104F by 8:30 p.m. the same evening.

The inspectors observed that temperatures inside all three EDG cubicles remained slightly above 90F for most of the week, and that all cubicle ventilation fans operated almost continuously. However, no alarm conditions existed, and no equipment degradation resulted from high room temperatures. The ventilation system was able to keep the cubicle temperatures from increasing further. During a routine surveillance on the 33 EDG on August 9, a high jacket water temperature alarm occurred at 165F; however the licensee determined that the alarm came in at a lower temperature than expected, and was well below the maximum temperature (190F) for engine operation. The inspectors verified that all three EDGs remained available throughout the high temperature period.

b. Findings

No findings of significance were identified

1R04 Equipment Alignment

a. Inspection Scope (71111.04)

<u>Auxiliary Feedwater System Partial Walkdown</u>

On July 31, the inspectors performed a partial system walkdown of the auxiliary feedwater (AFW) system while the 31 motor-driven AFW pump was removed from service for a scheduled maintenance outage. The inspectors verified that the redundant 32 and 33 AFW pumps were properly aligned to support normal and emergency plant operations in accordance with check-off list COL-FW-2, "Auxiliary Feedwater System," and system drawings 9321-F-20173, -20183, and -20193. The inspectors also observed whether any material conditions were present that could challenge the operability of the two operable AFW pumps.

The system lineup inspection included a review of accessible portions of the AFW system components, valve positioning, and verification of remote operating status lights and indicating instrumentation. The inspectors reviewed the AFW system performance report, open work requests (WRs), and deficiency/event reports (DERs) to assess any outstanding equipment and/or component deficiencies.

b. <u>Findings</u>

No findings of significance were identified

1R05 Fire Protection

a. Inspection Scope (71111.05Q)

On July 24, 2001, the inspectors conducted tours of the plant to verify the availability and material condition of fire protection equipment in areas that contain vital equipment for mitigating the consequences of events, and support equipment that is needed to operate other equipment important to safety. During these tours, the inspectors observed: 1) licensee control of transient combustibles and ignition sources; 2) the material condition, operational lineup and effectiveness of fire protection systems, equipment and features; and 3) the material condition and operational status of fire barriers used to prevent fire damage or fire propagation. The inspectors also examined the programmatic controls for combustible and flammable material that applied to the following areas toured:

- Central control room,
- 31, 32, and 33 component cooling water pumps
- 31, 32, and 33 charging pump rooms
- 31 and 32 residual heat removal (RHR) pump rooms
- 10 CFR 50, Appendix R diesel generator

The inspectors observed minor discrepancies that were brought to the attention of the licensee for resolution (DER 01-03071).

b. Findings

No findings of significance were identified

1R11 Licensed Operator Requalification

a. Inspection Scope (71111.11)

On August 6, 2001, the inspectors observed the simulator portion of an annual license examination for Crew E. The test involved two simulator scenarios:

- Uncontrolled depressurization of all steam generators
- Loss of instrument air followed by a reactor coolant system leak

The simulator portion of the annual examination was observed and evaluated by the assistant operations manager (AOM) and training evaluators. No performance deficiencies were identified by the AOM. The inspector attended the post-examination critique conducted by the AOM and the training evaluators and verified that minor performance improvements had been identified and discussed with the operating crew.

The inspectors noted that the requalification simulator scenarios were based on a recent change (Revision 16) to emergency operating procedure E-0, "Reactor Trip/Safety Injection," which incorporated a configuration change made to the essential service water header in June 2001. That change altered the source of cooling water to the circulating water pump (CWP) motors and seals from the non-essential to the essential header (see report section 1R15) to allow the CWPs to remain operating after a valid safety injection (SI) signal, and keep the main condenser available for a plant cooldown.

Prior to Revision 16, E-0 required operators to close all main steam isolation valves (MSIVs) following an SI signal, and to use the atmospheric dump valves (ADVs) for the cooldown. However, this would be unnecessary after the configuration change because the condenser would be available for decay heat removal.

During this inspection period, the operations department issued a temporary procedure change (TPC 01-0454) to E-0 after the NRC discovered that the change to the essential header was inadequately analyzed (see NRC inspection report 50-286/01-03). Also, the safety evaluation (01-03-019) for the change did not adequately address the consequences of a design basis seismic event to the essential header, and the safety evaluation had to be rescinded. The essential header was then returned to its configuration prior to June 2001, and the TPC was written to reverse the changes made by Revision 16, requiring operators to manually shut the MSIVs in response to an SI.

The licensee anticipated that the configuration change to the essential header would be properly analyzed so that the essential header could be restored as the cooling supply to the CWPs. Since requalification training proceeded in the mean time using E-0 without the TPC, the inspectors verified that all operating crews were properly briefed on the configuration change after completing requalification training, and were knowledgeable of the TPC prior to standing watch duties in the plant's control room.

b. <u>Findings</u>

No findings of significance were identified

1R12 Maintenance Rule Implementation

a. Inspection Scope (71111.12)

The inspectors reviewed problems involving selected in-scope structures, systems, and components (SSCs) to assess the effectiveness of the licensee's maintenance program. The review included a sample of operating logs, system engineer data, system reports, deficiency reports, availability data, selected surveillance performance data, and selected maintenance-related data. The reviews focused on proper maintenance rule scoping, proper classification of SSC equipment failures, safety significance classifications, 10 CFR 50.65 (a)(1) and (a)(2) classifications, and performance criteria for SSCs classified as (a)(2). The inspectors reviewed Entergy's scoping documents, deficiency/event reports (DERs), and completed work orders.

The inspectors also reviewed the periodic evaluations required by 10 CFR 50.65 (a)(3) for the Indian Point 3 (IP3) Station, to verify that SSCs within the scope of the maintenance rule were included in the evaluations, and that balancing of reliability and unavailability was given adequate consideration. The inspectors reviewed the below indicated sample of IP3 periodic system evaluation reports, covering the period from October 2000 through June 2001, to ensure that 1) goals, performance criteria, and technical justifications were appropriate, 2) industry operating experience was considered, 3) corrective action plans were effective, and 4) performance was being monitored. The following systems composed the sample:

- Service Water System
- 125 volt vital DC and 120 volt AC Power Systems

- 32 Emergency Diesel Generator (EDG)
- Fuel Storage Building Ventilation System
- Boric Acid Heat Trace Sub-System of the Chemical and Volume Control System
- 32 Battery Charger

b. <u>Findings</u>

No findings of significance were identified

1R13 Maintenance Risk Assessment and Emergent Work

a. <u>Inspection Scope</u> (71111.13)

The inspectors reviewed the plant risk assessments and corrective maintenance work request (WR) packages for the listed planned and emergent work. The inspectors also discussed cognizant personnel the deficient conditions, and subsequent revisions to the daily plant risk profiles (i.e, changes to the nominal core damage frequency) resulting from rescheduled maintenance):

- WR 01-03177-00; Core exit thermocouple H5 failure and troubleshooting
- WR 01-01913-xx; Westinghouse type "W2" switch replacements

WR 01-01913-00; 31 containment recirculation pump

WR 01-01913-02: 31 containment spray pump

WR 01-01913-04; 32 containment recirculation fan cooler

WR 01-01913-05; 33 containment recirculation fan cooler

WR 01-01913-08; 31 safety injection pump

WR 01-01913-09; 32 safety injection pump

WR 01-01913-13; 32 component cooling water pump

WR 01-01913-14; 33 component cooling water pump

WR 01-01913-15; 31 residual heat removal pump

- WR 01-00-03241-00; Packing replacement on the 34 SW pump (rescheduled due to failures on the 32 main transformer auxiliary system, a positive ground on 31 battery charger, and 31 static inverter card failure on July 24, 2001.
- WR 99-04394-00; B-Reactor trip bypass breaker preventive maintenance (deferred due to emergency core cooling systems motor-operated valves out of service for testing)

b. Findings

No findings of significance were identified

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

a. Inspection Scope (71111.14)

Partial Loss of Offsite Power

On July 6, 2001, the inspectors observed control room operators respond to an unexpected loss of the normal 13.8 kilo-volt (KV) feeder circuit (13W93) due to a circuit breaker failure that occurred during switchyard relay testing. The loss did not interrupt power to the 6.9 KV buses in the plant, since the station auxiliary transformer and the unit auxiliary transformers continued to supply these buses, and no safeguard loads were affected. However, the event caused a loss of the condensate polisher facility and resulted in a minor secondary plant transient. The licensee was not able to realign the 13.8 KV source to its alternate feed since the cause of the failure was not known, and troubleshooting of the failure was necessary. The inspectors observed operator and control room supervisor performance in coping with the event. The inspectors reviewed operator logs, plant system data, and control room strip charts to determine the scope of the transient, and how the operators responded. The inspectors determined that operator response was in accordance with the response required by their procedures and training and that the plant responded within its current design basis.

Loss of 32 Main Transformer Auxiliaries

On July 24, 2001, one bank of the auxiliary coolers on the 32 main transformer was lost due to a failed thermal overload in a power circuit on a cooling fan. The failure disabled all fans in the bank and transformer temperatures started to rise. During troubleshooting of the failure, operations personnel monitored the transformer temperatures and other plant equipment while engineering and maintenance performed troubleshooting and repairs.

Plant operators had questioned different limits for the maximum temperature allowed in the main transformer windings as documented in operator logs and the high temperature alarm response procedure. The operations department requested engineering assistance to identify the temperature at which operators would be required to take actions (95C or 120C) to reduce plant load (DER 01-02990). Operations temporarily imposed the 120C limit for plant operation, but the actual temperature did not exceed 95C. Design Electrical Engineering subsequently initiated Action Commitment Tracking System (ACTS) item 01-57747 to resolve this question for the main transformers, and for the station auxiliary and unit auxiliary transformers.

The inspectors also noted that the control room operators had not discussed a contingency plan to reduce power or to shutdown the plant in the event that the transformer auxiliaries were not recovered before the temperature exceeded the 120C limit. The inspectors discussed this situation with the shift manager and the operations manager. The operating crew was subsequently briefed on the possibility of a plant power reduction; however, by mid morning on July 24, operation of the auxiliaries were restored, and transformer temperatures were stabilized.

b. <u>Findings</u>

No findings of significance were identified

1R15 Operability Evaluations

a. Inspection Scope (71111.15)

The inspector reviewed various DERs on degraded or non-conforming conditions that raised questions about equipment operability. The inspector reviewed the resulting operability determinations (ODs) for technical adequacy, whether or not continued operability was warranted, and to what extent other existing degradations adversely impacted the affected systems. The following DERs, operability determinations, and calculations were evaluated:

- <u>DER 01-0128</u>; Degraded Grid motor protection.
- <u>OD 01-0124</u>; Cell Switches on 480 VAC Westinghouse DS breakers. Most of the cell switches in these breakers exceeded the manufacturers recommended number of total cycles (200). The OD concluded that all cell switches remained operable because the failure only occurred when the breaker was removed from its cubicle. The licensee developed an action plan to replace the switches during the normal preventive maintenance cycle for each affected breaker.
- <u>DER 01-1652</u>; The inspectors reviewed the operability evaluation which reviewed a problem involving water collection in the 32 auxiliary boiler feed pump (ABFP) steam supply piping.
- <u>DER 01-03130</u>; The inspectors reviewed the operability evaluation for a condition identified by the inspectors involving the installation of TRICO oilers used in several safety-related pumps. Additionally, the inspectors reviewed DER 99-01239, which evaluated the June 1999 catastrophic failure of the 33 component cooling water (CCW) pump inboard bearing.

The inspectors reviewed these issues to ensure that the identified conditions did not adversely affect system operability or plant safety, and to verify that corrective actions taken were adequate to prevent recurrence. The inspectors interviewed the system engineers and maintenance technicians, performed field walkdowns, visually inspected the oilers removed from the 32 CCW pump and other safety related pumps, and reviewed procedure LUB-001-GEN, "Lubrication of Plant Equipment," and applicable completed maintenance activities.

Essential Service Water Header Past Operability; During the Problem Identification & Resolution (PI&R) inspection at Indian Point 3, the inspectors determined that a safety evaluation written for a modification to the service water (SW) system was inadequate and caused the plant to be operated outside its design basis for approximately two months (see NRC inspection report 50-286/01-03). The modification aligned the essential SW header to the circulating water system (CWS) pumps through non-seismic piping connected to the essential header. The safety evaluation did not evaluate the consequences of a seismic event on the non-seismically qualified piping. The licensee subsequently

realigned the essential header to isolate the non-seismic piping until further analysis could be performed.

In order to evaluate the past operability of the essential SW header, the inspectors reviewed the licensee's Calculation No. IP3-CALC-SWS-03523, "Evaluation of 8" Seismic Class III Pipe Inside the Intake Structure." This calculation concluded that the non-seismic piping to the CWS pumps would not rupture, and the essential SW header could continue to supply all vital heat loads following a design basis seismic event. The inspectors noted that the licensee performed the analysis and calculation assuming nominal pipe wall thickness in accordance with normal code requirements. However, during discussions with the licensee, the inspectors noted that several sections of SW piping were known to have wall thinning with some locations below the code allowable thickness. The inspectors considered that some of the SW piping analyzed in calculation IP3-CALC-SWS-03523 may be in question if wall thinning below nominal thickness existed. The licensee subsequently inspected the 8" piping in question and discovered a pinhole leak in an pipe elbow weld downstream from valve SWN-4. The licensee performed non-destructive testing in the area of the defect to characterize the extent of the wall thinning. The licensee then analyzed this condition and generated calculation IP3-CALC-SWS-05324, "Wall Thinning Evaluation for 8" SW Pipe in Intake Structure." The inspectors reviewed this calculation to verify that the identified defect did not invalidate the seismic calculation.

The inspectors also reviewed the plant operating logs for the two months prior to discovery of the inadequate safety evaluation. No instances were documented where any service water pump associated with the essential SW header had been taken out of service, or where the essential header was declared inoperable for other reasons. The emergency diesel generators which would have powered the SW pumps during an emergency had been removed from service for normal surveillance testing during the two month period. However, during that testing, the minimum number of SW pumps required by technical specifications remained operable on the essential header.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. Inspection Scope (71111.17)

The inspectors reviewed Engineering Change Notice (ECN) 97-3-320, "PCV-1139 Solenoid Valve Tubing Modification." PCV-1139 is the main steam admission control valve to the turbine-driven auxiliary boiler feed pump (TDABFP). The modification reduced the size of the tubing from ½" to 1/4" from pressure transmitter PT-1139 to pressure controller PIC-1139, and from PIC-1139 to the valve positioner. This change was necessary to improve the response time associated with the PCV-1139 control loop. The inspectors reviewed the modification to verify that the design basis and performance capability of the risk significant turbine-driven auxiliary boiler feed pump (TDABFP) had not been degraded, and that the modification would not place the plant in an unsafe condition. The inspectors reviewed this modification with cognizant engineering personnel, evaluated the post-installation testing requirements, and performed a post-installation walkdown of the control loop hardware for PCV-1139.

b. Findings

No findings of significance were identified

1R19 Post Maintenance Testing

a. <u>Inspection Scope</u> (71111.19)

The inspectors reviewed post-maintenance test 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 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 inspectors performed system and control room walkdowns, observed operators and technicians perform test evolutions, reviewed system parameters, and interviewed the system engineers and field operators. The following post-maintenance test activities were evaluated:

- Stroke test failure of steam admission valve PCV-1139 on the 32 ABFP (DER 01-02813)
- Westinghouse W2 switch replacements on multiple plant components (WR 01-1913-00).

b. Findings

No findings of significance were identified

1R22 Surveillance Testing

a. Inspection Scope (71111.22)

The inspector reviewed surveillance test procedures and associated testing activities to assess whether 1) the test preconditioned the component(s) tested, 2) the effect of 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 with proper calibration, 5) the test was performed in the proper sequence, and 6) the test equipment was removed following testing.

The inspectors reviewed a sample of the periodic surveillance activities performed by Indian Point 3 Station, to verify that structures, systems and components (SSCs) were reliable, available and/or operable. The following surveillances composed the sample:

- 3PT-M62, 480V Undervoltage/Degraded Grid Protection System Functional
- 3PT-Q092C, Service Water System Pump Train Operational Test
- 3PT-M033, Fuel Storage Building Ventilation System Functional Test
- 3PT-R32A, Fuel Storage Building Ventilation Differential Pressure Test
- 3PT-M079B, 32 EDG Functional Test
- 3PT-Q120C, "33 ABFP [Motor-Driven] Surveillance and IST Monthly Operability Surveillance"
- 3PT-M79C, 33 EDG Functional Test

During the test of the 33 EDG, the inspector noted that operators recorded the time for the EDG to achieve its minimum output voltage (10.66 seconds) and minimum frequency (10.44 seconds) were both greater than the allowed acceptance criteria (10.0 seconds). Operators continued to run the engine for approximately one hour despite a note in the test procedure which stated that the minimum start time must be achieved in order to declare the test satisfactory for technical specifications surveillance requirements. Following the test, the EDG remained inoperable due to the apparently slow start (DER 01-02872), and the licensee's investigation determined that operators had used an incorrect method for timing the minimum voltage and frequency. Consequently, the engine was started a second time, and both minimum voltage and frequency were achieved within the required ten seconds using the correct methodology.

The inspector reviewed administrative procedure AP-19, "Surveillance Test Program," and discussed with operations and engineering personnel two conflicting requirements contained in the procedure related to continuing or aborting a test of safety-related equipment with out-of-specification conditions. The licensee also noted that AP-4, "Procedure Use and Adherence," contained guidance indicating that stopping a surveillance tests with an out-of-specification condition was an example for stopping an activity prior to completion. The licensee subsequently generated ACTS Item 01-57603 to evaluate the conflicting guidance and to develop consistent expectations to clarify who and when it would be appropriate to abort a surveillance test with an out-of-specification condition.

b. <u>Findings</u>

No findings of significance were identified.

1R23 Temporary Plant Modifications

a. Inspection Scope (71111.23A)

The inspectors reviewed the licensee's administrative procedure AP-13, "Temporary Modifications," and packages for selected temporary modifications (TMs).

The inspectors reviewed packages and engineering evaluations for four contingency TMs. These TMs were used to support maintenance/replacement of Degraded Grid Relays, and would install a jumper to maintain circuit continuity for the negative side of the control power circuitry. The inspectors also evaluated the licensee's administrative requirements and testing requirements associated with each TM.

TM 00-03002-25, "Install Jumper to Maintain Continuity of Negative & Positive Side of DC Power Feed (Relay 62-2/5A Replacement)."

TM 00-03002-26, "Install Jumper to Maintain Continuity of Negative & Positive Side of DC Power Feed (Relay 62-2/2A Replacement)."

TM 00-03002-27, "Install Jumper to Maintain Continuity of Negative & Positive Side of DC Power Feed (Relay 62-2/3A Replacement)."

TM 00-03002-28, "Install Jumper to Maintain Continuity of Negative & Positive Side of DC Power Feed (Relay 62-2/6A Replacement)."

b. Findings

No findings of significance were identified.

3. SAFEGUARDS

Cornerstone: Physical Protection

3PP1 Response to Contingency Events

a. Inspection Scope (71130.03)

The following activities were conducted to determine the effectiveness of the licensee's Response to Contingency Events:

Beginning on July 23, 2001, a review was conducted of the licensee's defensive strategy, response time lines, target sets, contingency drill scenarios and relevant implementing procedures. Upon completion of this review, on July 25, 2001, four tabletop drills (a simulated contingency response drill using a facility model) were conducted with security shift supervisors and response team leaders. The table-top drills were used to evaluate the licensee's capability to protect against the design basis threat.

A performance test of the licensee's Intrusion Detection System (IDS) was conducted on July 24, 2001.

A review of documentation associated with the licensee's drill and exercise program was conducted on July 26, 2001. This review included the documentation and critiques for contingency response drills conducted in the prior four quarters.

b. <u>Findings</u>

1. The licensee's submittal of Revision 20, to the Physical Security Plan dated March 26, 2001, did not meet the requirements of 10 CFR 50.54(p)(2), which permits only changes that do not decrease the effectiveness of the plan. The change made was to permit the use of a non-picture badge for unescorted site access. This is contrary to 10 CFR 73.55(d)(4), which requires a picture badge to be used for all individuals authorized unescorted access. This finding is considered a non-cited violation of 10 CFR 50.54 (p)(2).

This issue is more than minor in that, if left uncorrected, the same issue could become a more significant safety concern. Specifically, the proposed submittal would reduce the overall effectiveness of the program by allowing non-photo identification to be issued. The issue affects the Physical Protection Cornerstone since it involved non-conformance with a safeguards requirement related to Security Plans. This violation of 10 CFR 50.54(p)(2) is being treated as a Non-Cited Violation (NCV), consistent with Section VI.A.1 of the Enforcement Policy, issued May 1, 2000 (65FR25368). (NCV 50-286/01-07-01)

Applying the Physical Protection Significance Determination Process, the issue involved a potential vulnerability in access control. Notwithstanding, there was no malevolent act and no actual intrusion occurred; and there have not been greater than two similar findings in the past four quarters. Accordingly, this finding was considered to have very low safety significance (Green).

Upon identification, the use of non-photo identification badges was terminated, and this issue was entered into the Indian Point 3 problem identification and corrective action system as DER 01-03011.

2. During the conduct of the inspection, issues associated with contingency response equipment were identified. 10 CFR 73.55(b)(4)(i) requires response personnel to be equipped in accordance with Appendix B to Part 73. However, response personnel were not equipped as required relative to the number of rounds of ammunition immediately available, and non-lethal weapons. Accordingly, the licensee did not fully conform to the Requirements of 10 CFR 73, Appendix B, paragraphs V.A.4(a)(3), and V.A.5.8. The vulnerability was detected through a table-top drill, and consequently is not considered a violation of NRC requirements. This issue was of very low safety significance (Green) because, although it indicated vulnerabilities in the safeguards program, no actual intrusion occurred, and there have not been greater than two similar findings in the past four quarters.

Upon identification, the licensee initiated action to review the condition and entered this issue into the Indian Point 3 problem identification and corrective action system as DER 01-03012 (FIN 50-286/01-07-02).

4. OTHER ACTIVITIES (OA)

4OA1 Performance Indicator Verification

a. Inspection Scope (71151)

Emergency AC Power (Emergency Diesel Generators) System Unavailability and Auxiliary Feedwater Safety System Unavailability

The inspectors reviewed the performance indicators for the emergency diesel generators (EDGs) and the auxiliary feedwater (AFW) systems. The inspectors verified accuracy of the reported data through reviews of performance indicators for the time period from April, 2001 to July, 2001 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, control room operators logs, and PI data summary reports.

b. <u>Findings</u>

No findings of significance were identified

4OA2 <u>Identification and Resolution of Problems</u>

a. Inspection Scope (71111.12Q, 71111.22)

The inspectors reviewed the Indian Point 3 problem identification and resolution program related to selected plant equipment conditions and surveillances. The review was conducted to verify that the licensee identified issues at the proper threshold and entered them into its corrective action program, and to evaluate the adequacy of the resultant corrective actions. The following inspectors reviewed the following DERs and OD related to the maintenance rule process and surveillance performance samples chosen for this inspection:

- DER 01-00024, EDG Air Start Motor Failure
- DER 01-00103, EDG Battery Charger Alarm
- DER 01-00688, Spent Fuel Pool
- DER 01-01064, Spent Fuel Pool Surveillance
- DER 01-02923, Spent Fuel Pool Charcoal Filters
- DER 01-02967, 31 Inverter Transferred Automatically Onto Its Backup Supply
- OD 01-0128, Motor Performance with Degraded Grid Calculations

b. Findings

No findings of significance were identified

4OA4 <u>Licensee Event Report Reviews</u>

a. Inspection Scope

(Closed) LER 1997-021-01; One Train of Engineered Safeguards Equipment Out of Service

The inspectors performed an in-office review of this LER Supplement. The Supplement was an update of a historical event reported to the NRC in October 1997. The corrective actions were entered into the Indian Point 3 corrective action system, and the stated corrective actions appeared to be adequate. This issue was previously addressed in a NRC Inspection Report 50-286/97-11. This LER is closed

b. <u>Findings</u>

No findings of significance were identified

4OA6 Meetings

Exit Meeting Summary

The physical protection inspectors met with licensee representatives at the conclusion of the inspection on July 26, 2001. 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 September 10, 2001, the inspectors presented the inspection results to Mr. R. Barrett and other Entergy staff members who acknowledged the inspection results presented. The inspector asked Entergy personnel whether any materials evaluated during the inspection were considered proprietary. No proprietary information was identified.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

a. Key Points of Contact

P. Asendorf Security Manager

J. Barnes Acting Director, IP-3 Engineering
R. Barrett Vice President, Operations - IP3
T. Barry Security General Supervisor

R. Burroni I&C Manager

R. Cavaleri
J. Comiotes
Director, Safety Assurance
White Plains Administration

J. Donnelly Licensing Manager

J. DeRoy General Manager of Plant Operations

R. Deschamps Radiological and Environmental Services Manager

C. Gorges
 P. Grossgold
 D. Mayer
 L. Olivier
 Operations Shift Manager
 Federal Bureau of Investigation
 Health Physics/Chemistry Manager
 Senior Vice President, Indian Point 3

J. Perrotta Quality Assurance Manager

K. Peters Corrective Actions/Assessment Manager

P. Rubin Operations Manager
J. Russell Special Projects Manager
A. Small Operations Shift Manager
A. Vitale Maintenance Manager

T. Weir Director, Corporate Security

J. Wheeler Training Manager

b. List of Items Opened, Closed, and Discussed

Opened and Closed

LER 1997-021-01 One Train of Engineered Safeguards Equipment Out-of-

Service

NCV 50-286/01-07-01 Security Plan Revision not in accordance with 10 CFR

50.54 (p)(2)

FIN 50-286/01-07-02 Licensee's response equipment did not fully conform to

the requirements of 10 CFR 73, Appendix B, V.A.4(a)(3),

and V.A.5.8.

c. <u>List of Acronyms</u>

ABFP auxiliary boiler feed pump

ACTS Action Commitment Tracking System

ADV atmospheric dump valve AFW auxiliary feedwater

AOM Assistant Operations Manager ARP alarm response procedure C degrees Centigrade

CCW component cooling water
CFR Code of Federal Regulations

COL checkoff list

CS containment spray
CWP circulating water pump
DER Deviation/Event Report
ECN engineering change notice
EDG emergency diesel generator
EOP emergency operating procedure

F degrees Fahrenheit IDS intrusion detection system

IR inspection report IST in-service test

KV kilo-volts

LER Licensee Event Report MSIV main steam isolation valve

NCV Non-Cited Violation NEI Nuclear Energy Institute

NRC Nuclear Regulatory Commission

OD operability determination
OD operations directive
OE operating experience
PI performance indicator

PI&R problem identification and resolution

RHR residual heat removal

SDP Significance Determination Process SSCs structures, systems and components

SW service water

TDABFP turbine-driven auxiliary boiler feed pump

TM temporary modification
TPC temporary procedure change
VAC voltage-alternating current

WR work request