January 7, 2002

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

SUBJECT: INDIAN POINT 3 NUCLEAR POWER PLANT - NRC INSPECTION REPORT NO. 50-286/01-10

Dear Mr. Barrett:

On December 29, 2001, the NRC completed an inspection at the Indian Point 3 nuclear power plant. The enclosed report documents the inspection findings which were discussed on January 22, 2002, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings of significance were identified.

Immediately following the terrorist attacks on the World Trade Center and the Pentagon, the NRC issued an advisory recommending that nuclear power plant licensees go to the highest level of security, and all promptly did so. With continued uncertainty about the possibility of additional terrorist activities, the Nation's nuclear power plants remain at the highest level of security and the NRC continues to monitor the situation. This advisory was followed by additional advisories, and although the specific actions are not releasable to the public, they generally included increased patrols, augmented security forces and capabilities, additional security posts, heightened coordination with law enforcement and military authorities, and more limited access of personnel and vehicles to the sites. The NRC has conducted various audits of your response to these advisories and your ability to respond to terrorist attacks with the capabilities of the current design basis threat. From these audits, the NRC has concluded that your security programs are adequate at this time.

Robert J. Barrett

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/reading-rm.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 No. 50-286/01-10

Attachment: Supplemental Information

- cc w/encl: J. Yelverton, Chief Executive Officer
 - M. Kansler, Senior Vice President and CEO
 - J. DeRoy, General Manager Operations
 - D. Pace, Vice President Engineering
 - J. Knubel, Vice President Operations Support
 - F. Dacimo, Vice President Operations
 - J. Kelly, Director Licensing
 - C. D. Faison, Manager Licensing
 - H. P. Salmon, Jr., Director of Oversight
 - J. Comiotes, Director, Nuclear Safety Assurance
 - J. Donnelly, Licensing Manager
 - A. Donahue, Mayor, Village of Buchanan
 - J. McCann, Manager Nuclear Safety and Licensing IP2
 - J. M. Fulton, Assistant General Counsel
 - W. Flynn, President, New York State Energy Research and Development Authority
 - J. Spath, Program Director, New York State Energy Research and Development Authority
 - P. D. Eddy, Electric Division, New York State Department of Public Service
 - C. Donaldson, Esquire, Assistant Attorney General, New York Department of Law
 - R. Schwartz, SRC Consultant
 - R. Toole, SRC Consultant
 - C. Hehl, SRC Consultant
 - R. Albanese, Executive Chair, Four County Nuclear Safety Committee
 - S. Lousteau, Treasury Department, Entergy Services, Inc.
 - Chairman, Standing Committee on Energy, NYS Assembly

Chairman, Standing Committee on Environmental Conservation, NYS Assembly Chairman, Committee on Corporations, Authorities, and Commissions

Assemblywoman Sandra Galef, NYS Assembly

C. Terry, Niagara Mohawk Power Corporation

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
- M. Elie, Citizens Awareness Network

- Distribution w/encl: H. Miller, RA/J. Wiggins, DRA (1)
 - T. Bergman, RI EDO Coordinator
 - E. Adensam, NRR (ridsnrrdlpmlpdi)
 - P. Milano, PM, NRR
 - G. Vissing, Backup PM, NRR
 - P. Eselgroth, DRP
 - S. Barber, DRP
 - R. Junod, DRP
 - R. Martin, DRP
 - P. Drysdale, SRI Indian Point 3
 - Region I Docket Room (with concurrences)

DOCUMENT NAME: C:\Program Files\Adobe\Acrobat 4.0\PDF Output\IP30110.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	Е
NAME	NAME PDrysdale/PWE		PEselgroth/PWE	
DATE	02/7/02		02/7/02	

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

- Docket No. 50-286
- License No. DPR-64
- Report No. 50-286/01-10
- Licensee: Entergy Nuclear Northeast
- Facility: Indian Point 3 Nuclear Power Plant
- Location: 295 Broadway, Suite 3 Buchanan, NY 10511-0308
- Dates: November 18 December 29, 2001
- Inspectors: P. Drysdale, Senior Resident Inspector L. James, Resident Inspector A. Blamey, Senior Operations Inspector G. Morris, Reactor Engineer
- Approved by: Peter W. Eselgroth, Chief Projects Branch 2 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000286-01-010, on 11/18 - 12/29/2001, Entergy Nuclear Northeast, Indian Point 3 Nuclear Power Plant. Resident inspection report,

The inspection was conducted by resident inspectors and two regional inspectors. This inspection identified no significant findings. 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

None

B. Licensee Identified Violations

A violation of very low safety significance which was identified by the licensee was reviewed by the inspectors. Corrective actions taken or planned by the licensee appear reasonable. This violation is listed in Section 4OA7 of this report.

SUMMARY OF FINDINGS	ii			
ABLE OF CONTENTS	iii			
Report Details	1			
SUMMARY OF PLANT STATUS	1			
REACTOR SAFETY 1R01 Adverse Weather Protection 1R04 Equipment Alignment 1R05 Fire Protection 1R07 Heat Sink Performance 1R11 Licensed Operator Requalification Program 1R12 Maintenance Rule Implementation 1R13 Maintenance Risk Assessment and Emergent Work 1R14 Personnel Performance During Non-Routine Plant Evolutions and Events 1R15 Operability Evaluations 1R17 Permanent Plant Modifications 1R19 Post Maintenance Testing 1R22 Surveillance Testing	11234556788			
OTHER ACTIVITIES (OA) 1 4OA6 Meetings 1 4OA7 Licensee-Identified Violations 1	1			
ey Points of Contact	2			
List of Items Opened, Closed, and Discussed 1				
List of Acronyms Used				

Report Details

SUMMARY OF PLANT STATUS

The reactor operated at full power for most of the inspection period. On December 7, 2001, plant power was reduced to approximately 91% in order to conduct main turbine stop and control valve testing. Power was returned to 100% the same day following the test, and remained at 100% for the rest of the period. No significant equipment failures or events occurred during the report 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 inspectors reviewed the adequacy of the station's cold weather protection in accordance with the following procedures:

- Surveillance Procedure 3PT-W0201, "Weekly Surveillance Requirements" (checks temperature of the boric acid storage tank)
- Operations Directive OD-8, "Adverse Weather Preparation"
- Operations Directive OD-37, "Seasonal Weather Preparation"
- Surveillance Report 01-33, "Cold Weather Preparations"

The inspectors reviewed the outstanding problem identification tags and work requests (WR) designated as cold weather issues and verified that they were of minor significance and properly captured in the corrective maintenance program. The inspectors also performed a walkdown of the heat tracing control panels and heat trace for the boric acid storage tank and portions of the service water system. The inspectors interviewed control room operators and non-licensed operators to assess their understanding of cold weather protection and associated alarms for plant equipment.

b. Findings

No findings of significance were identified.

- 1R04 Equipment Alignment
- a. Inspection Scope (71111.04)

During December 3 - 6, 2001, the inspectors completed a partial walkdown of the 31 and 32 component cooling water (CCW) system trains when each of the CCW system heat exchangers were removed from service for inspection and preventive maintenance. The inspectors used system operating procedure SOP-CC-001B, "Component Cooling System Operation," and protective tagout clearances 01-1500 and 01-1509 used to isolate the heat exchangers during the maintenance, and verified that the tags hung on system components were consistent with the tagout requirements. Following restoration

of both heat exchangers to service, the inspectors reviewed check-off list COL-CC-1, "Component Cooling System," and procedure 3PT-M098, "Emergency Core Cooling System (ECCS) Alignment Verification," performed by the licensee to confirm, in part, that the CCW system was properly returned to service.

On December 20, 2001, the inspectors completed a partial walkdown of the 32 central control room air conditioning (CCRAC) unit to verify the availability of that equipment while the 31 CCRAC unit was out of service to troubleshoot repetitive tripping of the unit compressors. The inspectors used system operating procedure SOP-V-004, "Control Room Heating, Ventilation, and Air Conditioning System," to verify that the CCRAC equipment alignment was correct; and check-off list COL-RW-2, "Service Water System," to confirm that the service water system was properly aligned to the CCRAC.

b. Findings

No findings of significance were identified.

- 1R05 Fire Protection
- a. <u>Inspection Scope</u> (71111.05Q)

The inspectors conducted fire protection tours in the fire zones listed below to observe 1) that the licensee had been controlling transient combustibles in accordance with fire protection procedure FP-9, "Control of Combustibles"; 2) to ensure that the licensee had been controlling ignition sources in accordance with FP-8, "Controlling of Ignition Sources"; 3) to ensure that the licensee had provided the fire protection equipment as specified in Pre-Fire Plans listed below; and 4) to assess the general material condition of the fire protection equipment and fire protection barriers.

- On December 7, 2001, the inspectors toured the machine shop in the Mechanical Maintenance Department to evaluate the existence of potential fire hazards in the vicinity of the 600, 480, and 220 volt power supplies, and the adjacent flammable liquids storage area in the shop. The availability of fire protection equipment, and the general state of housekeeping in the shop area was also assessed. The inspection included a review of Pre-Fire Plan 54, "Machine Shop/Mechanical Maintenance Offices."
- On December 14, 2001, the inspectors toured the oil separator area of the Turbine Building to evaluate the existence of potential fire hazards and to ensure that fire protection equipment is staged appropriately (Pre-Fire Plan 44, "R4D4 Oil Separator"). There are Appendix R alternate shutdown cables running though this fire zone.
- On December 14, 2001, the inspectors toured the main turbine lube oil storage area of the Turbine Building to evaluate the existence of potential fire hazards and to ensure that fire protection equipment was staged appropriately (Pre-Fire Plan 42, "Turbine Lube Oil Storage/Reservoir Turbine Building"). There are Appendix R alternate shutdown cables running though this fire zone.

No findings of significance were identified.

1R07 Heat Sink Performance

a. <u>Inspection Scope</u> (71111.07A)

On December 2-7, 2001, the licensee sequentially removed the 31 and 32 CCW heat exchangers (HXs) from service in order to perform the 2-year preventative maintenance (PM) inspections on the HX internals, and eddy current testing on the HX tubes.

The inspectors reviewed the following documents related to these inspections:

- <u>WR 99-04460-00</u>: Perform PM (Tube Side) Inspection and Cleaning on 31 CCW HX using Maintenance Procedure HTX-004-CCW.
- <u>WR 99-04460-01</u>: Perform PM Eddy Current Testing on 31 CCW HX using Maintenance Procedure HTX-003-CCW.
- <u>WR 99-04461-00</u>: Perform PM (Tube Side) Inspection and Cleaning on 32 CCW HX using Maintenance Procedure HTX-004-CCW.
- <u>WR 99-04460-01</u>: Perform PM Eddy Current Testing on 32 CCW HX using Maintenance Procedure HTX-003-CCW.

Procedure HTX-004-CCW had recently undergone a general revision following a periodic review, and had incorporated additional guidance to record the total as-found number of tubes (if any) that were completely blocked with mud when the HXs were first opened for inspection. This information was not previously required by the procedure, but the licensee documented it as a program weakness in deficiency/event report (DER) 01-03720 during an NRC inspection on HX performance in September 2001 (report 50-286/01-08). The procedure also contained detailed steps to inspect and record the material condition of the HX internals, including the total number of tubes previously plugged, the level of erosion/corrosion present on various components, the condition of the concrete lining on connected service water piping, the presence of macro-biological fouling, and the amounts and locations of river silt deposited in the HXs.

The inspectors observed the as-found conditions of both CCW HXs to assess their condition after they were first opened for inspection. Approximately one pint of mud and debris was removed from the upper and lower channel heads of each HX. Although some tubes were partially blocked with debris, no tubes in either HX were completely blocked. The inspectors also observed the eddy current testing (ECT) performed on each HX by a licensee contractor. Each HX had over 1350 tubes examined by ECT (approximately 50%) which included those tubes identified as degraded during the previous ECT in 1999. Following the ECT, the inspectors discussed the test results with responsible engineering personnel. Due to significant erosion of several tubes, the 31 HX required 2 additional tubes to be plugged, and the 32 HX required an additional 5 tubes to be plugged. The inspectors noted that the licensee had established a 4.0% administrative limit on the total number of allowable tube plugs based upon the original design basis heat load calculations from Westinghouse, and a 1992 safety evaluation when both HXs were replaced. Following the preventive maintenance on both the 31

and 32 HXs, the total percentages of plugged tubes were at 0.2% and 0.6% respectively.

b. <u>Findings</u>

No findings of significance were identified.

1R11 Licensed Operator Regualification Program

a. <u>Inspection Scope</u> (71111.11)

The inspectors observed licensed operator requalification training and examination sessions to verify that the licensee's requalification program adequately evaluated how well the individual operators and crews mastered the training objectives. The inspectors also assessed the licensee's effectiveness in ensuring that the individuals who are licensed to operate the facility satisfied the conditions of their licenses as specified in 10 CFR 55.53.

On November 26 and 27, 2001, the inspectors observed simulator remediation training of a licensed operating crew which had failed its training cycle dynamic simulator examination. The remediation training reinforced crew communication and procedure usage, and was observed by the assistant operations manager and a training evaluator.

On November 28, 2001, the inspectors observed the dynamic simulator examination of the remediated operating crew which simulated a loss of condenser vacuum coincident with a faulted steam generator. The examination was observed and evaluated by the operation and assistant operations managers and training evaluators. The inspectors attended the post-examination critique conducted by the assistant operations manager and the training evaluator to verify that performance improvements had been identified and discussed with the operating crew.

In addition to the remediation training and examination, the inspectors observed class room discussions by a licensed operating crew during normal requalification training on November 26, 2001. This discussion involved implementation of operating procedures that required manipulation of electrical equipment, and the design and function of that electrical equipment. The inspectors also observed "just-in-time" training conducted on November 28, 2001 for the operating crew scheduled to perform surveillance testing on the main turbine generator stop and control valves.

b. Findings

No findings of significance were identified.

1R12 Maintenance Rule Implementation

a. <u>Inspection Scope</u> (71111.12)

Using 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," and Regulatory Guide 1.1.60, "Monitoring the Effectiveness of

Maintenance at Nuclear Power Plants," the inspectors verified that the licensee was implementing their maintenance program in accordance with NRC regulations and guidelines; that the system reviewed was properly scoped within the maintenance rule; that structures, systems, and components (SSC) equipment failures were properly classified into 10 CFR 50.65 (a)(1) and (a)(2) status; and that the appropriate performance criteria was used for an (a)(2) system.

The inspectors reviewed the following system and performance issues:

- CCRAC unit compressors tripping repeatedly, as documented in DERs 01-04388, -04387, -04397, -04400, -04496, -04505, -04519, -04549, -04550, and -04551. The CCRAC system is a low risk- significant, normally operating system, whose performance is monitored at the system level using functional failures as the principal performance criteria. Utilizing the licensee's criteria, multiple tripping of one of the two compressors in the 31 CCRAC unit was not a functional failure of the air conditioning system, and did not warrant entry into the Maintenance Rule (a)(1) category.
- b. Findings

No findings of significance were identified.

- 1R13 Maintenance Risk Assessment and Emergent Work
- a. <u>Inspection Scope</u> (71111.13)

The inspectors reviewed the licensee's assessment of selected maintenance activities to evaluate the effectiveness of Entergy's risk management for planned and emergent work. The inspectors compared the risk assessments and risk management actions to the requirements of 10 CFR 50.65(a)(4) and the recommendations of NUMARC 93-01 Section 11, "Assessment of Risk Resulting from Performance of Maintenance Activities." The inspectors evaluated the selected activities to verify whether risk assessments were performed when required and appropriate risk management actions were identified.

- <u>WR 01-4313-00: Replacement of the 35 Service Water Pump (SWP):</u> Performance monitoring of the 35 SWP indicated that the decreasing pump efficiency and vibration readings were approaching the point of increased monitoring. On November 28, 2001, the licensee pre-emptively replaced the 35 SWP before the pump efficiency degraded further.
- <u>Surveillance Test 3PT-M79B, 32 Emergency Diesel Generator (EDG)</u> <u>surveillance delayed due to feeder 138 KV offsite feeder out of service</u>: On November 29, 2001, the Consolidated Edison system operator notified the Indian Point 3 control room that they would be taking out of service one of the 138 KV offsite feeders for maintenance. The licensee was not previously aware of this activity and decided to delay a planned surveillance of the 32 EDG until the offsite feeder was returned to service.

No findings of significance were identified.

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

- a. <u>Inspection Scope</u> (71111.14 and 71153)
 - During the performance of 3PT-M13A1, "Reactor Protection Logic Channel Functional Test," on December 3, 2001, reactor trip bypass breaker "A" unexpectedly "tripped free" after receiving a close signal. The licensee replaced the bypass breaker with a spare and performed troubleshooting to determine the cause of the unexpected operation. The inspectors observed the replacement of the bypass breaker, which was a non-routine evolution that had the potential to cause a reactor trip, and was an indicator of personnel performance during potential emergencies.
 - On December 26, 2001, a fault in the local electric grid propagated into the Buchanan switchvard that resulted in an automatic trip of the Indian Point 2 (IP2) turbine generator (load rejection), and also caused an electrical transient in the 480 volt distribution system at Indian Point 3 (IP3). The transient caused the following IP3 equipment to trip: 1) all four control rod drive mechanism (CRDM) fans, 2) the 32 primary water pump, 3) the fuel storage building ventilation system, 4) the 31 and 32 hot penetration blowers, and 5) the 32 spent fuel pool pump. All of this equipment was restarted normally immediately following the transient. In addition, the following equipment started as a result of the transient: 1) the 33 CCW pump, and 2) and the 32 instrument air compressor. Also, the auxiliary equipment on the 32 main transformer switched to its emergency power supply, the 33 inverter switched to its backup power supply, and a trouble alarm occurred in the Appendix R diesel generator. Shortly after the transient, operators restored these conditions to normal after confirming that no equipment damage occurred. The transient did not require operators to enter any Technical Specification limiting conditions for operation (LCOs), no entries into emergency procedures were necessary, and there was no effect on reactor power.

The inspectors observed the performance of plant operators from inside the IP3 control room during their response to the transient. The inspectors verified that operators properly entered the appropriate alarm response procedures and correctly diagnosed the indicated conditions prior to taking recovery actions; and that the control room supervisor shift manager exercised adequate oversight of control room activities. After all plant equipment was restored to normal, the system engineering manager performed a general review of the transient in accordance with the guidance in administrative procedure AP-21.2, "Post Transient Evaluation," to determine if the operators and plant equipment responded as expected, and to assure that the results of the transient were correctly understood. During a follow-up review, the inspectors discussed the details of the transient with the operations shift manager, the system engineering manager, and reviewed the preliminary post transient report for accuracy and completeness.

No findings of significance were identified.

1R15 Operability Evaluations

a. <u>Inspection Scope</u> (71111.15)

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

- OD 01-043 <u>Pinhole Leak on an 18" Service Water Pipe Upstream of TCV-1105, Containment Fan Cooler Temperature Control Valve</u>: The licensee performed non-destructive testing in the area of the leak and performed a pipe stress analysis to determine operability of the pipe. The results concluded that the flaw was minor and did not affect operability. The licensee also used criteria contained in ASME Code Case N-513 to determine that the leak was minor and could be repaired during a future outage.
- OD 01-045 Higher than Expected Air Pressure Required for Closure of Steam Isolation Valves MS-PCV-1310A & B: In December 2001, the licensee received information from an engineering contractor that the air pressure required to close air-operated isolation valves in the steam line to the 32 auxiliary boiler feedwater pump (ABFP) would be higher during a high energy line break than had been previously analyzed. The inspectors reviewed the licensee's initial operability evaluation for isolation valve capability, and the subsequent formal operability determination.

No findings of significance were identified.

1R17 Permanent Plant Modifications

a. <u>Inspection Scope</u> (71111.17)

During December 19 - 27, 2001, the licensee installed steel plate shielding around portions of the 4-inch steam admission line (MS-R-1027) to the 32 ABFP in order to protect IA branch lines that supplied operating air to the 32 ABFP steam pressure control valve (MS-PCV-1139). The licensee had identified that a rupture of the steam line (high energy line break) could cause jet impingement on the adjacent 1-inch and ½-inch instrument air lines and would degrade the ability of the IA system to provide sufficient pressure to close the steam isolation valves (MS-PCV-1310A & B). The steel plate shielding modified the existing piping supports along a vertical section of line MS-R-1027 on the east wall of the ABFP room by attaching ½" steel plate barriers. The modification also re-routed portions of the instrument air tubing near line MS-R-1027 between the positioner and operator for MS-PCV-1139. The inspectors reviewed the applicable sections of design change package DCP-99-3-073 which specified the modification during installation to verify that the installed shielding complied with the specifications in the DCP and afforded the necessary protection to the instrument air lines.

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

• WR 01-04723-03: Post Work Test on Reactor Trip Bypass Breaker "A"

On December 4, 2001, the inspectors observed and reviewed the PMT for the replacement of the reactor trip bypass breaker "A." The inspectors verified the PMT demonstrated the functional capability of the replacement bypass breaker that was installed.

 WR 01-00376-00: Perform Preventive Maintenance Inspection on the 31 Fan <u>Cooler Unit breaker cubicle</u>

On December 18, 2001, the inspectors observed and reviewed the PMT for the PM inspection on the 31 fan cooler unit (FCU) breaker cubicle. The inspectors verified the PMT demonstrated the functional capability of the breaker to control operation of the 31 FCU.

 On December 7, 2001, the licensee performed a PMT of the Appendix R diesel generator (DG) in accordance with procedure 3PT-M090, "Appendix R DG Functional Test." The inspectors reviewed the following completed work request packages which documented the corrective maintenance performed on the DG during the week of December 10, 2001:

<u>WR 99-02648-00</u>: Repair minor oil leaks on cylinder heads R1 through R9, and replace banjo fitting washers with o-ring type.

WR 01-04424-00: Remove all cylinder fuel injection nozzles,

clean/remove debris on seating areas and inspect, pop test all 18 nozzles and reinstall. Replace the fuel injection pump, all banjo fittings, nozzle orings, and pop test all nozzles.

<u>WR 01-04364-00</u>: Remove the inlet flange for the crankcase exhauster, reinstall with new gaskets and flex hose to repair an oil leak. Perform an inspection to determine the correct orientation of the crankcase blower's inlet pick-up window/cut-out.

<u>WR 01-04389-00</u>: Remove lube oil strainer cover, clean gasketed surfaces, reinstalled new gasket, fasteners, and lock washers to repair a strainer cover leak.

<u>WR 01-03187-00</u>: Replace all jacket water hoses, all lube oil hoses, all fuel oil hoses, and all flexible connections.

<u>WR 01-04410-00</u>: Remove jacket water expansion tank sight glass (LG-805), clean, and reinstall to correct difficulty in determining tank level. <u>WR 01-03187-00</u>: Post-Maintenance Test. The test included performance of maintenance procedure GNR-035-ELC, "Appendix "R" Diesel Generator Engine Analysis/Inspection," to collect cylinder temperatures, compression, and firing pressure data. The test also provided instructions to adjust fuel rack settings to balance the engine firing pressures.

Prior to conducting the PMT, maintenance personnel wanted to bump the engine with the cylinder petcocks open to free any accumulated oil inside the cylinders. However, the normal start pushbutton could not be used for this because once pushed, the engine's air start system would continue to turn over the engine until it would eventually stop on over crank. As work proceeded, and after a revised plan was developed to manually crank over the engine, operators noted that a protective tag should be installed on the engine start pushbutton and requested that the field support supervisor issue a protective tagout first to assure personal safety. The inspector discussed with the work control manager the need to identify necessary protective tagout measures prior to allowing work to proceed in the field after the scope of work changes. The licensee documented the need to evaluate this concern in DER 01-4600.

The first PMT run demonstrated that the corrective maintenance performed was satisfactory, with the exception of the lube oil strainer leak. During the PMT, the strainer cover continued to leak and required additional corrective maintenance to repair after the engine was shut down. The GNR-035-ELC procedure was repeated during the second run due to a need to adjust four fuel rack settings. Although no engine parameters were out of specification during the first run, the engine manufacturer's representative considered it advisable to fine adjust four fuel racks to more evenly distribute the engine's firing pressures.

b. Findings

No findings of significance were identified.

- 1R22 Surveillance Testing
- a. <u>Inspection Scope</u> (71111.22)

The inspectors observed portions of the following surveillance tests and reviewed the surveillance test procedures to assess whether 1) the test preconditioned the component(s); 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; and 5) the test was performed in the proper sequence.

- 3PT-Q117, "Containment Spray Pump Functional Test;" December 6, 2001.
- 3PT-Q83, "Refueling Water Storage Tank Level Instrument Check and Calibration (LIC-921);" December 11, 2001.
- 3PT-M62, "480V Undervoltage/Degraded Grid Protection System Functional;" December 13, 2001.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES (OA)

40A6 Meetings

Exit Meeting Summary

On January 22, 2001, the inspectors presented the inspection results to Mr. R. Barrett and other Entergy staff members who acknowledged the inspection results presented. The inspectors asked Entergy personnel whether any materials evaluated during the inspection were considered proprietary. No proprietary information was identified.

4OA7 Licensee-Identified Violations

The following finding is of very low safety significance (Green), and was identified by the licensee. It was a violation of NRC requirements which meets Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a Non-cited Violation (NCV).

- NCV Tracking Number Requirement the Licensee Failed to Meet
- 50-286/01-010-01 10 CFR 50, Appendix B, Criterion III, requires, in part, that measures be established for the selection and review for suitability of application of materials and parts that are essential to the safety-related functions of the structures, systems, and components. Contrary to the above, the licensee failed to ensure that new maintenance isolation valves installed in the 31 central control room air conditioning unit were appropriate for a Freon-based refrigerant system. Consequently, refrigerant leaks occurred when the Freon chemically degraded Teflon parts inside the valves. These leaks contributed to subsequent compressor failures when the 31 air conditioning unit was in service. This issue was entered into the corrective action process as DER 01-03608, and is being treated as a Non-cited Violation.

If you deny this 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 facility.

ATTACHMENT 1

SUPPLEMENTAL INFORMATION

a. Key Points of Contact

b. List of Items Opened, Closed, and Discussed

Opened

None

<u>Closed</u>

None

Opened/Closed

50-286/01-10-01

NCV Failure to ensure application appropriate equipment was installed in the control room air conditioning unit per 10CFR 50, Appendix B, Criterion III

c. List of Acronyms Used

ABFP AP CCRAC CCW CFR COL CRDM DCP DER DG ECCS ECT FCU FP HX IP2 IP3	auxiliary boilier feedwater pump administrative procedure central control room air conditioning component cooling water Code of Federal Regulations checkoff list control rod drive mechanism design change package deviation/event report diesel generator emergency core cooling system eddy current testing fan cooler unit fire protection heat exchanger Indian Point 2 Indian Point 3	
KV	kilovolt	
LCO	Limiting Condition for Operation	
NCV NRC	Non-cited Violation Nuclear Regulatory Commission	
OD	operability determination	
PM	preventive maintenance	
PMT	post-maintenance test	
SOP	system operating procedure	
SSCs SWP	structures, systems, and components service water pump	
WR	work request	
	-	