September 19, 2000

Mr. A. Alan Blind
Vice President - Nuclear Power
Consolidated Edison Company of
New York, Inc.
Indian Point 2 Station
Broadway and Bleakley Avenue
Buchanan, NY 10511

SUBJECT: NRC's INDIAN POINT 2 INSPECTION REPORT 05000247/2000-009

Dear Mr. Blind:

On August 19, 2000, the NRC completed an inspection at the Indian Point 2 reactor facility. The enclosed report presents the results of that inspection. The results of this inspection were discussed on August 29, 2000, with Mr. John Groth and other members of your staff.

NRC inspectors examined numerous activities as they related to reactor safety and compliance with the Commission's rules and regulations, and with the conditions of your operating license. The inspection consisted of a selected examination of procedures and representative records, observations of activities, and interviews with personnel. Specifically, it involved seven weeks of resident and region-based inspections of engineering, operations and maintenance. All findings were determined to be within the licensee response band (i.e. Green).

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room and will be available on the NRC Public Electronic Reading Room (PERR) link at the NRC home page, http://www.nrc.gov/NRC/ADAMS/index.html. 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 Safety

Docket No. 05000247
License No. DPR-26

Enclosure: Inspection Report 05000247/2000-009

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REGION I

Docket No.:	05000247
License No.:	DPR-26
Report No.:	05000247/2000-009
Licensee:	Consolidated Edison Company of New York, Inc.
Facility:	Indian Point 2 Nuclear Power Plant
Location:	Buchanan, New York 10511
Dates:	July 2, 2000 to August 19, 2000
Inspectors:	William Raymond, Senior Resident Inspector Peter Habighorst, Resident Inspector Dr. Jason Jang, Senior Health Physicist John McFadden, Senior Health Physicist
Approved by:	Peter W. Eselgroth, Chief Projects Branch 2 Division of Reactor Projects

SUMMARY OF FINDINGS

Indian Point 2 Nuclear Power Plant
NRC Inspection Report 05000247/2000-009

IR 05000247-00-09, on 07/02-08/19/2000; Con Edison; Indian Point 2 Nuclear Power Plant. Resident Operations Report, Public Radiation Safety, Occupational Radiation Safety and Steam Generator Replacement Project.

The inspection was conducted by resident and region-based inspectors. This inspection identified all green issues. The significance of issues is indicated by their color (green, white, yellow, red) and was determined by the Significance Determination Process (SDP). None of the conditions reviewed during the inspection required assessment using the SDP. No findings or issues were identified in the Reactor Safety, Public Radiation Safety and Occupational Radiation Safety Areas.

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SUMMARY OF PLANT STATUS

During the inspection period the plant was in cold shutdown following activities to inspect steam generators, conduct refueling, and complete maintenance and modifications. Preparations for plant startup were in progress while NRC completed its review of the steam generator condition monitoring and operational assessment. On August 8, 2000, Con Edison announced its decision to begin the steam generator replacement outage. Following reactor disassembly, Con Edison began removing fuel from the reactor on August 19, 2000.

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

1R04 Equipment Alignment

a. Inspection Scope

The inspector conducted a walkdown of

- the fire protection sprinkler system for the emergency diesel generator room
- the fuel oil system for the emergency diesel generators
- the 125 volts direct current (VDC) distribution system

Documents reviewed that are applicable to these system alignment verifications included: System Operating Procedure (SOP) 29.6 and check off list (COL) 29.6 for the Fire Protection System Operation; COL 27.3.1, Diesel Generators; and, plant drawing 9321-F-2030, Fuel Oil To Diesel Generators; and SOP 27.1.6 and COL 27.1.6 for the DC Distribution System.

The inspector reviewed outstanding maintenance activities, outstanding corrective action program deficiencies, temporary facility changes, and operator work arounds associated with the emergency diesel generator fuel oil system.

b. Issues and Findings

No findings were identified.

1R05 Fire Protection

a. Inspection Scope

The inspector conducted tours of areas important to reactor safety, listed below, to evaluate, as appropriate, 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.

- Emergency Diesel Generator Oil Sump Sprinklers (CR 200005419)

- Primary Auxiliary Building 68 Foot Elevation
- 480 Volt Switchgear Room (Fire Zone 14)
- Spent Fuel Pool Equipment Area (Fire Zones 90A and 91A)
- Main Steam and Feedwater Valve Area (Fire Zone 65A)

The inspector observed a fire brigade drill on July 13, 2000. The inspector evaluated the fire brigade readiness to fight fires with properly donned protective clothing and self-contained breathing apparatus (SCBA). The inspector confirmed the brigade entered the fire area in a controlled manner and brought sufficient fire fighting equipment. The inspector confirmed that the pre-planned drill scenario was followed and that drill objectives were met.

b. Issues and Findings

The licensee identified several deficiencies in the emergency diesel generator sprinkler system during the conduct of surveillances per PT-EM15. The licensee corrected problems with sprinkler head spray deflectors and sensing elements. The inspector identified additional sensing element problems that were subsequently addressed by the licensee. The deficiencies were documented in condition report CR 200005419.

The inspector observed numerous minor deficiencies in fire zones 90A, 91A, and 65A. The deficiencies involved improper mounting of an emergency light, two fire suppression line leaks, and errors in the fire hazards analysis drawing depicting the location of portable fire extinguishers. The deficiencies were documented in condition reports (CRs 200005399, 200005297, 200005294, and 200005298.

The fire brigade response during a drill was delayed due to communication problems, which were documented in the licensee's corrective action program (condition reports 200005248 and 200005245).

No findings were identified.

1R12 Maintenance Rule Implementation

a. Inspection Scope

The inspector reviewed selected risk significant equipment problems that have occurred. Items checked included licensee evaluation of functional failures, maintenance preventable functional failures, repetitive failures, availability and reliability monitoring, and system specialist involvement. Additionally, the licensee's Maintenance Rule Basis Document and system condition reports were reviewed and system engineers were interviewed. The following system/component performance issues were assessed:

- gas turbine GT-3 black start diesel failure (CR 200005510, WO 00-16780)
- 125 Volt DC system
- fuse repair impacting Train A undervoltage protection logic (CR 199904877)
- 23 static inverter swap to alternate power supply (CR 200000225)
- 24 battery inoperability (CR 199907340)
- minimum electrolyte level in 22 station battery (CR 199907193)

- 22 Battery Charger out of service for planned maintenance (CR 1999905154)
- 21 Battery Charger out of service for planned maintenance (CR 199907114)
- transfer switch to emergency source of power (CR 199906701)
- instrument air system
- air leak on pre-filter (CR 199904588)
- deformed air lines to high pressure steam dumps (CR 199907299)
- air leak on air regulator for 21 steam generator blowdown outboard isolation valve (CR 199907629)

b. Issues and Findings

The inspector identified that Con Edison failed to properly account for unavailability hours during planned maintenance on a cabinet fan for the 21 battery charger (CR 199907114). The maintenance occurred on September 19, 1999 when the reactor coolant system temperature was at 330 Fahrenheit. The system engineer failed to recognize that the maintenance rule basis document states that the criteria are required to be monitored above a cold shutdown plant condition. Con Edison added eight unavailability hours to the 21 battery charger. The additional hours did not result in the system performance criteria being exceeded (less than 17 hours/24 months).

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspector evaluated the effectiveness of the risk assessments performed before maintenance was conducted and verified how the licensee managed the risk. The inspector verified that the licensee took the necessary steps to plan and control the resulting emergent work activities. Additionally, it was verified that the licensee had adequately identified and resolved maintenance risk assessments and emergent work problems. The following maintenance risk assessments and/or emergent performance issues were assessed:

- 23 Charging Pump Discharge Check Valve 4005 (CR2000, WO 00-16722)
- 22 Station Battery Cell Replacement (WO 00-16756)
- Emergency Diesel Generator Sprinkler System (WO 00-16764)
- Station Auxiliary Transformer Tap Changer Local Indication (WO 00-16676)
- Residual Heat Removal Suction Valve Packing Leak (WO 00-16931)

b. Issues and Findings

There were no findings during these inspections.

1R15 Operability Evaluations

a. Inspection Scope

The inspector reviewed operability evaluation 00-013, Station Battery 22 Evaluation, Revision 0, July 19, 2000, to verify it was technically acceptable and in accordance with licensee procedures and NRC requirements.

b. Issues and Findings

The 22 Station Battery failed the acceptance criteria when load tested per PT-R76B on July 18. The test was performed to demonstrate terminal voltage remained above 110.2 vdc at the 2 hour test interval, and verify that the battery could deliver 90% of rated capacity with a minimum terminal voltage of 105 vdc at the 4 hour interval. The battery met the acceptance criteria at the 2 hour mark with a terminal voltage of 110.7 vdc. The test was stopped after 3 hour 35 minute mark when terminal voltage dropped to
104.9 vdc.

Con Edison completed an operability determination to show that the battery could perform its intended functions for the 2 hour duty cycle required of the battery. The technical basis included three tests which showed with repeatability that capacity was greater than 85%. Con Edison intends to install a new battery prior to startup from the steam generator replacement outage. Con Edison actions continued at the end of the inspection period to identify the root cause for the 22 battery performance problems. The deficiencies were described in condition report 200005366.

No findings were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

The inspectors verified that the post-maintenance test procedures and test activities were adequate to verify system operability, and functional capability. The inspectors witnessed tests and/or reviewed the test data to verify the equipment met the design/licensing bases requirements and commitments and demonstrated that the equipment was capable of performing its intended safety functions. The effect of testing on the plant was reviewed. Additionally, the inspectors reviewed the testing to verify: it adequately addressed the scope of the maintenance work performed; acceptance criteria was clear and demonstrated operational readiness; and test equipment range and accuracy was consistent with the application. Finally, the inspectors verified that after completion of testing, equipment was returned to the positions/status required for the equipment to perform its safety function.

The inspector also verified that the licensee identified surveillance testing problems at the appropriate threshold and entered them in the corrective action program and implemented appropriate corrective actions. The following system/component post maintenance tests were assessed:

- Emergency Diesel Generator Sprinkler System, PMT 00-16764
- Manipulator Crane Overload and Underload Setpoints, PT-R8A (CR 200006123)

c. Issues and Findings

No findings were identified.

1R20 Refueling and Outage Activities

a Inspection Scope

The inspectors reviewed the following activities related to the Unit 2 refueling and maintenance outage for conformance to the applicable procedures, and witnessed selected activities associated with each evolution. Surveillance tests and inspections were reviewed to verify completeness within the technical specifications and procedure requirements.

- reactor operation on residual heat removal system per SOP 4.2.1
- shutdown risk evaluations
- prerequisites and preparations for plant startup
- plant heatup to 340 degrees F per POP 1.1 (CR 200005582, 200005583)
- plant testing and steam generator leak measurement at 340 F, 1500 psig
- residual heat removal (RHR) valve testing
- reactor disassembly, FP-IPP-R15A (CR 200006117)
- core offload and foreign object search, FP-IPP-15A (CR 200006218)
- failure of radiographic source to return to shielded position (CR 200006130)
- refueling interlocks and associated bypasses test per PT-R8 (CR 200006116)

b. Issues and Findings

Several problems with the refueling equipment caused delays in completing the offload. The deficiencies were documented in condition reports CR 200006123, 200006125, 200006135, 200006175, 200006179, and 200006198. Problems with some equipment were in the work backlog, but were not corrected prior to the start of vessel disassembly and core offload. ConEd initiated a CR response plan to evaluate the problems and initiate corrective actions to improve refueling equipment performance.

Inadequate procedure use was observed during vessel disassembly on August 18 when the controlling copy of the refueling procedure in the containment was not maintained current with plant conditions and the controlled copy outside the containment. No unsafe plant conditions were identified. The deficiency was entered in condition report 200006117.

Con Edison retrieved a loose part from the top of the core plate. The examinations below the lower internals were limited by the available equipment to 5 small areas on the lower vessel head, and did not include the areas, such as the core support basket, deemed vulnerable to a foreign object. Con Edison actions continued at the end of the inspection to identify and evaluate the part retrieved from the vessel, and consider what additional examinations should be done during the present outage.

No findings were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors witnessed the surveillance tests and/or reviewed the test data of selected risk-significant SSCs listed below to assess, as appropriate, whether the SSCs met technical specification requirements, and updated final safety analysis report and licensee procedure requirements. The inspectors also determined if the testing effectively demonstrated that the SSCs were operationally ready and capable of performing their intended safety functions.

The inspector also verified that the licensee identified surveillance testing problems at the appropriate threshold and entered them in the corrective action program and implemented appropriate corrective actions.

- PT-R76B, Station Battery 22 Load Test (CR 200005366)
- PT-EM15, Diesel Generator Building Water Sprinkler System (CR 200005419)
- PT-R53A, RHR Valves 730, 731 Integrity
- PI-M5, Alternate Safe Shutdown Inventory
- PT-R93, Essential Service Water Header Flow Balance (CRs 200005646, 200005377, 200005383, 200005386, 200005387, 200005371, 200005392, and 200005255)

b. Issues and Findings

The purpose of surveillance PT-R93 was to verify service water flow was properly aligned to safety equipment following a safety injection signal. The service water flow rate to the instrument air compressor heat exchanger was 45 gallons per minute, which did not meet the acceptance criteria of 65 gallons per minute.

The inspector identified that PT-R93 did not fully assure that design requirements would be met as described in Updated Final Safety Analysis Report Table 9.6-1. Specifically, there was no acceptance criteria for individual flows to the containment fan motor coolers, and service water flow was not measured to essential radiation monitor sample coolers (containment service water monitor, and steam generator radiation monitor). Although the acceptance criteria did not specify fan motor cooler individual flows, it was recorded and met the UFSAR requirements. Though not recorded, sufficient flow to the radiation monitors was confirmed through the lack of high temperature conditions and proper system performance during two past safety injections. The noted deficiencies were not risk significant, and the service water system would perform the required safety

function. Con Ed initiated a CR and actions continued at the end of the inspection period to resolve this issue.

During the development of the service water system design basis document, Con Ed identified numerous calculational differences on required service water flow to the fan cooler units, instrument air compressor closed cooling water heat exchanger, and service water strainers. These issues were placed in the licensee's corrective action program (CRs 2000-06154, 6155, 6156, 6157 and others).

No findings were identified.

1EP1 Drill Observation

a. Inspection Scope

The inspector observed Con Edison conduct and evaluate an emergency plan training drill on August 16, 2000.

b. Issues and Findings

The emergency response organization was activated and managed a scenario starting with a steam generator tube leak at the Alert level, which subsequently escalated to Site Area and General Emergency due to complications involving loss of normal power. The Operations Support Center was exercised to simulate equipment repairs.

The emergency response facilities were staffed in a timely manner, accountability was completed in 31 minutes, and emergency action levels were properly classified. The accountability time exceeded the expectation by one minute. Con Ed initiated a CR. Con Edison noted areas for improvement included recurrent equipment problems with the emergency data display system, pagers activation, audibility of the public address system, and actions by the joint news center to issue press releases in a timely manner.

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Control To Radiologically Significant Areas

a. Inspection Scope

The inspector reviewed the following ongoing exposure significant activities and reviewed the following program documents to evaluate the effectiveness of the licensee's access controls to radiologically significant areas.

- Reactor head disassembly (prior to defueling in preparation for steam generator replacement) (RWP 558)

- Reactor cavity sump level test (prior to pulling thimbles) (RWP 577)
- Procedure SAO (Station Administrative Order)-133, Procedure, Technical Specifications and License Adherence and Use Policy
- Procedure SAO-300, Radiation Protection Plan
- Procedure SAO-302, Radiation Work Permit (RWP) Program

The inspector reviewed the associated radiation work permits (RWPs) and prescribed radiological controls and reviewed radiological postings, barricades and access controls. The inspector also evaluated the awareness, by radiation workers and radiation protection technicians, of significant radiological conditions in their workplace including controls/limits of the applicable radiation work permits for the above-cited activities.

The review was against criteria contained in 10 CFR 19.12, 10 CFR 20 (Subparts F, G, H, and J), site Technical Specifications, and site procedures.

b. Issues and Findings

No findings or issues were identified.

2OS2 ALARA Planning and Control

a. Inspection Scope

The inspector reviewed the following activities and reviewed the following program documents to determine the effectiveness of ALARA (As Low As Reasonably Achievable) planning and control.

- Station ALARA Committee Meeting Minutes for March 1, March 10, March 14, March 24, March 31, April 8, April 13, April 21, May 8, and May 15, 2000
- Exposure estimates, exposure performance, post-job reviews, and post-outage ALARA report critiques for the following completed dose-significant job evolutions:
- Eddy current testing on all steam generators (RWP 236)
- Reactor coolant pump 21 and 23 seal and motor preventive maintenance (RWP 263)
- Sludge lancing (RWP 269)
- Reactor head disassembly (RWP 314)
- Valve inspections and repairs throughout containment (RWP 366)
- Procedure SAO-303, ALARA Program
- Procedure SAO-305, Station ALARA Committee

The review was against criteria contained in 10 CFR 20.1101, 10 CFR 20.1702, site Technical Specifications, and site procedures.

b. Issues and Findings

No findings were identified.

2OS3 Radiation Monitoring Instrumentation

a. Inspection Scope

The inspector reviewed the following activities and reviewed the following program documents to determine the effectiveness of radiation monitoring instrumentation.

- Procedure PC-EM 4, Rev. 5, Non-VC Area Monitors R-1, R-4, R-5, R-6, R-8, R-5987, R-37-1, R-37-2, and R-37-3 Calibration
- Calibration records dated February/March 2000 for Non-VC Area Monitors R-1, R-4, R-5, R-6, R-8, R-5987, R-37-1, R-37-2, and R-37-3
- Procedure PC-R15B, Rev. 12, Area Radiation Monitors R-2 and R-7 Calibration
- Calibration records dated October 1999 for Area Radiation Monitors R-2 and R-7
- Procedure HP-3.201 Use of Calibration Sources
- Installation and Operation Manual for Series 10 Single Source Calibrator (Cesium-137, 100 millicuries on 09-15-94, SN 11071)

The review was against criteria contained in 10 CFR 20.1501, site Technical Specifications, and site procedures.

b. Issues and Findings

No findings or issues were identified.

2PS1 Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope

The inspector reviewed the following documents and conducted the following activities to evaluate the effectiveness of the licensee's REMP. The requirements of the REMP were specified in the Technical Specification/Offsite Dose Calculation Manual (TS/ODCM):

- the 1999 Annual REMP Report;
- the most recent ODCM (Revision 6, October 28, 1999) and technical justifications for ODCM changes;
- the most recent calibration results for the meteorological monitoring instruments and weekly display validation log (between meteorological monitoring tower and the control room);
- the five most recent calibration results for all TS air samplers;
- the measurement laboratory QC program, including the interlaboratory comparison program and the corrective actions for any deficiencies;
- Condition Reports and resolutions (CR-199906658; CR-199906683; CR-200002834; and CR-200004752);
- 1999 Meteorological Program Self-assessment (IP-RES-99-245);

- 1999 QA audit for the REMP/ODCM implementations (Audit Report Number A99-09-I, IP2/IP3 Joint Audit of the REMP and Meteorological Monitoring Program);
- the Land Use Census (procedure and result);
- implementation of the environmental thermoluminescent dosimeters (TLDs) program;
- walk-down for determining whether all air samplers, composite water sampler, vegetation sampling, and 20% of TLDs were as described in the ODCM;
- observation of water sampling techniques; and
- associated REMP procedures.

b. Issues and Findings

No findings were identified.

2PS2 Radioactive Material Control Program

a. Inspection Scope

The inspector reviewed the following documents and 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 Radiologically Controlled Area (RCA):
- the most recent calibration results for the radiation monitoring instrumentation (small articles monitor), including the (a) alarm setting, (b) response to the alarm, and (c) the sensitivity;
- the licensee's criteria for the survey and release of potentially contaminated material; and
- associated procedures and records to verify lower limits of detection.

The review was against criteria contained in 10CFR20. Other documents referenced included NRC Circular 81-07, NRC Information Notice 85-92, NUREG/CR-5569, Health Position Data Base (Positions 221 and 250), and the licensee's procedures.

2. Issues and Findings

No findings were identified.

4. OTHER ACTIVITIES [OA]

4OA1 Performance Indicator Verifications

.1 Unplanned Scrams per 7000 Critical Hours

a. Inspection Scope

The inspector examined corrective action program records, control room logs, licensee event reports, and past NRC inspections reports for occurrences involving scrams while critical. The inspector reviewed data for all four quarters of 1999 and the 1st and 2nd quarters of 2000. The inspector guidance in NEI 99-02, "Regulatory Assessment Performance Indicator Guideline", Revision 0, was consulted to verify that plant data was properly identified within the published performance indicators.

b. Issues and Findings

Con Edison's data for the second quarter of 2000 showed the performance indicator (PI) for unplanned scrams per 7000 critical hours in the white band. The performance indicator for Emergency AC power was in the white band, and the indicator for reactor coolant system identified leak rate was in the yellow band. All other performance indicators were in the green band (licensee response band).

The PI for unplanned scrams per 7000 critical hours was green for the first quarter of 2000 (value of 2.1) based on scrams on August 31, 1999, and February 15, 2000, but entered the white band for the second quarter of 2000 (value of 3.1 versus a threshold of 3.0) because the plant remained subcritical for that quarter and the number of critical hours for the four quarter average decreased. Thus, the PI value will increase until the plant returns to operations and the number of critical hours changes.

The Emergency AC Power PI was white for Train 3 (value of 3.2 vs threshold of 2.5) for the same reason as the previous quarter: emergency diesel generator 23 fault exposure hours for an improperly calibrated breaker. The PI was trending toward green. The RCS barrier integrity PI was yellow (value of 1090 vs threshold of 100) due to the February 15 steam generator tube leak. No problems with PI accuracy or completeness were found.

No findings were identified.

.2 RETS/ODCM Radiological Effluent Occurrences

a. Inspection Scope

The inspector reviewed the adequacy and effectiveness of the licensee's implementation of the public exposure performance indicator (PI). The following documents were reviewed to ensure the licensee met all requirements of the PI from the third quarter 1999 to the second quarter 2000 (four quarters):

- monthly projected dose assessment results due to radioactive liquid and gaseous effluent releases; and
- quarterly projected dose assessment results due to radioactive liquid and gaseous effluent releases.

2. Issues and Findings

No findings were identified.

4OA2 Cross Cutting Issues

a. Inspection Scope

Equipment deficiencies and human performance issues identified during the inspection are summarized below.

b. Issues and Findings

Equipment deficiencies and problems with communication equipment were noted in the fire protection area. The inspector identified equipment deficiencies not noted by the licensee (Section 1R05). Con Edison staff did not recognize that the maintenance rule basis document requires that performance criteria be monitored when the plant is in hot shutdown, and did not account for unavailability hours during planned maintenance (Section 1R12). Several problems with the refueling equipment caused delays in completing the offload. Problems with some equipment were in the work backlog, but were not corrected prior to the start of vessel disassembly (Section 1R20). Inadequate procedure use was observed during vessel disassembly when the refueling procedure in the containment was not maintained current with plant conditions and the controlled copy outside the containment (Section 1R20). The acceptance criteria in surveillance procedure PT-R93 was not adequate to assure the service water system design flows would be met as described in the Updated Final Safety Analysis Report (Section 1R22).

No findings were identified.

4OA3 Steam Generator Replacement

a Inspection Scope (IP 50001)

The inspectors reviewed the following activities related to the replacement of the Unit 2 steam generators. Inspection Procedure 500001 was used as a guide to review activities for conformance with applicable licensee and regulatory requirements.

Con Edison established a steam generator replacement (SGR) project team and selected a primary contractor (Steam Generator Team) to implement the project. Con Edison and SGT began staffing the project teams in April 2000 and began the detailed engineering, planning and preparations to conduct the project. The old Model 44 steam generators will be replaced with Model 44F steam generators, which have been on site since 1987. The old steam generators will be stored on site in a temporary location, and

then moved to a building being constructed for that purpose. The polar crane will be modified with the addition of a temporary lifting device (TLD) to lift the old and replacement steam generators. The inspectors reviewed preparations for the replacement project, including:

- steam generator replacement (SGR) project planning, organization and controls
- plans for project quality assurance, audits and surveillance
- replacement steam generator storage and electro-polishing
- plans for steam generator lifting and transport
- plans for old steam generator storage
- plans for the completion of 50.59 safety evaluations

The inspector interviewed the Health Physics Manager of the steam generator replacement project team to determine the readiness of organizational responsibilities and staffing, project planning and preparation, facilities, and equipment. The inspector selectively reviewed the following documents to determine the effectiveness of access control to radiologically significant areas and of ALARA planning and control for the steam generator replacement project (SGRP).

- Procedure SAO-185, Indian Point Station Steam Generator Replacement Project
- Radiation Protection Plan-Steam Generator Replacement Project
- Health Physics Project Overview (SGRP)
- HPAP (Health Physics Activity Plan)-01, Training and Recommended Reading Plan (SGRP)
- HPAP-02, Containment Access Facility Plan-Steam Generator Replacement Project (SGRP)
- HPAP-03, Decontamination Facility Plan (SGRP)
- HPAP-04, Communication Plan (SGRP)
- HPAP-05, Inside Crane Wall Work Guideline for SGR (SGRP)
- HPAP-06, ALARA Support Plan (SGRP)
- HPAP-07, Ventilation Plan (SGRP)
- HPAP-08, Pipe Cutting, Machining, and Welding (SGRP)
- HPAP-09, Reactor Coolant System Pipe End FME (Foreign Material Exclusion) Cover, Tripod Assembly, and Internal Shielding (SGRP)
- HPAP-10, Reactor Coolant System Pipe End Decontamination (SGRP)
- HPAP-11, Moving the Original Steam Generators to the OSG (Original Steam Generator) Interim Storage Area (SGRP)
- HPAP-12, Radiography (SGRP)
- HPAP-13, FOSAR (Foreign Object Search And Retrieval) and Replacement Steam Generator Bowl Closeout (SGRP)
- HPAP-14, Radioactive Material Handling Plan (SGRP)
- HPAP-15, Laundry Plan (SGRP)
- HPAP-17, Asbestos Containing Material Handling Plan
- SGRP RWP Listing
- SGRP person-rem estimates by task number
- Draft Work Package Number 1040 Installation of Temporary Shielding

The review was against criteria contained in 10 CFR 19.12, 10 CFR 20 (Subparts F, G, H, and J), 10 CFR 20.1101, site Technical Specifications, and site procedures.

Finally, the inspectors witnessed selected activities associated with evolutions in progress.

b. Issues and Findings

No findings were identified.

4OA4 Inspection Item Followup

.1 (Closed) IFI 05000247/199910-01: Auxiliary Feed Pump Bearing Cooling. The inspector reviewed the licensee's response to this item in condition report 199909349 and concluded that it adequately evaluated the use of city water to provide back-up cooling of both motor-driven auxiliary feedwater pumps.

.2 (Closed) VIO 0500247/1999006-01: Temporary Facility Changes. The inspector reviewed the licensee response to this item in condition reports 199907501, 199907502, 199907503, and Con Edison's response to the notice of violation on October 4, 1999. The corrective actions adequately addressed a failure to properly change a procedure impacted by a temporary facility change on gas turbine 2. The inspector reviewed condition reports in the last year to understand if corrective actions had been effective. Based upon review, the inspector concluded that actions have been effective to ensure that temporary facility changes are initiated when required and that procedures are changed based upon the impact of the temporary facility change. This item is closed.

.3 (Closed) LER 05000247/1998007-01: Gas Turbine Output Breaker. The inspector reviewed the additional information the licensee provided to analyze this event. The corrective actions to address the deficiency were acceptable. This item is closed.

.4 (Closed) IFI 05000247/1998002-04: TS Acceptance Criteria. The inspector reviewed licensee surveillance procedures associated with containment spray nozzles and fuel storage building filtration and concluded that the acceptance criteria agreed with licensing and engineering analysis. This item is closed.

.5 (Closed) VIO 05000247/1998011-01: Acceptance Review of Vendor Calculations. This item concerned the failure to review calculations performed by a vendor. The NRC previously verified that the corrective action and preventive action were appropriate. This Severity IV violation was issued in a Notice of Violation prior to the current NRC Enforcement Policy, issued on May 1, 2000 (65FR25368). This violation is considered a Non-Cited Violation, in accordance with Section VI.A. This issue is closed.

No findings were identified.

4OA5 Management Meetings

a. Exit Meeting Summary

On August 29, 2000, the inspector presented the overall findings to Mr. J. Groth of Con Edison management. Con Edison acknowledged the findings and did not contest the conclusions. Additionally, none of the information reviewed by the inspectors was considered proprietary.

PARTIAL LIST OF PERSONS CONTACTED

B. Allen	Regulatory Affairs Manager
M. Miele	Radiation Protection Manager
R. Masse	Plant Manager
J. McCann	Licensing Manager
J. Ventosa	Site Engineering Manager
R. Sutton	Maintenance Rule Coordinator
M. Entenberg	Manager Facilities Engineering
P. Russell	Manager Corrective Action Program
T. McCaffrey	Plant Engineering
M. Dampf	Radiation Protection Special Projects
M. Donegan	Health Physics/Radioactive Waste Manager
G. Gross	Radiation Protection-Instrumentation
A. King	Engineering, Test and Performance
L. Menoscal	Radiation Support Health Physicist
V. Nutter	Radiation Support Manager

ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

IFI 05000247/1998002-04: TS Acceptance Criteria
LER 05000247/1998007-01: Gas Turbine Output Breaker
VIO 05000247/1998011-01: Acceptance Review of Vendor Calculations
VIO 05000247/1999006-01:Temporary Facility Changes
IFI 05000247/199910-01: Auxiliary Feed Pump Bearing Cooling

LIST OF ACRONYMS USED

ALARA	As Low As Reasonably Achievable
CFR	Code of Federal Regulations
COL	check off list
CR	condition report
FME	Foreign Material Exclusion
HPAP	Health Physics Activity Plan
ODCM	Offsite Dose Calculation Manual
PERR	Public Electronic Reading Room
RCA	Radiologically Controlled Area
REMP	Radiological Environmental Monitoring Program
RHR	residual heat removal
RWP	Radiation Work Permit
SCBA	self-contained breathing apparatus
SDP	significance determination process
SAO	Station Administrative Order
SGRP	Steam Generator Replacement Project
SGT	Steam Generator Team
SOP	system operating procedure
SSC	structure, system and component
TLD	thermoluminescent dosimeter
TS	technical specification
UFSAR	updated final safety analysis report
VDC	volts direct current

ATTACHMENT I

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revised its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents), radiation safety (protecting plant employees and the public), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety
- Initiating Events
- Mitigating Systems
- Barrier Integrity
- Emergency Preparedness

Radiation Safety
- Occupational
- Public

Safeguards
- Physical Protection

To monitor these cornerstones of safety, the NRC uses inspections and performance indicators that generate information about the safety significance of plant operations. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the NRC can reach objective conclusions regarding overall plant performance. The NRC will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC actions in response to the significance of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.