

DEC 10 1985

Docket No. 50-247

Consolidated Edison Company of
New York, Inc.
ATTN: Mr. Murray Selman
Vice President
Indian Point Station
Broadway and Bleakley Avenue
Buchanan, New York 10511

Gentlemen:

Subject: Systematic Assessment of Licensee Performance (SALP)
Report No. 50-247/85-99

This refers to the evaluation we conducted of the activities at Indian Point Nuclear Generating Station, Unit 2, for the period of August 1, 1984 through July 31, 1985 and discussed with members of your staff on October 25, 1985 at the Region I office in King of Prussia, Pennsylvania. The list of meeting attendees is attached as Enclosure 1. The NRC Region I SALP Report is provided as Enclosure 2. Our letter of October 11, 1985 (Enclosure 3) forwarded the SALP Board Report and solicited comments within 20 days of our meeting. As discussed during the October 25 meeting and subsequently documented in your November 13, 1985 letter (Enclosure 4), the comments relative to reactor vessel surveillance have been clarified in the enclosed report. Your comment relative to improved performance in radiological control is noted.

Our overall assessment of your facility operation concludes that your initiatives have improved performance and there is effective management attention and involvement oriented toward nuclear safety in the functional areas evaluated. Specifically, active corporate and site management actions have resulted in three Category I assessments and improving trends in the remaining areas evaluated. Your programs initiated to identify and deal with previously recognized shortcomings in the Radiological Controls area have resulted in program improvements, the effectiveness of which will be assessed during the current assessment period. We encourage continued management attention to this area to provide for feedback and ongoing evaluation of your program initiatives.

We consider that our meeting and subsequent interchange of information were beneficial and improved mutual understanding of your activities and our regulatory program.

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No reply to this letter is required. Your actions in response to the NRC Systematic Assessment of Licensee Performance will be reviewed during future inspections of your licensed facility.

Your cooperation is appreciated.

Sincerely,

Original signed by
Thomas E. Murley
Thomas E. Murley
Regional Administrator

Enclosures:

1. SALP Management Meeting Attendees
2. NRC, Region I SALP, Indian Point Unit 2, September 24, 1985
3. NRC, Region I Letter, T. Murley to M. Selman, October 11, 1985
4. Con Ed Letter, M. Selman to T. Murley, November 13, 1985

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ENCLOSURE 1

OCTOBER 25, 1985 SALP MANAGEMENT MEETING ATTENDEES

1. Licensee Attendees

E. McGrath, Executive Vice President of Operations
M. Selman, Vice President, Nuclear Power
J. Basile, General Manager, Nuclear Power Generation
M. Miele, General Manager, Environmental Health & Safety
M. Blatt, Manager, Regulatory Affairs
M. Lee, Chief, Nuclear Engineering

2. NRC Attendees

T. Murley, Regional Administrator, RI
J. Allan, Deputy Regional Administrator
R. Starostecki, Director, Division of Reactor Projects
S. Ebnetter, Director, Division of Reactor Safety
S. Varga, Chief, Operating Reactors Branch No. 1, NRR
S. Collins, Chief, Projects Branch No. 2, RI
R. Bellamy, Chief, Emergency Preparedness and Radiological Protection
Branch, RI
M. Shanbaky, Chief, PWR Radiological Protection Section, RI
D. Neighbors, Licensing Project Manager, NRR
M. Slosson, Licensing Project Manager, NRR
L. Rossbach, Senior Resident Inspector, Indian Point 2
P. Kelley, Resident Inspector, Indian Point 2
B. Hillman, Reactor Engineer, Reactor Projects Section 2B

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE
INSPECTION REPORT 50-247/85-99
CONSOLIDATED EDISON COMPANY, INC.
INDIAN POINT UNIT 2 NUCLEAR POWER PLANT
ASSESSMENT PERIOD: AUGUST 1, 1984 - JULY 31, 1985
BOARD MEETING DATE - SEPTEMBER 24, 1985

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TABLE OF CONTENTS

	Page
I. INTRODUCTION	2
A. Purpose and Overview	2
B. SALP Board Members	2
C. Background	3
II. CRITERIA	5
III. SUMMARY OF RESULTS	7
A. Overall Facility Evaluation	7
B. Facility Performance	9
IV. PERFORMANCE ANALYSIS	10
A. Plant Operations	10
B. Radiological Controls	13
C. Maintenance	17
D. Surveillance	19
E. Fire Protection/Housekeeping	21
F. Emergency Preparedness	23
G. Security and Safeguards	25
H. Outage Management and Modification Activities	28
I. Licensing Activities	30
V. SUPPORTING DATA AND SUMMARIES	32
A. Escalated Enforcement Actions	32
B. Management Conferences	32
C. Licensee Event Reports	32

TABLES

Table 1 - Tabular Listing of LERs by Function Area	T1-1
Table 2 - Inspection Hours Summary	T2-1
Table 3 - Enforcement Summary	T3-1
Table 4 - Inspection Report Activities	T4-1
Table 5 - LER Synopsis	T5-1
Table 6 - Plant Shutdowns	T6-1

FIGURES

Figure 1-Number of Days Shutdown	F1-1
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I. INTRODUCTION

A. Purpose and Overview

The Systematic Assessment of Licensee Performance (SALP) is an integrated NRC staff effort to collect the available observations and data on a periodic basis and to evaluate licensee performance based upon this information. SALP is supplemental to normal regulatory processes used to ensure compliance to NRC rules and regulations. SALP is intended to be sufficiently diagnostic to provide a rational basis for allocating NRC resources and to provide meaningful guidance to the licensee's management to promote quality and safety of plant construction and operation.

An NRC Indian Point Unit 2 SALP Board, composed of the staff members listed below, met on September 24, 1985, to review the collection of performance observations and data to assess the licensee performance in accordance with the guidance in NRC Manual Chapter 0516, "Systematic Assessment of Licensee Performance." A summary of the guidance and evaluation criteria is provided in Section II of this report.

This report is the SALP Board's assessment of the licensee's safety performance at the Indian Point Unit 2 Nuclear Power Plant for the period August 1, 1984 through July 31, 1985. The summary findings and totals reflect the twelve month assessment period.

B. SALP Board Members

Chairman

R. W. Starostecki, Director, Division of Reactor Projects (DRP)

Members

T. T. Martin, Director, Division of Radiation Safety and Safeguards (DRSS)

L. H. Bettenhausen, Chief, Operations Branch, Division of Reactor Safety (DRS)

S. Collins, Chief, Project Branch No. 2, DRP

L. J. Norrholm, Chief, RPS 2B, DRP

L. W. Rossbach, Senior Resident Inspector, Indian Point 2

S. Varga, Chief, Operating Reactor Branch 1, (ORB-1), NRR

D. Neighbors, Licensing Project Manager, ORB-1, NRR

Other Attendees

M. M. Slosson, Licensing Project Manager, ORB-1, NRR

D. F. Limroth, Project Engineer, RPS 2B, DRP

T. J. Kenny, Senior Resident Inspector, Salem Generating Station

C. Background

1. Licensee Activities

At the beginning of the assessment period (August, 1984), the unit was in a refueling shutdown condition. The licensee was continuing with the 10 year ISI program. The 10 year ISI program was completed in September, 1984.

In September, 1984, the licensee was issued a Notice of Violation and Order Modifying License for inadequate radiological controls. Subsequent to this order, the licensee has developed programs to improve its radiological controls in the areas of training, work habits, decontamination, and procedure development.

The unit was returned to service on October 17, 1984 and physics testing was conducted. During this early period after refueling, the reactor was shut down to repair steam leaks and resistance thermal devices. In December, 1984, the reactor tripped on Low-Low steam generator level while rapidly reducing power due to a fire on the main generator resulting from a hydrogen leak. During the transient the steam dumps opening caused a high steam line flow and a safety injection signal occurred. While attempting to start up the reactor following repairs the licensee declared all three safety injection pumps inoperable after attempting to fill the accumulators. Upon investigation, it was determined that the suction piping of the safety injection pumps was blocked with boric acid and nitrogen gas was vented from the pumps. The boric acid blockage resulted from insufficient pipe flushing following the previous safety injection and leakage past the boron injection tank discharge valves. The source of the nitrogen gas is still under investigation by the licensee.

In December, 1984, the licensee informed the NRC that the motor-driven auxiliary feed pump discharge valve positions were improperly set resulting in the delivery of less water to the steam generators than required by the FSAR.

During the assessment period the licensee has experienced several trips due to main boiler feed pump malfunctions and several spurious turbine control valve movements in the open and shut direction which were attributed to control oil system problems.

In December 1984, a new Vice President of Nuclear Power was appointed. The plant has operated continuously since April 16, 1985, and surpassed its own continuous operating record in mid-August 1985.

2. Inspection Activities

A senior resident inspector was assigned to the unit throughout the entire assessment period. In mid-April 1985, a resident inspector was assigned and a new senior resident was appointed.

In response to the deficiencies noted in the Order Modifying License, a marked increase in inspection effort in the area of radiological control activities during the first part of this SALP period was initiated.

Inspection hours and activities conducted during the assessment period are summarized in Tables 2 and 4 of this report.

II. CRITERIA

Licensee performance is assessed in selected functional areas, depending whether the facility is in a construction, preoperational, or operating phase. Each functional area normally represents areas significant to nuclear safety and the environment, and are normal programmatic areas. Special areas may be added to highlight significant observations.

One or more of the following evaluation criteria were used to assess each functional area:

1. Management involvement and control in assuring quality.
2. Approach to resolution of technical issues from a safety standpoint.
3. Responsiveness to NRC initiatives.
4. Enforcement history.
5. Reporting and analysis of reportable events.
6. Staffing (including management).
7. Training effectiveness and qualification.

Based upon the SALP Board assessment, each functional area evaluated is classified into one of three performance categories. The definitions of these performance categories are:

Category 1. Reduced NRC attention may be appropriate. Licensee management attention and involvement are aggressive and oriented toward nuclear safety; licensee resources are ample and effectively used so that a high level of performance with respect to operational safety or construction is being achieved.

NRC Inspection and Enforcement Manual Chapter 2515 allows reduction of overall assessment of nuclear safety performance as part of the SALP process except at sites near high population areas such as Indian Point. Region I will utilize the SALP to concentrate the inspection effort in areas of major as well as minor concerns as identified by the SALP. Region I will also continue to conduct inspections in accordance with the Basic and Supplemental Programs as outlined in the above manual chapter.

Category 2. NRC attention should be maintained at normal levels. Licensee management attention and involvement are evident and are concerned with nuclear safety; licensee resources are adequate and reasonably effective so that satisfactory performance with respect to operational safety or construction is being achieved.

Category 3. Both NRC and licensee attention should be increased. Licensee management attention or involvement is acceptable and considers

nuclear safety, but weaknesses are evident; licensee resources appear to be strained or not effectively used so that minimally satisfactory performance with respect to operational safety or construction is being achieved.

The SALP Board also assessed each functional area to compare the licensee's performance during the last quarter of the assessment period to the overall performance for the entire SALP period in order to determine the recent trend for each functional area. The trend categories used by the SALP Board are as follows:

Improving: Licensee performance has generally improved over the last quarter of the current SALP assessment period.

Consistent: Licensee performance has remained essentially constant over the last quarter of the current assessment period.

Declining: Licensee performance has generally declined over the last quarter of the current assessment period.

III. SUMMARY OF RESULTS

A. Overall Facility Evaluation

Since the last SALP assessment, the licensee has made major management changes and has adopted new philosophies of management at the facility. A corporate change has aligned all the key disciplines necessary to operate the facility under one Senior Vice President. This has improved communications between the key disciplines and a more coordinated and cohesive approach to plant-related activities appears to be developing. At the facility, the new Vice President has incorporated new management techniques, has conducted team building seminars, and has made several changes in upper level plant management positions. The new management ideas and team oriented approach to overall operations has begun to spread to lower management and the plant staff. Although more time will be necessary to assess the overall effect of these changes on the operation of the facility, their initial impact appears to be positive.

Toward the end of this assessment period, management made personnel and financial commitments that have improved the general appearance of the entire plant, lowered the radiation levels in the controlled work areas, and begun to improve the records management program. The effects of these commitments are not yet fully realized, since many changes are in a development phase, however, physical and program changes are evident and are considered an improvement in the overall operation of the facility.

The licensee initiated a major effort to upgrade the radiological protection program in response to an Order Modifying License issued early in this SALP period. The improving SALP trend in radiological controls reflects the licensee's responsiveness to the issues raised by the Order, particularly the change in management attitude with respect to personal accountability regarding radiation protection. Many program changes were implemented toward the end of this SALP period; however, the effectiveness of these changes has not yet been fully demonstrated, particularly during outage conditions.

Training

The licensee has maintained a strong commitment to training throughout this assessment period. Training played a major role in the upgrade of the radiological protection program by effectively communicating the new philosophies and program changes to the radiation protection staff and all plant staff. Licensed operator candidates were well prepared for their exams. Training of operators in symptom-oriented emergency procedures appears to have been very effective.

Quality Assurance

The Quality Assurance program has maintained an effective involvement in all functional areas. A more direct involvement in improving plant performance is evident by initiation of such projects as a study of control and lube oil, an area which has caused numerous operational problems in the plant. Also, Quality Assurance is contributing to the ongoing improvement of the records storage program.

B. Facility Performance

<u>Functional Area</u>	<u>Category Last Period</u> (February 1, 1983 - July 31, 1984)	<u>Category This Period</u> (August 1, 1984 - July 31, 1985)	<u>Recent Trend</u>
A. Plant Operations	2	2	Improving
B. Radiological Controls	3	3	Improving
C. Maintenance	1	2	Improving
D. Surveillance	1	1	Consistent
E. Fire Protection/ Housekeeping	3	2	Improving
F. Emergency Preparedness	1	1	Consistent
G. Security and Safeguards	2	1	Consistent
H. Outage Management and Modification Activities	2	2	No basis for assessment
I. Licensing	2	2	Improving

IV. PERFORMANCE ANALYSIS

A. Plant Operations (32.0%, 894 hours)

The operations area, including operational support activities, was under continual review by resident inspectors throughout the period with observations in the areas of compliance with license and procedural requirements, training, corrective action systems, onsite committees, and reporting systems. As a result of key management changes initiated onsite, management activities associated with the overall operation of the facility were closely followed during this period.

During this period, the licensee effectively managed the overall operation of the facility. Unit availability during the period was the best achieved since initial plant startup while the number of challenges to reactor protection systems and the number of reportable events in the operations area were comparable to the previous assessment period.

During followup inspection activities for plant events, licensed operators displayed a detailed working knowledge of the plant and the ability to analyze and explain transient response. This indicates experience and a good state of training. Shift turnovers are conducted in a thorough and professional manner.

Significant improvements related to control room habitability and environment have been completed. These improvements complement and enhance the professional approach displayed by control room personnel.

Heavy demands were placed on the Operations and Training Departments to complete training in symptom-oriented emergency procedures and to train a class of SRO candidates. The training will enable the licensee to meet their commitment to the NRC to implement the new emergency procedures in October, 1985. General simulator performance by the SRO class was outstanding, particularly with respect to the use of the symptom-oriented emergency procedures, teamwork, and diagnostic ability. With the licensing of 11 of 12 new SRO candidates, the licensee is sufficiently staffed with operators to meet commitments for licensed operator staffing with little or no use of overtime.

Major concerns highlighted during the previous period were related to timeliness of long-term corrective action programs, Station Nuclear Safety Committee reviews, lack of an effective records management system and, administrative reviews of Licensee Event Reports.

At the beginning of this assessment period, a new General Manager of Technical Support was selected who functions as chairman of the Station Nuclear Safety Committee (SNSC). Improvements have been made in the quality of the reviews of events, procedures, and other items by the SNSC. Also, a multi-disciplinary group called the "Corrective

Action Committee" has been formed to review test and equipment history and trends to determine root causes of failures and evaluate corrective actions to improve plant safety and reliability. The effectiveness of this initiative has not been reviewed.

Two violations resulted from inadequate records management. As a result of previously identified deficiencies the licensee has initiated a comprehensive review and revision of the records management program. The upgraded program is expected to be implemented in January 1986. This time frame seems appropriate because of the program's large scope. In the interim, improvements have been noted in records management, in particular, licensee responses to the TMI Action Plan tracking system were consolidated and prompt retrieval of records was noted during an inspection of those items.

Two violations were issued relating to implementation of Technical Specification amendments and one violation for failure to maintain plant logs in accordance with procedures. The licensee responded promptly to these violations and instituted adequate corrective actions.

As noted in Section E, plant housekeeping effort has shown marked improvement during the latter half of this assessment period. Operations Department personnel played a significant role in the improvements in the nonradiological areas.

The Operations Department completed a review and upgrade of procedures. Only one licensee event was attributed to procedural inadequacy during this assessment compared with three during the preceding period.

The licensee increased the number of shift technical advisors (STA) to 22 and 4 additional candidates are completing training. STAs are assigned a 24-hour tour of duty at the plant and although assigned other duties at the plant, the STA duties take priority. This approach vis-a-vis the potential benefits accruing from a greater shift integration of STAs should be evaluated by the licensee.

Improvements are needed in both written and verbal reports of events by the licensee. One violation was issued for not promptly issuing a LER. Safety evaluations have been usually brief and sometimes not comprehensive. For most reports no statement is made to document prior similar events, and the coded information was frequently omitted or incorrect. Also, one LER (84-025) contained two events that should have been reported separately.

A review of the prompt notification of an event on April 16, 1985 received by the NRC HQ Duty Officer showed that a more complete description of events was called for. Licensee management initiated prompt corrective actions including training and procedure reviews, and committed to long-term corrective actions in response to this concern. This problem has not recurred in the few prompt notifications made since April.

2. Conclusion

Rating: Category 2
Trend: Improving

3. Board Recommendations

Licensee: Review causes of trips to reduce frequency of challenges to safety systems. Consider effectiveness of STA program, particularly shift integration, in light of recent industry experience.

NRC: Review activities of off-site safety review committee.

B. Radiological Controls (19.5%, 543 hours)

1. Analysis

There were eight inspections conducted by radiation specialists of areas affecting radiological controls during this period. Included were radiation protection program implementation, radiochemistry capability, effluent monitoring and control, and environmental monitoring. Special inspections were also conducted to review implementation of the licensee's action plan to upgrade the radiation protection program and verify and validate implementation of certain post-accident sampling and monitoring capabilities specified in NUREG-0737. Resident inspectors also provided periodic review of radiological control related activities.

Previous assessment of this area revealed substantial weaknesses in the radiation protection program as evidenced by numerous violations and programmatic deficiencies and the inability to identify and effect corrective measures necessary to reverse a declining trend in program performance. As a consequence of repeated instances of unplanned radiation exposure to workers, identified at the end of the previous assessment period, an Order Modifying License was issued September 27, 1984. This Order prescribed specific actions and measures to upgrade the radiation protection program. Included was the formation of a special senior level Oversight Committee to monitor and report on the effectiveness and quality of the program and the progress of upgrade actions to the Vice President of Nuclear Power and the NRC Regional Administrator.

As a result of these measures, the licensee has implemented, and continues to demonstrate, aggressive and thorough development of program elements, including procedures, personnel training, radiological audit and assessment, and ALARA. Additionally, the Vice President of Nuclear Power is directly involved in the upgrade activities and maintains a highly visible interest in assuring the quality of the program and the completion of planned improvement as scheduled. The Oversight Committee conducts thorough evaluations of program performance. A majority of the committee's recommendations have been incorporated as program improvements.

The upgraded Radiological Protection Program became effective on July 1, 1985, on schedule. The new policies involved in the implementation of the new program were well stated and disseminated to the staff. For example, as of July 11, 1985, 56 training sessions had been conducted involving about 1000 workers. Each session was personally introduced by either a General Manager or the Vice President of Nuclear Power. In this endeavor, previous problems were honestly portrayed and the bases for the upgraded program were detailed. The training program is designed to provide a thorough understanding of the upgraded radiological controls program. Training provided to workers included training in work practices and procedures in a mock

radiologically controlled area. Strong emphasis was placed on high radiation area access control, self-monitoring while in these areas and Radiation Work Permit usage. These items were particularly weak in the previous assessment period and, as a result of the new training emphasis, improved performance by the end of this SALP period was evident. Three violations were noted during this assessment period, two of which involved failure to follow procedures resulting in unplanned exposure to workers. This type of violation was typical of the licensee's previous program and occurred prior to the Order Modifying License. These violations also occurred prior to the implementation of the Action Plan to upgrade the radiological controls program. Though the effectiveness and results of the upgrade effort have yet to be evaluated, the foundation of the program is substantially stronger than previously noted.

Personnel changes in the organization were made to strengthen management controls over the program. Selection, qualification and training of personnel is well defined by new procedures and criteria. Procedures have been completely reviewed and, in most cases, rewritten to assure effective use. All major elements of the program are defined by Station Administrative Order which assures that the implementation of the radiation protection program is a matter of station policy rather than departmental requirements. This reflects management support to a strong radiological safety program, a change from past practice.

An aggressive radiological assessment program, independent of the Radiation Protection Department, provides direct feedback to responsible managers to effect corrective measures. While some questions remain on formalizing procedures and policies in this area, recent audits have been extensive, thorough and effective in creating awareness of program performance.

An ambitious and aggressive ALARA program has been initiated as evidenced by enhanced corporate policies and the development of a specific Station Administration Order. Actual implementation is exemplified by a program to reduce primary system activity, and extensive decontamination of the primary auxiliary building. Both these efforts required the dedication of significant technical and personnel resources and should result in further reduction in contaminated areas and personnel exposure. Though the effectiveness of the new ALARA program is yet to be evaluated, the new program appears to be technically sound and workable.

The results of improved management is evident in the Unit 1 rad-waste area where extensive efforts have been expended with significant reductions in the volume of radioactive waste and contaminated areas.

A special inspection of the licensee implementation of the post-accident sampling and monitoring specifications of NUREG-0737 indicated that generally technically sound and thorough approaches were used. The post-accident sampling capability was found to be very

reliable and reasonably accurate. While some technical deficiencies were noted, corrective measures were initiated to effect resolution.

A review of the effluents, environmental monitoring, and plant radio-chemistry found technically sound programs in place to meet the requirements of the license. Radiochemical samples split with the NRC indicated that all analyses were in agreement. One minor violation was cited for failure to have a procedure to implement the ODCM. In these programs, though examples were noted where documentation was not properly reviewed, or omissions of information were made in procedures, prompt corrective measures were effected to resolve these items.

Summary

The licensee commenced this assessment period with a radiological controls program characterized by repeated violations and ineffective corrective action indicative of a programmatic breakdown. Following several management meetings, an Order Modifying License was issued. A completely revised radiation protection program was developed. A Radiation Protection Oversight Committee, independent of the licensee and reporting to the Vice President, was constituted to provide assessment of the adequacy of corporate and station policies, practices and performance of the radiation protection program and to assess progress in upgrading the program. Nine months were required for program development and to train personnel in the implementing procedures. This program was reviewed during development by members of the Region I Radiological Protection Branch. This effort is expected to produce marked improvement; however, full implementation one month prior to the close of the assessment period with the unit at full power precluded meaningful evaluation of the results. The "Improving" trend noted in the conclusion to this section resulted from the apparently successful implementation of this revised program during the last quarter of this period and the significant improvement in management support and oversight of the radiological control program.

2. Conclusion

Rating: Category 3
Trend: Improving

3. Board Recommendations

Licensee:

Continue implementation of upgraded program in accordance with commitments pursuant to Order Modifying License.

NRC:

Monitor the effectiveness of program improvements by performing programmatic inspection prior to the next refueling outage. Assessment of program implementation to be performed during outage.

Conduct Management Meeting to review program status and compare with available observations.

C. Maintenance (11.2%, 314 hours)

1. Analysis

The assessment during the previous SALP was based largely on highly specialized maintenance/modification activities; e.g., steam generator tube leak repairs. This assessment is based primarily on non-outage maintenance activities. Meaningful comparison of outage performance in this functional area between the two periods is not appropriate.

The resident inspectors routinely observed corrective and preventive maintenance activities. Region based inspectors examined the maintenance aspects of Generic Letter 83-28, the Salem ATWS.

The maintenance program is well established with capable management and a large and experienced staff. Maintenance activities are preplanned and properly classified. QC hold points were established in most procedures reviewed. Quality related maintenance records reviewed were complete.

A large backlog of non-outage work orders had developed during the assessment period. When the resident inspectors discussed this concern with licensee management, it was apparent that they were aware of the situation and were taking steps to reduce the maintenance backlog. These steps included improving efficiency, scheduling, quality of work orders, and the addition of 25 temporary, but experienced maintenance workers from the utility's off-site work force. Because licensee management is committed to improving the physical condition of the plant, they have encouraged staff to be alert to equipment deficiencies and report them. This resulted in an initial increase in work orders. However, a decreasing trend in the number of work orders was established by the end of this assessment period.

The licensee has initiated a computerized Power Plant Maintenance Information System (PPMIS) for controlling work orders. Although the capabilities of this system are not yet fully developed, it seems to be contributing to more efficient handling of work orders and improved management, planning, and scheduling of the maintenance program. The PPMIS is also to be used in trending equipment failures.

The licensee has assembled a Classification Support Package to combine all the existing guidance that has been developed to properly classify a component. This package, however, is not a controlled document. The licensee expects to develop a computerized equipment table as part of the PPMIS.

The licensee is establishing control of vendor-furnished technical manuals and documentation. The vendor equipment manual control program is expected to be implemented by January 1986.

During a review of equipment storage facilities, some safety-related items were found stored in the plant satellite lay-down area without

providing for the required preventive maintenance or periodic examination. This concern was brought to the licensee's attention and management provided prompt and effective corrective action by directing QA to "embargo" all material stored in that lay down area and to review each item for deterioration prior to its release for use.

The IP-2 Central Store (warehouse) has been relocated to Cortlandt, 8 miles away from the plant. The new facility is an improvement over the old storage area, in that there is more, better organized space and level A storage has been provided. The designated materials have been moved to this new warehouse and improvement has been noted in the handling and issuance of stock.

2. Conclusion

Rating: Category 2
Trend: Improving

3. Board Recommendations

None

D. Surveillance (8.4%, 235 hours)

1. Analysis

Surveillance activities were routinely observed by the resident inspectors. Region-based inspectors observed the Containment Leak Rate Test and reactor trip breaker surveillance tests.

During this assessment period, the licensee maintained a high level of performance in the surveillance program. The surveillance program is well established. Individuals performing surveillance are qualified and experienced. Procedures are well developed with adequate format and technical content.

Scheduling of surveillances is tracked by a staff member using a computerized tracking system. During this assessment period, one surveillance test was not done within the required schedule. This was a semi-annual operability test of smoke detectors in the Safety Injection Pump cubicle. The detectors were tested a month late and found to be operable. For corrective action, the licensee has divided all smoke detectors among four surveillance procedures for easier tracking of individual detector tests.

Completed surveillance tests are reviewed by qualified individuals. No instance was identified in which a failed surveillance test did not result in a declaration of inoperability and application of the appropriate action statement.

Test-related instrumentation was observed to be properly calibrated and the calibration documentation was complete and traceable.

Containment Leak Rate test strategies were observed by the inspector to be well defined and structured in a manner to address any contingencies and resolve related problems identified during the test. As a result, during the first unsuccessful CLRT attempt, the licensee recognized the test shortcoming and appropriately issued a Licensee Event Report which was followed by a supplemental investigation notification. The subsequent CLRT test was conducted successfully. The inspector, using raw test data, performed an independent calculation of the test result and verified the accuracy of the licensee's computer generated calculation.

Surveillance test results related to high pressure boundary valves whose leakage could lead to intersystem LOCA (Event V) were inspected by the Resident Inspector. While a specialist inspection remains to be performed, no areas of concern were found by the Resident Inspector.

2. Conclusion

Rating: Category 1
Trend: Consistent

3. Board Recommendations

None

E. Fire Protection and Housekeeping (5.6%, 155 hours)

1. Analysis

One region based inspection and resident inspector observations provide the basis for the fire protection assessment. Observations by all inspectors visiting the facility provide the basis for the housekeeping assessment.

In the previous assessment period, the licensee's fire protection program was identified as an area for increased management and NRC attention. The reason for the poor rating was multiple minor violations stemming from inadequate procedures or inadequate hardware modifications to fire protection systems.

Management's reaction to this evaluation was an increased involvement in areas that control and assure quality in the Fire Protection area. This involvement is apparent in the area of quality assurance audits of Fire Protection required by Technical Specifications. These Fire Protection Program audits, particularly those utilizing qualified offsite auditors, are complete, thorough, and timely. These audits attempt to not only identify weaknesses, but try to identify trends.

The licensee's fire protection program record keeping is adequate, with records well maintained and readily available. With regards to being responsive to NRC concerns, the licensee's responses are technically sound and proposed resolutions to various concerns are acceptable as evidenced by the number of unresolved items being closed.

The licensee conducted a comprehensive review of fire protection commitments made to the NRC. Procedure changes and a few hardware changes resulted from this review.

An area of previous NRC concern was the lack of an adequate and clearly defined fire protection program. This was addressed by the licensee by revising the plant fire protection procedures, establishing new corporate fire protection procedures for the nuclear plant, and by utilizing qualified consultants to set forth a fire protection program based on NRC guidelines.

Staffing in the area of fire protection is adequate, positions are identified with authorities and responsibilities well defined.

The onsite staff responsible for the implementation of the fire protection program is competent and has direct access to senior management onsite to resolve and expedite fire protection issues. As a result of frequent plant tours by the fire protection staff, transient fire hazards in the plant are kept to a minimum. Training of brigade members is adequate with each person participating in the required number of drills.

Housekeeping and cleanliness of the facility was poor during the first half of this assessment period. However, the licensee has made a major effort to clean up and refurbish the plant. Housekeeping is now much improved throughout the plant. Management's commitment to establish and maintain good housekeeping is evident.

Increased pride in the plant by the plant staff, due to the improved appearance, is also evident.

2. Conclusion

Rating: Category 2

Trend: Improving

3. Board Recommendations

Licensee: Continue to emphasize good housekeeping practices.

NRC: None

F. Emergency Preparedness (4.3%, 120 hours)

1. Analysis

A partial exercise was conducted on June 5, 1985 which was observed by a team of six NRC Region I and NRC contractor personnel. As a result of the exercise, the inspectors concluded that, within the limitations of the exercise, the licensee's emergency response actions provided adequate protection of public health and safety.

The licensee has been responsive to NRC initiatives in that the exercise objectives and scenario package were submitted to the NRC in a timely manner so that Region I personnel were able to perform an adequate review. In addition, licensee personnel were noted to provide the appropriate upgrades of the scenario as requested by the NRC to demonstrate abilities in the areas of operational assessment, technical support to operations, radiation surveillance, general health physics practices, repair and corrective actions and decision making. The upgrade of the scenario provided the opportunity for the licensee to demonstrate to the NRC during the conduct of the exercise that previously identified concerns were adequately corrected.

During the exercise, the NRC team identified that the Emergency Action Levels in the Emergency Plan resulted in confusion among key licensee participants when classifying events. The licensee should evaluate the procedures used to determine Emergency Action Levels to eliminate possible ambiguities.

The NRC team attended the licensee's post exercise critique on June 6, 1985 during which key licensee controllers discussed observations of the exercise. At the conclusion of the critique, the NRC team determined that the licensee had the ability to identify areas for improvement.

Region I also observed a full-scale exercise conducted at Indian Point 3 on November 28, 1984. Two major deficiencies in the offsite facilities were noted by FEMA Region II during this exercise (Indian Point 2 and 3 share the same offsite facilities.) The problems dealt with difficulties in emergency broadcast messages from the joint news center and delayed protective action recommendations from Rockland County. Although these deficiencies were beyond the control of the licensee they were corrected and cleared as a result of an exercise on April 10, 1985. ConEd emergency planning staff played an active role in resolving these deficiencies.

2. Conclusion

Rating: Category 1
Trend: Consistent

3. Board Recommendations

None

G. Security and Safeguards (12.6%, 353 hours)

1. Analysis

There were two unannounced physical security inspections performed by region-based inspectors and continual review of the security program during routine resident inspections during this assessment period. No violations were identified. In addition, a Safeguards Regulatory Effectiveness Review (RER) (280 man-hours) was conducted by the NRC's office of Nuclear Material Safety and Safeguards. The RER did not identify any safeguards vulnerabilities, but did disclose some deficiencies which the licensee will be requested to address. It is felt that a majority of the deficiencies can be resolved effectively by concentrating additional management attention in the identified areas.

The licensee was effective in achieving a high degree of performance during this assessment period, and continuing improvements in program implementation were observed. Of particular note was an increase in management's attention to the program. This was evident by the continuing efforts to upgrade the Security Plan and implementing procedures, the purchase and installation of improved equipment, improvements to facilities, more indication of prior planning and interface with other departments on site, and increased attention to maintenance and testing of equipment. While maintenance and testing of security-related equipment received increased attention by the licensee during this period, continued management involvement is warranted to strengthen the program more expeditiously. Weaknesses in the security barrier installations' maintenance and testing programs were also observed by the RER team.

Corrective actions implemented as a result of violations identified during previous assessment periods have been effective; no violations were identified during this period. Increased licensee emphasis on the training and requalification program and on supervision of the contract security force contributed to the improved performance.

Licensee reporting and analysis of events, in accordance with 10 CFR 73.71, are generally prompt and complete. Problems with the security computer which precipitated more than half the last period's 10 CFR 73.71 reports have been rectified; only one event related to the computer occurred during this period.

An analysis of the event reports submitted during this period (seven) indicated a need to improve contract employee awareness of the security program and procedures. Two of the event reports involved the unauthorized entry into vital areas by contract employees and one involved a contract employee attempting to enter the protected area with a weapon in the rear of a vehicle. The security force responded properly and effectively to these events in a prompt manner. However, there appears to be a need for increased emphasis in contract employee training to achieve compliance with security program requirements.

Compensatory measures, when required, were adequate and promptly implemented.

The site security program is directed by a licensee employee who had previously been assigned on an acting basis and was appointed on a permanent basis in the latter portion of the assessment period. He is assisted by a Field Operations Supervisor and four Shift Supervisors who are also licensee employees. The administrative workload appears to be appropriately assigned such that sufficient oversight can be exercised with respect to the contractor.

In about the middle of the assessment period, the licensee engaged the services of a new security force contractor to provide for the administration, supervision and training of the security force which remained essentially intact. The transition to the new contractor went very smoothly. The licensee and the new contractor have implemented several initiatives which should result in a strengthened program and an increase in the morale of security personnel.

The licensee's training and qualification program has improved during this assessment period as evidenced by the lack of procedural violations by members of the security force. This is attributable to upgraded procedures, more effective training and an increase in management attention. Additionally, an increase in the frequency and realism of contingency plan drills was noted during the period which also may have contributed to better performance.

Security program records were generally found to be complete and available. However, an effort should be made to centralize records and reports to enable easier and more effective proprietary oversight and awareness of program and equipment status. Several of the RER findings appear to be a result of inadequate awareness on the part of site security management as to the extent of certain self-identified deficiencies.

While the security program annual audit during this assessment period appeared to be more comprehensive than previous audits, improvements could be effected by conducting more frequent audits and narrowing the scope of each. This, coupled with a more detailed audit plan,

prepared by knowledgeable security personnel, would greatly enhance the audit program.

2. Conclusion

Rating: Category 1
Trend: Consistent

3. Board Recommendations

None

H. Outage Management and Modification Activities (6.4%, 178 hours)

Region-based inspectors conducted inspections of the Cycle 7 refueling-startup physics testing, and Reactor Trip Breaker Shunt Trip Modification. The resident inspectors conducted reviews of on-going outage activities.

The cycle 6/7 refueling outage was completed during the first quarter of this assessment period. Numerous technical issues were encountered during this outage. These included the installation of nozzle dams, an expanded steam generator inspection program, and an indication in the reactor vessel. The outage man-rem exposure was significantly over the estimated exposures. Problems in the radiological controls area led to an Order Modifying License which is discussed in Section IV.B of this report.

Licensee management has aggressively pursued improvements in outage management. A reorganization has established a planning group with new responsibilities and approaches for the planning and scheduling of future outage activities. Based on inspectors' observations, it appears that adequate preparation is being made for the forthcoming outage.

During the last outage, the licensee completed all fuel movements without incident. This indicates good operator training and coordination with contractors.

The start-up physics testing procedures were adequate, and the test results were satisfactory and properly evaluated. The reactor engineering staff exhibited sound knowledge and competency in the areas inspected. The successful test completion and consistency in actual and intended fuel load schedule support the conclusion that the licensee's involvement to control quality was adequate.

The licensee implemented the Reactor Trip Breaker Shunt Trip Modification in a timely manner. Procurement, installation, operation, testing and maintenance of the shunt trip circuitry were performed according to the approved program.

During the assessment period, modification work on the Auxiliary Feedwater (AFW) pumps resulted in the power feeds to solenoid valves for the steam-driven AFW pump steam isolation valves being disconnected. The root cause was identified as inadequate drawings to describe actual field conditions. Licensee corrective actions include increased emphasis on field walkdowns by engineers prior to issuance of design changes.

Since the plant was operating at power during the last quarter of the assessment period, no basis exists for determining a recent trend in this functional area.

2. Conclusion

Rating: Category 2

Trend: No basis for trend assessment

3. Board Recommendations

Licensee: None

NRC: Conduct team inspection to review modification management; specialist inspections of corporate design effort and corporate/site interface.

I. Licensing Activities

1. Analysis

During the present rating period, the licensee's management demonstrated active participation in licensing activities and kept abreast of current and anticipated licensing actions. The management's involvement was evident in the use of a Regulatory Action Tracking System in which all open actions were scheduled and tracked. The management's involvement in licensing activities generally assured a timely response to requirements of the Commission's rules. The licensee's management generally exercised good control over its internal activities and its contractors and maintained effective communication with the NRC staff. Generally, the licensee has met schedules or informed NRC at an early date of schedule problems. However, it should be noted, that the licensee did not meet the revised schedule date contained in the Appendix R scheduler exemption issued October 16, 1984 and did not notify the staff that the schedule would not be met.

In addition, the licensee seems to have a great deal of difficulty processing a letter out of their office even when required on an urgent basis. We feel that improvement could be made in this area.

The interaction of the licensee, including visits and management discussions/meetings, with the NRC staff, have resulted in clear understanding of safety issues. Generally sound technical approaches are taken by the licensee's technical staff toward their resolution. Conservatism is usually exhibited in relation to significant safety issues.

It should be noted that during the review of the IP-2 reactor vessel indication, it is the staff's view that the licensee did not obtain sufficient field data to support his conclusion that the size of the vessel indication fell within the acceptable limits of the industry code to not require repair or augmented inspection. Because the inspection tool had been removed from the reactor vessel, additional measurements on a representative vessel configuration as well as several meetings with the licensee were required to conclude that while vessel repair was not required, augmented inspection of the vessel at a frequency of three times over the next ten years must be performed.

The good communications between the licensee and the NRC staff have been beneficial to both in the processing of licensing actions and minimizing the need for additional information.

The licensee has been responsive to NRC initiatives in most instances. However, there are a few instances when the licensee's delays have caused delays in closing out issues. For instance, the licensee has delayed in responding to requests for additional information in the areas of Inservice Testing, Fire Protection Relief Valve and Safety Valve Testing, Control of Heavy Loads, and Snubbers Technical Specification. In most other instances when the original commitment could

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In most instances, sound technical justification is provided by the licensee for deviations from staff guidance. However, it should be noted that during the review of the reactor vessel flaw, in the opinion of the staff, the licensee did not obtain sufficient field data to reach a definitive conclusion regarding the location and size of the indication before the inspection tool was removed from the reactor vessel. This necessitated an augmented inspection program for long-term resolution.

The good communications between the licensee and the NRC staff have been beneficial to both in the processing of licensing actions and minimizing the need for additional information.

The licensee has been responsive to NRC initiatives in most instances. However, there are a few instances when the licensee's delays have caused delays in closing out issues. For instance, the licensee has delayed in responding to requests for additional information in the areas of Inservice Testing, Fire Protection, Relief Valve and Safety Valve Testing, Control of Heavy Loads, and Snubbers Technical Specifications. In most other instances when the original commitment could

not be met, the licensee was prompt to discuss the problems and provide a new schedule. It should be noted, however, that the licensee is usually much quicker responding to their own initiatives than the NRC's.

The licensee has a licensing staff which appears to be sufficient to provide adequate and timely responses.

2. Conclusion

Rating: Category 2
Trend: Improving

3. Board Recommendations

None

V. SUPPORTING DATA AND SUMMARIES

A. Escalated Enforcement Actions

1. Civil Penalties

None

2. Orders

Order Modifying License dated September 27, 1984 to establish an effective program to assure adequate radiological controls of licensed activities and to minimize the radiological hazards associated with the performance of those activities.

3. Confirmatory Action Letter

None

B. Management Conferences Held During the Assessment Period

1. November 7, 1984 - SALP Management Meeting at Indian Point Unit 2.
2. January 3, 1985 - Management Meeting at NRC Region I on supplemental information provided by the licensee in response to Order Modifying License.

C. Licensee Event Reports (LER's)

Tabular Listing

	<u>Type of Events</u>	
A.	Personnel Error	5
B.	Design.Man./Constr./Install.	1
C.	External Cause	0
D.	Defective Procedure	2
E.	Component Failure	16
X.	Other	1
		—
	TOTAL	25

Causal Analysis

Two common causal chains were identified:

A. Service Water Pump Discharge Check Valve Leakage

- 84-011 CCW pump motors tripped on overcurrent after the CCW pump cubicle flooded during outage maintenance. The water leaked past service water pump discharge check valves from the essential to the non-essential header.
- 84-021 While at cold shutdown, leakage was observed past service water pump discharge check valves. This could have led to service water pumps being inoperable. No mention was made in this LER of the previous similar event.

Based on the Indian Point 2 Probabilistic Risk Study, the service water system is the second most important system in reducing risk and failure of the discharge check valves are a significant failure mode for that system.

The affected check valves were repaired and tested satisfactorily.

B. Loss of Main Boiler Feed Pumps Result in Unit Trip

- 85-02 One main boiler feed pump tripped and in the course of the resulting transient, the reactor tripped due to high pressurizer pressure.
- 85-05 Both main boiler feed pumps tripped. The operator manually tripped the unit in anticipation of an automatic trip.
- 85-06 One main boiler feed pump tripped and in the course of the resulting transient, the reactor tripped due to low-low level in steam generator #24.

The control oil systems for the main boiler feed pumps were overhauled. Three conditions were discovered and repaired that could have caused the pumps to trip.

T1-1

TABLE 1

TABULAR LISTING OF LERs BY FUNCTIONAL AREA

INDIAN POINT STATION, UNIT 2

Area	Cause Code						Total
	A	B	C	D	E	X	
A. Plant Operations	3			1	1		5
B. Radiological Controls							0
C. Maintenance	1						1
D. Surveillance						1	1
E. Fire Protection/ Housekeeping		1					1
F. Emergency Preparedness							0
G. Security and Safeguards							0
H. Outage Management and Modification Activities	1			1			2
I. Licensing Activities							0
J. Other					15		15
Totals	5	1	0	2	16	1	25

Cause Codes: A. Personnel Error
B. Design, Manufacturing, Construction, or Installation Error
C. External Cause
D. Defective Procedure
E. Component Failure
X. Other

T2-1

TABLE 2

INSPECTION HOURS SUMMARY (8/1/84 - 7/31/85)

INDIAN POINT STATION - UNIT 2

	<u>Hours</u>	<u>% of Time</u>
A. Plant Operations	894	32.0
B. Radiological Controls	543	19.5
C. Maintenance	314	11.2
D. Surveillance	235	8.4
E. Fire Protection/Housekeeping	155	5.6
F. Emergency Preparedness	120	4.3
G. Security and Safeguards	353	12.6
H. Refueling (Modifications)	178	6.4
I. Licensing Activities	N/A	N/A
	<hr/>	
Total	2792	100

TABLE 3
 ENFORCEMENT SUMMARY (8/1/84 - 7/31/85)
 INDIAN POINT STATION - UNIT 2

A. Number and Severity Level of Violations

<u>Severity Level</u>	<u>No</u>
Severity Level I	0
Severity Level II	0
Severity Level III	1
Severity Level IV	5
Severity Level V	<u>4</u>
Total	10

B. Violations Vs. Functional Areas

<u>FUNCTIONAL AREAS</u>	<u>Severity Levels</u>					<u>DEV</u>	<u>TOTALS</u>
	<u>I</u>	<u>II</u>	<u>III</u>	<u>IV</u>	<u>V</u>		
A. <u>Plant Operations</u>	0	0	0	3	4		7
B. <u>Radiological Controls</u>			1	2			3
C. <u>Maintenance</u>							
D. <u>Surveillance</u>							
E. <u>Fire Protection & Housekeeping</u>							
F. <u>Emergency Preparedness</u>							
G. <u>Security and Safeguards</u>							
H. <u>Outage Management & Modifications</u>							
I. <u>Licensing Activities</u>							
<u>Violation and Deviation Totals:</u>			1	5	4		10

TABLE 3 (CONT'D)

C. Summary - Enforcement Data

<u>Inspection Report No.</u>	<u>Inspection Date</u>	<u>Req.</u>	<u>Severity Level</u>	<u>Functional Area</u>	<u>Violation</u>
84-21	8/1-8/31/84	10CFR 50.34	IV	Ops	Failure to produce a system for receipt of QA records, retrieval of information without undue delay, and a list of personnel with file access.
		ANSI N4.2.9- 1974	V	Ops	Failure to maintain transient or operational cycling records on machinery.
84-22 Order	8/16-8/17/84 9/27/84	TS 6.11	III	Rad Con	Failed to follow procedures for S/G entry by not reading highest dosimeter.
84-24	8/27-8/31/84	TS 6.11	IV	Rad Con	Failed to follow procedures for S/G entry by not recording exposure after each jump.
84-32	11/1-11/30/84	TS 6.8.1	IV	Ops	Failure to follow proper procedures for logging abnormal plant parameters.
		10CFR50	IV	Ops	Failure to alter plant status in accordance with amendment changes.
		10CFR 50.73	V	Ops	Failure to present a licensee event report within 30 days of event.

TABLE 3 (CONT'D)

<u>Inspection Report No.</u>	<u>Inspection Date</u>	<u>Req.</u>	<u>Severity Level</u>	<u>Functional Area</u>	<u>Violation</u>
85-05	2/25-3/1/85	TS 6.8.1	IV	Rad Con	Failure to establish written procedures covering the off site dose calculation manual
85-10	4/1-5/17/85	10CFR50 OAD-21	V	Ops	Failure to provide an information feedback system sign-off sheet.
85-18	7/1-7/31/85	TS 6.8.1	V	Ops	Failure to follow procedures.

T4-1

TABLE 4

INSPECTION REPORT ACTIVITIES (8/1/84-7/31/85)

INDIAN POINT STATION - UNIT 2

<u>Report/Dates</u>	<u>Inspector</u>	<u>Hours</u>	<u>Areas Inspected</u>
84-21 8/1-8/31/84	Resident	110	Routine, daily inspections and unscheduled backshift inspections
84-22 8/16-8/17/84	Specialist	25	Routine, unannounced inspection of the licensee's radiation protection program
84-23 8/20-8/24/84	Specialist	32	Routine, unannounced inspection of the licensee's radioactive waste management program
84-24 8/27-8/31/84	Specialist	45	Routine, unannounced inspection of the licensee's radiation protection program
84-25 9/17-9/21/84	Specialist	30	Routine, unannounced inspection of the licensee's nonradiological chemistry program
84-26 9/1-9/30/84	Resident	137	Routine, daily inspections and unscheduled backshift inspections
84-27 9/17-9/21/85	Specialist	49	Routine, unannounced inspection of the containment leakage testing program
84-28 9/27-9/28/84 10/16-10/19/84	Specialist	76	Routine, unannounced safety inspection of the licensee's radiation protection program
84-29 9/24-9/28/84	Specialist	36	Routine, unannounced inspection of physical protection and safeguards
84-30 10/1-10/31/84	Resident	178	Routine, daily inspections and unscheduled backshift inspections
84-31 10/15-10/19/84	Specialist	40	Routine, unannounced inspection of startup physics testing following refueling of Unit 2, Cycle 7

Table 4 (Continued)

84-32 11/1-11/30/84	Resident	126	Routine, daily inspections and unscheduled backshift inspections
84-33 12/1-12/31/84	Resident	82	Routine, daily inspections and unscheduled backshift inspections
84-34 12/10-12/19/84	Resident	18	Special inspection of throttle valves setting in the auxiliary feedwater system
85-01 1/1-1/31/85	Resident	116	Routine, daily inspections and unscheduled backshift inspections
85-02 1/14-1/18/85	Specialist	170	Special, announced safety inspection of the licensee's implementation and status of NUREG-0737
85-03 1/3/85		9	Meeting - Requested by NRC to discuss supplemental information provided by licensee in response to order modifying license
85-04 2/1-2/28/85	Resident	89	Routine, daily inspections and unscheduled backshift inspections
85-05 2/25-3/1/85	Specialist	102	Routine, unannounced inspection of the licensee's chemical and radiochemical measurements program
85-06			Cancelled
85-07 3/1-3/31/85	Resident	96	Routine, daily inspections and unscheduled backshift inspections
85-08 3/25-3/29/85	Specialist	37	Routine, unannounced physical protection inspection
85-09 3/25-3/29/85	Specialist	124	Announced inspection of licensee's actions to address the concerns identified in NRC Generic Letter 83-28
85-10 4/1-5/17/85	Resident	201	Routine, daily inspections and unscheduled backshift inspections

Table 4 (Continued)

85-11 4/10-4/12/85	Specialist	32	Special, announced inspection to review the licensee's implementation of radiological controls improvement program
85-12			Cancelled
85-13			Cancelled
85-14 6/4-6/6/85	Specialist	120	Routine, announced emergency preparedness inspection
85-15 5/18-6/30/85	Resident	139	Routine, daily inspections and unscheduled backshift inspections
85-16 7/8-7/12/85	Specialist	116	Licensed operator exams and review of requalification program
85-17 6/17-6/21/85	Specialist	12	Review of licensee's contingency plans for continued operation during a possible strike
85-18 7/1-7/31/85	Resident	132	Routine, daily inspections and unscheduled backshift inspections
85-19 7/22-7/26/85	Specialist	43	Review of environmental monitoring system
85-20 7/22-7/26/85	Specialist	40	Fire protection program

T5-1

TABLE 5

LER SYNOPSIS (8/1/84-7/31/85)

INDIAN POINT STATION, UNIT 2

<u>LER Number</u>	<u>Event Date</u>	<u>Cause Code</u>	<u>Description</u>
84-008	7/13/84	E	Spurious Actuation One Channel Safety Injection While Shutdown
84-009	7/19/84	E	Reactor Coolant Pump Undervoltage Setpoint
84-010	7/23/84	E	Excessive Service Water Containment Isolation Valve Leakage
84-011	8/13/84	E	Flooding of CCW Pump Motors
84-012	9/10/84	E	Auxiliary Feedwater Pump Relays Defective
84-013	9/20/84	B	Deficient Fire Dampers
84-014	10/7/84	D	480 V Undervoltage Relay Setpoints Not Changed per Technical Specifications
84-015	10/8/84	A	Safety Injection Signal on Loss of Instrument Bus
84-016	10/16/84	E	Safety Valve Lifted, Subcritical Steam Generator Delta P Safety Injection Signal
84-017	10/21/84	A	Turbine/Reactor Trip During Overspeed Test
84-018	10/20/84	A	Reactor Trip - Steam Flow/Feed Flow Mismatch, Steam Generator Low Level
84-019	10/22/84	E	Turbine Fire - Turbine/Reactor Trip (6% PWR)

Table 5 (Continued)

84-020	10/26/84	E	Inoperable Cable Tunnel Fans Due to Closed Louvers
84-021	10/02/84	E	Service Water Pumps Inoperable Due to Check Valve Leakage
84-022	11/27/84	D	Auxiliary Feedwater Steam Isolation Valves Fail to Close in Test, Power Feed Disconnected During Modification
84-023	12/7/84	X	Auxiliary Feedwater Valves Throttled Incorrectly
84-024	12/18/84	A	Weld Channel to Electrical Penetration Inoperable (ILRT), Personnel Error During Modification
84-025	12/19/84	E	Turbine Generator Fire 12/19; Safety Injection Pumps Inoperable 12/28
84-026	12/28/84	E	Spurious SI Signal (High Steam Flow Instrumentation Drift)
85-001	2/2/85	A	Turbine Generator Hydrogen and Oil Leakage/Manual Reactor Trip, Cuno Filter Reassembled Incorrectly
85-002	2/4/85	E	Unit Trip/High Pressurizer Pressure, One MBFP Tripped
85-003	2/13/85	E	Hydrogen Recombiner Inoperable
85-004	3/6/85	E	Unit Trip/Faulty Relays, Steam Generator Level Controls
85-005	3/26/85	E	Both MBFP's Tripped/Reactor Trip
85-006	4/16/85	E	One MBFP Tripped/Reactor Trip

T6-1

TABLE 6

PLANT SHUTDOWNS

<u>DATE</u>	<u>DESCRIPTION</u>	<u>CAUSE</u>
Oct. 17, 1984	Startup following Cycle 6/7 refueling/maintenance/10-year ISI outage	
Oct. 20, 1984	Reactor trip from 5% power: Steam generator (SG) low level with steam flow/feedwater flow mismatch	Operator did not adequately respond to plant conditions after switching from auxiliary to main feedwater pumps (MFP)
Oct. 20, 1984	Startup	
Oct. 21, 1984	Reactor trip from 10% power during turbine generator overspeed test.	Operator used incorrect gauge during overspeed test.
Oct. 21, 1984	Startup	
Oct. 22, 1984	Reactor tripped from 6% power: turbine manually tripped	Turbine: oil fire Reactor: low setting on interlock P-7
Oct. 23, 1984	Startup	
Nov. 30, 1984	Reactor shutdown for scheduled maintenance	
Dec. 2, 1984	Startup	
Dec. 19, 1984	Reactor tripped: low SG level while rapidly shutting down from 100% power	Turbine generator hydrogen and oil fire
Dec. 27, 1984	Startup	

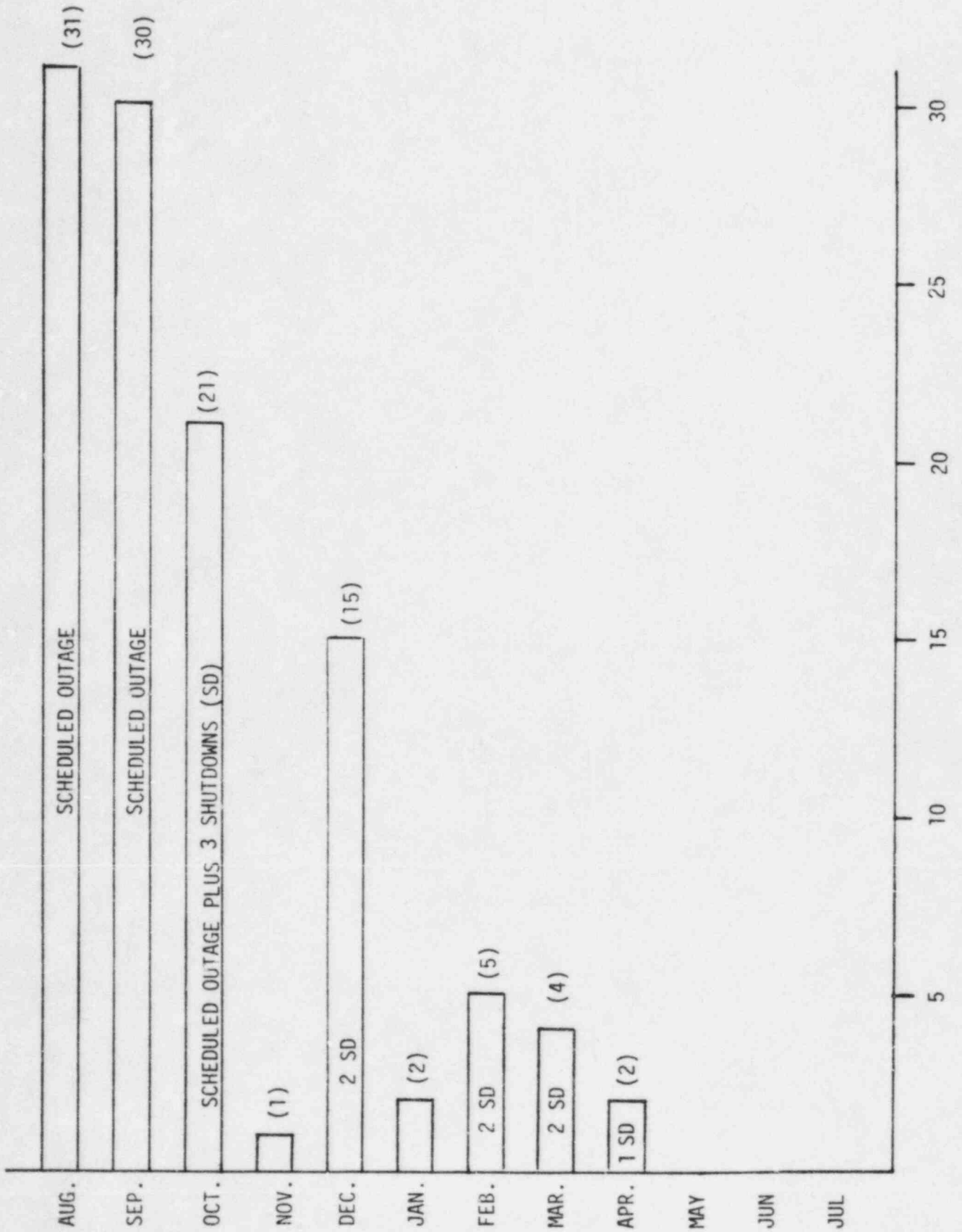
Table 6 (continued)

T6-2

Dec. 28, 1984	Reactor shutdown because safety injection (SI) pumps inoperable	Leaking boron injection tank (BIT) valves and inadequate flushing procedures caused boric acid solidification of SI pumps.
Jan. 2, 1985	Startup	
Feb. 2, 1985	Reactor manually tripped from 50% power	Incorrect re-assembly of filter led to hydrogen seal oil system malfunction
Feb. 4, 1985	Startup	
Feb. 4, 1985	Reactor trip from 100% power: high pressurizer pressure following turbine runback with control rods in manual and steam dumps in pressure mode	One MFP tripped
Feb. 5, 1985	Startup	
Mar. 6, 1985	Reactor trip from 100% power: SG low level with steam flow/feedwater flow mismatch	Faulty relay in SG level controller
Mar. 7, 1985	Startup	
Mar. 26, 1985	Manual trip from 25% power in anticipation of automatic trip	Both MFP tripped
Mar. 27, 1985	Startup	
Apr. 16, 1985	Reactor trip from 100% power: low-low SG level	One MFP tripped
Apr. 17, 1985	Startup	

FIGURE 1

NUMBER OF DAYS SHUTDOWN





ENCLOSURE 3
UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

OCT 11 1985

Docket No. 50-247

Consolidated Edison Company of
New York, Inc.
ATTN: Mr. Murray Selman
Vice President, Nuclear Power
Indian Point Station
Broadway and Bleakley Avenue
Buchanan, New York 10511

Gentlemen:

Subject: Systematic Assessment of Licensee Performance (SALP) Report
No. 50-247/85-99

The NRC Region I SALP Board has reviewed and evaluated the performance of activities at the Indian Point Nuclear Generating Station Unit 2, Buchanan, New York for the period August 1, 1984 through July 31, 1985. The results are contained in the enclosed report.

A meeting to discuss this assessment has been scheduled for 9:00 a.m., October 25, 1985, at the Region I offices, King of Prussia, Pennsylvania.

At the SALP meeting, you should be prepared to discuss our assessments and your plans to improve performance where weakness was noted. The meeting is intended to be a dialogue wherein any comments you may have regarding our report may be discussed. Additionally, you may provide written comments within 20 days after the meeting.

Your cooperation is appreciated.

Sincerely,

A handwritten signature in cursive script, appearing to read "T. Murley".

Thomas E. Murley
Regional Administrator

Enclosure: SALP Report No. 50-247/85-99
Docket No. 50-247

~~50-247/85-99~~

OCT 11 1995

Consolidated Edison Company
of New York, Inc.

2

cc: w/encl:

J. D. O'Toole, Vice President, Nuclear Engineering, Quality Assurance and
Reliability
M. Blatt, Director, Regulatory Affairs
F. Matra, Resident Construction Manager
R. L. Spring, Nuclear Licensing Engineer
P. Kokolakis, Director, Nuclear Licensing
Brent L. Brandenburg, Assistant General Counsel
Public Document Room (PDR)
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Nuclear Safety Information Center (NSIC)
NRC Resident Inspector
State of New York