

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-247/84-32

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Docket No. 50-247

License No. DPR-26 Priority -- Category C

Licensee: Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, New York 10003

Facility Name: Indian Point Nuclear Generating Station, Unit 2

Inspection at: Buchanan, New York

Inspection conducted: November 1-30, 1984

Inspectors:

for *T. Kenny* T. Kenny, Senior Resident Inspector 1-3-85
date

B. Hillman B. Hillman, Reactor Engineer 1-3-85
date

D. Limoth D. Limoth, Project Engineer 1-3-85
date

Approved by: *Leif Norholm* Leif Norholm, Chief, Reactor Project 1/3/85
Section 2B, DPRP date

Inspection Summary:

Inspection on November 1-30, 1984 (Report No. 50-247/84-32)

Areas Inspected: This inspection report includes routine daily inspections, as well as unscheduled backshift inspections of onsite activities, and includes the following areas: Operational safety verification; maintenance; surveillance; review of monthly report; independent verification of system lineup; followup on IE bulletin; LER's; and, review of new procedures. The inspection involved 76 hours by the resident inspector and 50 hours by visiting inspectors.

Results: This report identifies concerns in two areas, reporting of significant events, and the keeping of logs related to the operation of the unit. Also identified is the improper implementation of a Technical Specification Amendment.

DETAILS

1. Persons Contacted

Within this report period, interviews and discussions were conducted with members of the licensee management and staff to obtain the necessary information pertinent to the subjects being inspected.

2. Licensee Action on Previously Identified Inspection Findings

(Closed) Unresolved Item (247/83-12-03) Improper operation of the reactor cavity sump level transmitter. The reactor cavity sump level transmitter instrument was found to have an air leak in the vacuum side. The licensee modified the transmitter by installing a second o-ring to stop air inleakage. The vacuum line was reevacuated and the detector was returned to service. No further malfunctions have been identified.

(Closed) Unresolved Item (247/83-18-01) Inadequate log keeping and review. The inspector reviewed control room logs and the conventional area logs for compliance with licensee Administrative Directive OAD-3, Revision 6, "Plant Surveillance and Log Keeping." The inspector reviewed a total of 6 days' worth of control room logs and conventional area logs. As a result of the inspection, the inspector identified the following:

- Nuclear plant operators did not highlight out-of-specification readings nor explain them in the remarks section;
- Normal readings on measured parameters were erroneously red circled;
- Operators failed to enter required entries and readings;
- Readings on Technical Specification related data were neither red circled nor delineated in the remarks section of the logs, whenever it deviated from its normal values; and,
- Administrative reviews of the procedures are inadequate in that they failed to identify the log errors.

The inspector discussed these items with the licensee and expressed concern that this was an ongoing problem. The licensee's review of logs has been noted to be deficient by the licensee's staff as evidenced by a memorandum to the Chief Operations Engineer from the Operations Superintendent dated April 13, 1983 and the Director of Regulatory Affairs dated September 28, 1983. The NRC's enforcement policy requires that corrective action for licensee-identified violations prevent recurrence within a reasonable time. The licensee's actions in regard to corrective actions for inadequate reviews do not appear to prevent recurrence. This constitutes a violation. (247/84-32-01)

3. Operational Safety Verification

A. Documents Reviewed:

- Selected Operators' Logs
- Senior Watch Supervisors (SWS) Log
- Jumper Log
- Radioactive Waste Release Permits (liquid & gaseous)
- Selected Radiation Work Permits (RWP's)
- Selected Chemistry Logs
- Selected Tagouts
- Health Physics Watch Log

B. The inspector(s) conducted routine entries into the protected area of the plant, including the control room, PAB, fuel building, and containment (when access is possible.) During the inspection activities, discussions were held with operators, technicians (HP & I&C), mechanics, foremen, supervisors, and plant management. The purpose of the inspection was to affirm the licensee's commitments and compliance with 10 CFR, Technical Specifications, and Administrative Procedures.

1. On a daily basis, particular attention was directed in the following areas:
 - Instrumentation and recorder traces for abnormalities;
 - Adherence to LCO's directly observable from the control room;
 - Proper control room and shift manning and access control;
 - Verification of the status of control room annunciators that are in alarm;
 - Proper use of procedures;
 - Review of logs to obtain plant conditions; and,
 - Verification of surveillance testing for timely completion.
2. On a weekly basis, the inspector confirmed the operability of a selected ESF train by:
 - Verifying that accessible valves in the flow path were in the correct positions;
 - Verifying that power supplies and breakers were in the correct positions;

- Verifying that de-energized portions of these systems were de-energized as identified by Technical Specifications;
- Visually inspecting major components for leakage, lubrication, vibration, cooling water supply, and general operable condition; and,
- Visually inspecting instrumentation, where possible, for proper operability.

Systems Inspected:

- Rod Control System
 - Service Water System
3. On a biweekly basis, the inspector(s):
- Verified the correct application of a tagout to a safety-related system;
 - Observed a shift turnover;
 - Reviewed the sampling program including the liquid and gaseous effluents;
 - Verified that radiation protection and controls were properly established;
 - Verified that the physical security plan was being implemented;
 - Reviewed licensee-identified problem areas; and,
 - Verified selected portions of containment isolation lineup.

C. Inspector Comments/Findings:

The unit operated at 100% power throughout the month except as delineated below. The inspector monitored selected phases of the unit's operations to determine compliance with NRC's regulations. The inspector determined that the areas inspected did not constitute a health and safety hazard to the public or plant personnel. The following are noteworthy areas the inspector researched in depth:

1. During this report period, the RTD's (Resistance Temperature Detectors) in Th of Loop 1 failed. These RTD's have an input into overtemperature and overpower Delta T (Reactor Protection). With the failure of the RTD's, the signal to these reactor protection circuits is less conservative. In accordance with Technical Specifications, the protection devices were placed in the tripped condition, enabling any overtemperature and overpower Delta T signal to trip the unit if the adverse condition exists. This is conservative.
2. On November 27, the licensee initiated a shutdown of the unit when the loop 4 overpower and overtemperature Delta T trip setpoints were found out of specification during a periodic test. Because of the condition of the unit mentioned in paragraph 1 above the unit had less than the minimum degree of redundancy for Delta T protection circuits. After fifty minutes, the loop 4 protection channels were recalibrated and the unit was returned to power.
3. On November 27, the licensee conducted a test on the steam driven auxiliary feedwater pump steam isolation valves. The valves failed to close. The licensee immediately dispatched a security guard to roll up the door to the area and station himself for security purposes consistent with action previously analyzed in a licensee safety evaluation performed in conjunction with an earlier similar failure of these valves to operate properly. The failure of the valves to close in this instance was due to their wires having been disconnected during the recent outage. The licensee is investigating the cause of the disconnected wires. On November 30 during the licensee's review of the incident, it was realized that the previous safety evaluation had addressed slow closure rather than non-closure of these isolation valves. The senior resident inspector was notified immediately. This item remains unresolved. (247/84-32-02)
4. The unit began to shut down to repair the failed RTD's in loop 1 on November 30, 1984.

One violation was identified.

4. Maintenance and Surveillance

The inspector reviewed Maintenance Work packages and re-start surveillances as appropriate to close the licensee event reports delineated in Paragraph B of this report.

In addition, the inspector witnessed portions of periodic testing which was being performed during plant walkdowns.

No violations were identified.

5. Review of Monthly Report

The Monthly Operating Report for October 1984 was reviewed. The review included an examination of selected maintenance work requests and an examination of significant occurrence reports to ascertain that the summary of operating experience was properly documented.

The inspectors verified through record reviews and observations of maintenance in progress that:

- The corrective action was adequate for resolution of the identified item; and,
- The operating report included the requirements of TS 6.9.1.7 & 8.

The inspectors have no further questions relating to the report.

6. Independent Verification of System Line-up

The inspectors independently verified the licensee's lineup of the Containment Spray System utilizing the licensee's system checkoff list and latest system print. The inspectors concluded that the system was lined up to perform the function for which it was intended.

No violations were identified.

7. Followup on IE Bulletin

(Closed) 83-BU-07 The licensee submitted its reply to I&E Bulletin 83-07, "Fradulent Products Sold by Ray Miller, Inc." on March 22, 1984. The licensee has concluded its investigation and has determined all suspect material satisfies all applicable inspection criteria. A further review of the general concerns expressed in the bulletin concluded these concerns were not applicable to Indian Point 2.

8. Licensee Event Report Followup

- A. Through discussions with licensee personnel and review of maintenance and surveillance records, the following event reports were reviewed to determine that reportability requirements were fulfilled, immediate corrective action was accomplished and corrective action to prevent recurrence had been accomplished in accordance with Technical Specifications.
- The following LER's were mechanical failures that were corrected and retested. They all appeared to be isolated instances.

83-003 Excess reactor coolant leakage
 83-005 Excess temperature on Auxiliary Feedwater Pump during test
 83-011 Suction Valve to #22 Safety Injection Pump Inoperative
 83-013 Containment Isolation Valve 1702 would not close during test
 83-020 Steam Generator High Steam Flow Setpoint too high
 83-042 Circuit 46B Heat Tracing inoperable
 83-045 Seal on the inner door to containment not fully sealed
 83-046 Less conservative TAVE input to Safety Injection Signal
 83-047 Weld Channel Penetration Pressurization System Valve failed to close
 83-049 Steam Generator High Flow Safety Injection Bistable found set less conservative than specification

- The following LER's were operator induced off normal operation and were isolated instances of operator error:

83-040 Condensate Storage Tank level below Technical Specification limits
 83-048 Inadvertent opening of 480V breaker causing turbine runback

No violations were identified.

- B. LER 84-14 - 480-Volt breaker undervoltage relay setpoint set at 398 volts vs. 403 volts as required by Technical Specifications. During the review of licensee events leading up to the reporting of LER 84-14, the inspector noted two incidents that were not in compliance with NRC regulations as delineated below:

- In April 1981, the licensee requested a Technical Specification change reflecting calculations that had been performed in the area of the Degraded Grid Voltage Study. In the request, the licensee requested a voltage setting to the undervoltage relays on the 480 volt busses of 396 volts with equal to or less than 180-sec. time delay. The station reviewed the Technical Specification Amendment and set the relays at 396 volts. NRR performed their safety evaluation and had discussions with engineering in the New York office, and agreed the settings of the relays should be changed to 403 volts. The revised Technical Specification change was approved by NRR and sent out for distribution. The station changed their procedures to conform to the new Technical Specifications, but did not change the settings on the undervoltage relays. This is a violation, (247/84-32-03) of their Station Administrative Orders, SAO-120, which requires that reviewers of the amendment changes should assure the status of the plant are consistent with, and comply with, the amendment requirements in their area of responsibility. A subsequent study performed by the licensee has shown

that with the relays set at 396 volts, all the equipment running during a postulated low voltage accident would remain running with no detrimental effect, and that the only equipment that would not start under this condition would be the charging pumps, which are not considered part of the equipment needed for the accident scenario.

- The incorrect undervoltage settings were discovered by the licensee during the review of a refueling surveillance test and the settings of the relays were set correctly prior to the test being performed. However, the incorrect settings were discovered and reset thirty-six days prior to the performance of the surveillance test, and the LER was written and reported to the NRC thirty days after the completion of the test. A thirty-day notification of this type of event is required by 10 CFR 50.73. The licensee failed to report the circumstances in a timely manner. This is a violation. (247/84-32-04)

9. Plant Procedures

A. Documents Reviewed:

- FSAR Chapter 12.3, "Written Procedures"
- 10 CFR 50.59 Changes, Tests and Experiments
- ANSI 18.7 - 1972
- Station Administrative Order (SAO) 102 Procedure, "Procedure Change Approval Policy"
- Operations Administrative Directive (OAD) 7, "Operating Procedure, Development and Control"
- Regulatory Guide 1.33
- Selected Plant Procedures - Station Operating Procedures (SOP)
- SOP 1.2 "Draining the RCS (Reactor Coolant System)"
- SOP 3.2 "RCS Boron Concentration Control"
- SOP 3.6 "CVCS Recycling System Operation"
- SOP 7.1 "Steam Generator Blowdown System Operation"
- SOP 8.1 "RCS Chemistry Control"
- SOP 10.3 "Containment Cooling System Operation"
- SOP 10.6.2 "Containment Entry & Egress"
- SOP 12.2 "Noble Gas Effluent Radiation Detector R-27 Operation"
- SOP 15.3 "Quadrant Power Tilt Calculation"
- SOP 21.3 "Auxiliary Feedwater System Operation"
- SOP 24.1 "Service Water System Operation"

The licensee recently instituted a new set of operating procedures, which were written by an outside agency. These procedures are to upgrade the quality of operation, and to meet their commitments made to rectify procedural problems identified in the SALP (Systematic Assessment of Licensee Performance) of 1982.

The inspector reviewed the above-listed procedures to confirm that they were issued in accordance with the licensee's commitments to the above documents. The inspector verified that:

- The procedure changes were made in accordance with approved procedures;
- The procedures were written in accordance with ANSI 18.7-1972;
- The procedure content was consistent with Technical Specifications; and,
- The procedures adequately addressed the operations in an orderly manner with adequate prerequisite precautions.

The inspector also verified that the licensee included in the new procedures past concerns, noted in previous inspections, which led to RHR pump cavitation problems, mispositioning of safety grade equipment during containment entries and other similar instances.

The inspector had discussions with the licensee with regard to how these procedures were verified workable. The licensee discussed their use on the simulator and extensive reviews by operators. The inspector asked the licensee for a commitment to field test all the new procedures in order to validate their workability. The licensee agreed and has committed to field test all of the newly issued procedures over the next three months. The inspector will follow the licensee's progress.

No violations were identified.

10. Exit Interview

At periodic intervals during the course of the inspection, meetings were held with senior facility management to discuss the inspection scope and findings. An exit interview was held with licensee management at the end of the reporting period. The licensee did not identify 2.790 material.