

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Report No. 84-15

Docket No. 50-247

License No. DPR-26 Priority -- Category C

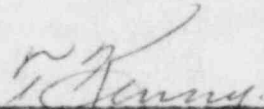
Licensee: Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, New York 10003

Facility Name: Indian Point Nuclear Generating Station, Unit 2

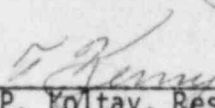
Inspection at: Buchanan, New York

Inspection conducted: June 16, 1984 to July 31, 1984

Inspectors:

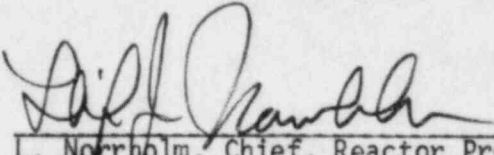


T. Kenny, Senior Resident Inspector 8/2/84
date



for P. Valtay, Resident Inspector 8/2/84
date

Approved by:



L. Norrholm, Chief, Reactor Projects Section 2B,
DPRP 8/7/84
date

Inspection Summary:

Inspection on June 16 - July 31, 1984 (Report No. 50-247/84-15)

Areas Inspected: This inspection report includes routine daily inspections, as well as unscheduled backshift inspections of onsite activities, and includes the following areas: licensee action on previously identified inspection findings; maintenance and refueling operations; maintenance; surveillance; onsite safety review committee; and, presentation of license certificates. The inspection involved 181 hours by the resident inspectors.

Results: The licensee has entered an extensive outage to refuel and perform the 10 year inservice inspection program. This report documents the beginning of the outage and the licensee's experiences with several delays in the installation of steam generator nozzledams, the removal of the lower internals, and the inspection tool. The report also discussed the expansion of the steam generator eddy current examination. No major items of concern have been identified in this report.

DETAILS

1. Persons Contacted

Within this report period, interviews and discussions were conducted with various licensee personnel, including reactor operators, maintenance and surveillance technicians, and the licensee's management staff.

2. Licensee Action on Previously Identified Inspection Findings

(Closed) Violation (247/83-21-07) Post Maintenance Test, (PMT) performed on two solenoid valves installed on the fan cooler units as per modification MM 77-2-06, failed to identify improper installation of the two valves. The licensee determined that the PMT performed was based on insufficient information and was inadequate in substance to confirm that the installation was appropriate. The inspector verified that the licensee corrected the installation; upgraded Engineering Procedures OP-290-1 requiring full construction details to be included in the modification packages; and, the Test and Performance group had been instructed to conduct a more detailed review of modifications prior to issuing test requirements.

(Closed) Unresolved Item (247/83-21-08) Automatic Switch Company (ASCO) issued a 10 CFR part 21 report regarding possible binding of switch operating mechanism on seven D.C. transfer switches. The inspector verified that ASCO is in the process of replacing the transfer switch internals for all seven units. The modification has been reviewed and approved by the responsible licensee groups.

(Closed) Unresolved Item (247/84-12-03) A former licensee employee alleged that six Station Nuclear Safety Review Committee (SNSC) meetings were improperly recorded and issued. The inspector reviewed the minutes of meetings identified by the allegor, Nos. 761, 771, 777, 780 and 781, and found them to be acceptable for attendance and contents.

(Closed) Unresolved Item (247/81-15-05) The subject report addresses a dropped rod incident which caused a turbine runback, loss of load and a subsequent reactor trip. Reactor protection systems operated as per design; however, a future review of the licensee's evaluation regarding the reactor trip sequence was left unresolved. Since 1981, the licensee experienced several reactor trips of similar nature. The inspectors verified that the licensee reviews the sequence of events for each reactor trip and initiates the appropriate corrective actions. Therefore, this open item is no longer considered applicable.

(Closed) Unresolved Item (247/83-24-02) The subject report discussed the lack of training of personnel in the use and understanding of Digital Exposure Dosimeters. The inspector verified that the licensee augmented its training program to include instructions in the use of the dosimeters. In addition, all personnel must read and sign an instruction sheet on the use of the equipment prior to issuance.

(Closed) Unresolved Item (247/83-24-03) The subject report discussed the inspector's concern regarding personnel exposure controls in work areas in the vicinity of the regenerative heat exchanger. This item has been upgraded to a violation in NRC report 84-12 as item No. 84-12-01; licensee's failure to provide access controls to a high radiation area.

(Closed) Unresolved Item (247/84-12-02) The licensee's failure to monitor changing (increasing) radiation levels inside the containment building, may have resulted in greater than expected exposure to several individuals. This item was reviewed by a regionally based health physics specialist and, subsequently, changed to a violation (84-13-04) in NRC report No. 84-13.

(Closed) Violation (247/83-21-04) The subject report discussed the licensee's failure to perform a safety evaluation pursuant to 10 CFR 50.59, for the installation of several valves on systems described in the FSAR. The inspector verified that the modification controls detailed in Engineering Procedure OP-290-01 have been revised. The most recent revision of the procedure more specifically delineates the action to meet the requirements of 10 CFR 50.59 than previous revisions. Additional training has been provided to responsible individuals based on the revised procedure.

(Closed) Violation (247/83-21-06) The subject report discusses the Station Nuclear Safety Committee's failure to recognize and evaluate the potential safety significance of a leaking welded joint on the safety injection system's test line. The inspector verified that the licensee issued a document titled, "Guidelines for SNSC Safety Reviews and Unreviewed Safety Questions." In addition, training was provided for each member of the SNSC in the same area, by the licensee's nuclear safeguards engineer.

3. Maintenance and Refueling Operations

During the reporting period, the reactor remained in cold shutdown with major maintenance inservice inspections and refueling activities ongoing.

Major evolutions during this period included:

- Installation of nozzle dams in all steam generator hot and cold leg nozzles to allow continuation of steam generator inspections while the primary system remained filled. The licensee experienced considerable delays in accomplishing this task, mostly attributed to unforeseen difficulties in the placement of the nozzle dams and the installation of backing braces.
- The lower internals were lifted from the reactor vessel and stored in the refueling cavity. The licensee experienced some delays during the removal of the internals due to alignment problems with the lifting rig.

- The inservice inspection (ISI) of the reactor vessel presently ongoing is also experiencing delays due to breakdowns of the inspection tool. The licensee's contractor is in the process of completing required troubleshooting and repairs.
- Major maintenance activities are being monitored by the inspectors, including installation of new circulating water pumps, fan cooler unit repairs, turbine-generator overhaul, auxiliary boiler feed pump repairs, main steam isolation valves overhaul, and human factors engineering work ongoing in the control room.
- The licensee has expanded their Steam Generator (S/G) Eddy Current Examination because of identified pitting in the cold leg side of all S/G's. The Technical Specification requirement was 16% of selected hot leg tubes and 3% of selected cold leg tubes. The licensee has elected to examine 100% of all the tubes in #22 and 24 S/G, and at least 100% of all the tubes in #21 and 23 S/G up to the 1st support plate. Pitting has been identified from 1/2"-9" above the tube sheet, and seems to be in the sludge area at random positions. As of the end of this report period, the licensee has not made a total evaluation of the number of tubes that will require plugging and the eddy current is still in progress. No violations were identified.

4. Maintenance

The inspectors reviewed the licensee's maintenance programs and interviewed responsible personnel to determine the programs' effectiveness for:

- Maintaining accessible records of equipment failures history;
- Detecting and monitoring failure trends;
- Conducting failure analysis; and,
- Recognizing and correcting root causes.

The inspectors reviewed the following applicable procedures:

- Station Administrative Order, SAO-132, Revision 0, "Analysis of Operational Events";
- Administrative Directive MAD-17, Revision 2, "Preventive Maintenance Procedure";
- Administrative Directive IC-AD-7, Revision 11, "Periodic Instrument Calibration"; and,
- Selected machinery history files.

Findings:

As required, the licensee maintains hard copy files of equipment history, including copies of Maintenance Work Requests (MWR's). While failure history is available by review of system maintenance history files, root cause of failures are not routinely documented in the maintenance packages.

Major failures associated with safety-related equipment are evaluated through SAO 132 reports and are reviewed by the Station Nuclear Safety Committee (SNSC). Engineering evaluations are requested as needed. Failure trends are not monitored through this review process. Generally, identification of failure trends relies upon the recollection of previous similar failures by licensee supervisors and management, based on high MWR numbers and surveillance test results. The inspectors verified that the licensee identified root causes for repeated failures on several important safety related equipment such as, service water pumps, auxiliary boiler feed pumps, diesel generators, main steam isolation valves, etc. The licensee's corrective actions included changes in the preventive and/or corrective maintenance program, use of new lubricants, and use of improved grade replacement parts. Within the review sample, the inspectors did not identify evidence of repeated failures of major safety related equipment which were not evaluated by the licensee for root cause and corrective action. However, the timeliness of such licensee evaluations was not ascertained during the review.

In order to enhance the maintenance programs and to provide a formal methodology for determination of root cause, trending of repeated failures and failure analysis, the licensee recently implemented the following methods for tracking and evaluating problems:

1. Power Plant Maintenance Information System (PPMIS). This is a systems based computer file of all maintenance work completed or in progress. Local terminals are being made available to maintenance and surveillance departments.
2. The licensee hired a failure analysis engineer, who is assigned to the site.
3. The licensee has access to the Nuclear Power Reliability Data System, (NPRDS) and contributes input into that system. The failure analysis engineer has initiated a review of the NPRDS data to determine its applicability to site specific equipment.

In conclusion, it appears that recently, the licensee has obtained the necessary tools and personnel to support the maintenance program in the areas discussed in this review. However, the exact direction of the program needs to be identified and formalized in applicable procedures. Through discussions with licensee management during this review period, the inspectors determined that the licensee is committed to the program enhancement, but no schedules have been developed to that effect.

No violations were identified.

5. Surveillance

1. In accordance with the Technical specifications, Section 4.12, the licensee tested 10 snubbers, as per licensee procedure PTR-34, Hydraulic Snubbers Functional Test, Revision 7.

The snubbers were tested on a Bergen-Patterson Hydraulic Test Stand, Model 2500. The test stand was calibrated on June 25, 1984. No failures were observed.

The licensee is in the process of conducting visual inspections of 24 Grinnel snubbers associated with the steam generators. The inspection is in accordance with licensee procedure PI-V1(A), Revision 7.

2. PTR-49 Halon System Functional Test

During the test, interlocks failed to isolate cable tunnel fans, interrupt battery room 24 ventilation, and close several fire dampers. The licensee is investigating the cause of interlock failures. This item remains unresolved pending NRC review of a successful test (84-15-01)

The following additional surveillance activities were monitored by the inspectors.

- PTR-26 and 27, B and C Type Leak Rate Tests; and,
- PT-34, Revision 1, Integrated Leak Rate Test. This procedure is in its final review.

No violations were identified.

6. Onsite Safety Review Committee

A. Documents Reviewed:

- ANSI N18.7-1972 QA for Operational Phase of Nuclear Power Plants
- Technical Specifications
- Station Nuclear Safety Committee (SNSC) Minutes

B. Inspector Findings:

The inspector attended a SNSC meeting (No. 862) on July 27, 1984. The inspector ascertained that:

- A quorum was present;

- An Agenda was used and adhered to;
- The requirements delineated in Technical Specifications were satisfied; and,
- Minutes were taken.

Discussions with the Chairman of the SNSC afterwards identified the following: a new person has been appointed as a Secretary of the committee. This should improve the quality of minutes and add a SNSC follow list (list of outstanding generated items which will be addressed by the SNSC at subsequent meetings). This had been a problem area in the past. Also, the Chairman is being replaced by a newly hired Technical Services Director. The present Chairman, who has been acting in the position, will remain at the site for two weeks to make an orderly turnover. The inspectors will continue to observe the SNSC to insure a smooth transition and more clearly delineated minutes.

No violations were identified.

7. Presentation of License Certificates

The Region I Administrator visited the site and presented certificates to twelve Reactor Operators and nine Senior Reactor Operators in recognition for their accomplishments in achieving the licenses. In his talk, the Administrator reiterated the need to operate a safe plant and pointed out to the licensee, and the new operators, the need to maintain their license by their perseverance in the retraining program. The Administrator said: "The public expects that the operators will operate the plant with a true safety perspective and constant attention to safe operation. Your operator license and these certificates, therefore, do not simply represent your accomplishments and achievements, so much as they constitute a public trust and a charter for a continuing high standard of performance." The newly licensed personnel will be integrated into their job functions in accordance with the licensee's procedures.

8. Unresolved Items

Unresolved items are those for which further information is required to determine whether the item is acceptable or a violation. An unresolved item is discussed in Paragraph 5.

9. Exit Interview

During the inspection, meetings were held periodically with senior facility management to discuss inspection scope and findings.