

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

DCS 50247/840105

Report No. 84-26

840205

Docket No. 50-247

840611

License No. DPR-26

Priority --

Category C

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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: September 1-30, 1984

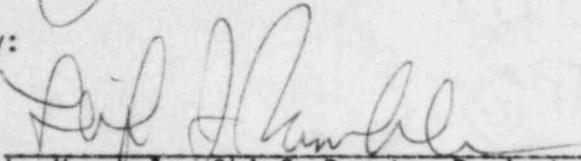
Inspector:



T. Kenny, Senior Resident Inspector

10/4/84  
date

Approved by:



L. Norrholm, Chief, Reactor Projects Section 2B,  
DPRP

10/9/84  
date

Inspection Summary:

Inspection on September 1-30, 1984 (Report No. 50-247/84-26)

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; review of potentially generic issues; allegation; reactor vessel flaw; Commissioners' visit; followup on IE bulletins, and LER's. The inspection involved 64 hours by the resident inspector and 73 hours by region based inspectors.

Results: This report closes licensee event reports, bulletins, the concerns of a former contractor, and potentially generic issues. The report also discusses the visits of two Commissioners to the facility. No items of concern have been identified in this report.

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## 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. Operational Safety Verification

#### a. Documents Reviewed:

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

b. The inspector(s) conducted routine entries into the protected area of the plant, including the control room, PAB, fuel building, and containment. 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.

#### c. Inspector Comments/Findings:

During this report period, the unit was in a refueling shutdown condition. The inspectors conducted reviews on shutdown activities to ascertain compliance with NRC regulations. The following events were noteworthy and outside of the routine events ongoing during a refueling outage:

1. The licensee completed the 10 year ISI program for the facility. One weld flaw discovered in the reactor vessel vertical seam weld remains to be resolved. (See Section 8 of this report for details)
2. The containment Integrated Leak Rate Test (ILRT) has been completed and documented in Report 84-27. As a result of some leakage during the first attempt of the ILRT, the licensee made a 4 hour report, required by 10 CFR 50, to the NRC. The first test was termed invalid, and a second test was performed which is documented in Report 84-27.

3. The licensee made another 10 CFR 50 4-hour report concerning 18 dampers in the ventilation of the cable spreading room. The discovery of 1-hour dampers vs. 3-hour dampers was identified during an Appendix R review. The licensee took the necessary steps concerning continuous fire protection coverage by assigning a continuous fire watch until the dampers can be replaced. The inspectors will monitor the licensee's actions on this matter.
4. Steam generator work was completed. The following tables summarize the licensee's efforts:

A total of 116 tubes were identified with indications greater than 20% degradation. Of these 84 were plugged because degradation was greater than 40%.

	<u>Tubes Plugged</u>			
	S/G 21	S/G 22	S/G 23	S/G 24
Plugged because of Indications	38	29	2	15
Plugged because of Restrictions	10	38	9	27
Total Plugged 1984	48	67	11	42
Total Previously Plugged	101	133	125	137
Total Plugged at End of Outage	149	200	136	179
% Plugged at End of Outage	4.6%	6.1%	4.2%	5.5%

Sludge lancing was performed twice with the following results:

<u>Total Sludge Removed</u>	
S/G 21	363 lbs.
S/G 22	543 lbs.
S/G 23	217 lbs.
S/G 24	270 lbs.

Sludge Analysis

Metals, %	21 S/G	22 S/G	23 S/G	24 S/G
Ni	1.40	1.66	1.18	1.05
NiO	1.85	2.18	1.78	1.79
Zn	3.48	3.79	3.31	3.14
ZnO	4.33	4.72	4.12	3.91
Fe	51.52	45.21	43.86	43.97
Fe O	74.16	64.65	62.72	62.88
Cu	8.43	7.53	10.88	10.31
B	0.05	0.04	<0.01	<0.01
Ca	0.26	0.18	0.11	0.36
CaO	0.36	0.25	0.15	0.50
Mg	0.08	0.05	0.06	0.09
MgO	0.13	0.08	0.10	0.15
K	< 0.01	< 0.01	< 0.01	<0.01
Cr	0.40	0.44	0.24	0.18
Cr O	0.92	1.14	0.80	0.74
Na	0.05	0.06	0.02	0.04
Na O	0.08	0.10	0.03	0.07
SiO	0.62	0.32	0.47	1.16

A chemical soak was performed and to the date indicated, the following represents the amount of copper removed. The licensee will continue the soak until the unit is brought above cold shutdown.

Copper Removed By Chemical Soak  
(as of 9/10/84)

S/G	21	35 lbs.
S/G	22	38 lbs.
S/G	23	26 lbs.
S/G	24	24 lbs.

As a result of the annulus inspection in all steam generators, several small pieces of debris were removed. One piece was lodged between tubes and could not be removed. Slight vertical movement was possible, so the licensee added stabilizing plugs to the adjacent tubes, as a precautionary measure.

Flow slot measurements were also taken and compared to previous measurements obtained during past outages. The "hour glassing" was apparent and slightly increased since the last inspection. The maximum total flow slot reduction observed during this outage was approximately 2-1/2 inches in #22 steam generator.

A complete report has been submitted, by the licensee, to NRR dated September 20, 1984.

5. The primary system has been filled and vented with the primary chemistry in specifications awaiting final preparation to proceed above cold shutdown (200°F) at the end of this report period.

No violations were identified.

### 3. Maintenance

The inspector reviewed 118 completed Maintenance Work Requests (MWR's) and their associated Post Maintenance Test/Inspections (PMT's). The purpose of this review was to determine the licensee's effectiveness of correcting deficiencies reported on MWR's. PMT results were used as a measure of the licensee's maintenance performance. Because the licensee's permanent record storage is offsite, a representative sample of completed MWR packages could not be readily obtained.

Of the 118 MWR packages reviewed, 19 were for repair of deficiencies that required retest. The other 99 MWR's either did not require retest, were canceled or were initiated for the performance of preventive maintenance. Seven of the 19 maintenance items failed to meet the acceptance criteria of the PMT. All 7 of these failures were associated with valve maintenance; however, the reason for the failures varied. No root cause of failures could be determined from this sampling.

In the future, the licensee plans to trend failures of PMT's to determine root cause. This will be facilitated by the computerized Power Plant Maintenance System. The system is being upgraded to enable it to sort all work items that have failed the PMT. This upgrade is scheduled to be completed by January 1, 1985.

No violations were identified.

#### 4. Surveillance

##### a. Documents Reviewed:

- PT-M29 Nuclear Instrumentation Detector Current Comp. Operational Test
- PT-M24 Fire Protection System Surveillance
- PT-W4 City and Fire Water Tank Volume Determination
- PT-R13 Eight Recirculation Switches Functional test

##### b. Inspector Findings:

The inspector reviewed the above completed surveillance procedures to ascertain the following:

- That the instrumentation used was properly calibrated;
- That the redundant system or component was operable, where required;
- That properly approved procedures were used by qualified personnel;
- That the acceptance criteria were met;
- That the test data were accurate and complete;
- That proper reviews, by the licensee, had been conducted; and,
- That the results of the tests met Technical Specification requirements.

No violations were identified.

#### 5. Review of Monthly Report

##### a. Monthly Operating Report

The Monthly Operating Report for August, 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 inspector verified through record reviews and observations of maintenance in progress that:

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

The inspector has no further questions relating to this report.

## 6. Review of Potentially Generic Issues

### A. Underrated Fuses Which May Affect Vital Busses

This item was an identified deficiency in fuse ratings at another operating facility. Fuse holders and fuses in the 250V AC & DC systems which could result in an arc-to-ground which could cause the loss of the vital bus supply breakers. The licensee has checked the conditions at Indian Point and has determined that no fuse holders are underrated in accordance with design prints.

### B. Misapplication of Westinghouse KF Underfrequency Relays

This item was the misapplication of the KF relay, at another operating facility. The relays were installed in a circuit to close contacts on increasing frequency above the setpoint, rather than the intended application of closing contacts on a decreasing frequency below the setpoint. The application of these relays at Indian Point are installed to close contacts on a decreasing frequency below the setpoint.

### C. Seismic Qualification of Containment Personnel Air Locks

This item was an identified deficiency in the seismic design of the pneumatic supply system for the personnel air locks at another facility. The resident inspector had discussions with the licensee and reviewed FSAR Section 1.11 and 6.6 and has determined that the pneumatic supply system at Indian Point is seismic.

### D. Steam Generator Snubber Testing Failures

This item was the identified failure, during the testing of snubbers manufactured by Boeing Company, at other facilities. Boeing Company snubbers are not used at Indian Point.

## 7. Allegation

A former contract employee telephoned the resident office and alleged that: "Contaminated tools were being stored in unauthorized areas, and, that contaminated water was being poured into a sink that was not monitored." He also alleged that: "People were not obeying the Radioactive Work Permits (RWP's)."

The inspector conducted an investigation into the allegations with the following results:

- The subject room was used to store contaminated tools and had a sign on the door marked "radioactive materials." There was also a current radiological survey of the room posted on the door. Within the room there were tools in yellow bags marked "radioactive materials."

These bags, as well as some loose items, were stored in one corner of the room. The inspector had a health physics supervisor perform a survey of the area, which indicated a reading of 2 MRen/hr. The inspector asked the health physics supervisor to identify the area further by roping off the storage area and conspicuously posting it. Within the room there was also a frisker for monitoring the tools.

- The alleged sink drains to the laundry drain tanks which are pumped to the radioactive waste processing system.

The alleged could not supply the inspector with RWP numbers or dates to corroborate his allegation about the RWP violations. However, the inspectors, as part of the routine inspection activities monitored selected RWP's and checked for nonconformance.

The inspector concludes there was no substance in the allegations made and the room was authorized to decontaminate and store contaminated tools. The inspector has no further questions concerning this matter.

8. Ultrasonic Reflector in Reactor Pressure Vessel (RPV) Longitudinal Weld No. 12 at 345° Azimuth Location

The inspectors reviewed the summary of the licensee's findings provided to the NRC in a meeting on August 14-17, 1984 regarding the subject reflector, discussed the findings with the NRC consultant and, during telephone conversations with licensee representatives, obtained information regarding vessel dimensions, weld preparation geometry, and reflector location with respect to the weld centerline.

Using the aforementioned information, the inspectors prepared a full scale plot of the weld and the reflector. The plot shows that the reported reflector is 1.66 inches from the weld centerline and, based on the weld preparation geometry, it appears to be located in the base material.

The condition is being further evaluated by the licensee, his ISI vendor, and the NRC. NRR will continue to follow this item, and will evaluate the final results.

9. Commissioners' Visit

On September 25, the inspector accompanied Commissioner Lando W. Zech, Jr. on a tour of the training facility and simulator, the EOF (Emergency Operations Facility), control room, turbine building, auxiliary building, containment building, and Technical Support Facility. The Commissioner talked with operators, technicians and management staff and concluded with a debriefing.

In his debriefing, the Commissioner thanked everyone for their cooperation during a busy time (end of refueling outage), and made comments on: The mock-ups he had seen for training steam generator workers; the need to run a clean and tidy facility with good formal operating procedures; the need for extensive ongoing training of plant personnel; and, the key ingredient in operating a smooth, clean and safe facility was management involvement on all levels of plant operations.

On September 28, the inspector conducted a tour for Commissioner James K. Asselstine of the training facility and simulator, the EOF, control room, containment building, and auxiliary building. The Commissioner concluded his visit by thanking the licensee for his time, and proceeded to tour the Unit 3 facility.

Intervenors representing "Concerned Parents to Close Indian Point," "NYPIRG," "Alliance to Close Indian Point," and Rockland County accompanied the Commissioners during the tours.

#### 10. Followup on IE Bulletins

##### Bulletin 80-BU-05, "Vacuum Condition Resulting in Damage to Low Pressure Tanks Which May Contain Primary System Water"

This bulletin was previously closed in Inspection Report 83-11, but a recent letter (April 18, 1984) from the Director of DEPER, IE requested Region I to verify that the modifications committed to by the licensee have been completed, and that the licensee evaluations of system design include the following:

- Tank vents are unvalved.
- Tank vents are adequate to prevent damage at the maximum rate of liquid removal.

The inspector reviewed the actions taken by the licensee to prevent a vacuum condition resulting in damage to the Chemical Volume Control System (CVCS) Holdup Tanks.

The licensee approved Revision 3 to Station Operating Procedure 3.6, CVCS Recycle System Operation, January 18, 1984. This revision incorporated the valve lineup required to align the system for polishing holdup tanks using the gas stripper feed pumps. A modification to the gas stripper feed pumps was completed April 5, 1983 which added a low suction pressure interlock. These actions fulfilled the licensee's commitments made as a result of damage to No. 21 CVCS holdup tank on October 6, 1982 due to an error in valve alignment.

These tanks are not vented to atmosphere and part of the modification was to increase the N<sub>2</sub> cover gas along with the added low pressure suction interlock that would trip the transfer pumps, should a low vacuum exist, prior to damaging the tank. Thus, the questions about the vents do not apply.

Bulletin 84-BU-02 "Failures of General Electric Type HFA Relays In Use In Class IE Safety Systems"

Through discussions with the licensee and an examination of licensee documentation, the inspector has determined that no HFA relays are in use at Indian Point Unit 2. The licensee also reviewed the general concerns raised by the bulletin, and has documented that these concerns do not apply to Indian Point. The inspector could not identify any failures of this type of relays in the review of LER's. The inspector considers this item closed.

11. Licensee Event Report Followup

Through discussions with licensee personnel and review of 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:

LER 84-002 & 003	MSIV Excessive Closure Time
LER 84-006	Isolation Valve Seal Water System Leakage
LER 84-007	Failure to Maintain Continuous Fire Watch
LER 84-008	Spurious Actuation of Manual Safety Injection Channel
LER 84-010	Excessive Containment Isolation Valve Leakage

Each of these events were reported in the prescribed manner under the rules of 10 CFR 50.73 and were verbally reported to the resident inspector at the time of the event. One LER exceeded the time limit of 30 days prescribed. The resident inspector had discussions with the licensee's management about the need to complete these items on time. The licensee has agreed to address this matter by assessing the review chain within his organization.

The above items are considered closed.

12. 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 was asked to identify any proprietary information provided to the inspector in the course of the inspection. No such information was identified.