

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-247/84-24

Docket No. 50-247

License No. DPR-26

Priority -

Category -

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

Facility Name: Indian Point Nuclear Generating Station, Unit 1

Inspection At: Buchanan, New York

Inspection Conducted: August 27-31, 1984

Inspector: *P. Clemons*
P Clemons, Radiation Specialist

10/15/84
date

Approved by: *M. Shanbaky*
M. Shanbaky, Chief, Facilities
Radiation Protection Section,
Radiation Protection Branch

10/16/84
date

Inspection Summary: Inspection on August 27-31, 1984 (Report No. 50-247/84-24)

Areas Inspected: Routine, unannounced inspection of the licensee's Radiation Protection Program including surveys, procedures, external exposure control, personnel selection, qualification and training, posting and high radiation area control and internal exposure control. The inspection involved 45 inspector hours on site by one region based inspector.

Results: One violation was identified (failure to follow procedures, paragraph 3).

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DETAILS

1.0 Persons Contacted

1.1 Licensee Personnel

J. Basile, General Manager, Nuclear Power Generation, Acting Vice President, Nuclear Power
Q. Budnick, Manager, Nuclear Power Quality Assurance
M. Miele, General Manager, Environmental health and Safety
S. Quinn, General Manager, Technical Support
M. Blatt, Director, Regulatory Affairs
W. Graber, Radiation Protection Manager (EB)

1.2 NRC Personnel

T. Kenney, Senior Resident Inspector
P. Koltay, Resident Inspector

Other licensee and contractor personnel were contacted and interviewed during the inspection.

2.0 Purpose

The purpose of this routine inspection was to review the licensee's radiation protection program with respect to the following elements:

- Review an unplanned exposure;
- Review survey results;
- Review procedures;
- Review ALARA;
- Review training;
- Review posting and high radiation area controls; and
- Review health physics control of Control Points

3.0 Procedures

The adequacy and effectiveness of the licensee's procedures were reviewed against the criteria contained in Technical Specification 6.11, "Radiation Protection Program". The licensee's performance relative to these criteria was determined by interviewing the Radiation Protection Manager, a Contractor Health Physics Supervisor, a Contractor Health Physics Technician, and by reviewing procedures and other appropriate documents.

Within the scope of this review, the following violation was identified:

Technical Specification 6.11, "Radiation Protection Program", states that "Procedures for personnel radiation protection shall be prepared consistent with the requirements of 10 CFR Part 20 and shall be approved, maintained and adhered to for all operations involving personnel radiation exposure".

Procedure No. EHS 3.403, Revision 0, "Steam Generator Channel Head Entry", developed pursuant to the above in Section 5.3, requires that an SAO-134 be prepared for the entry of personnel into the Steam Generators. The SAO-134 prepared for the Steam Generator entry on August 22, 1984, required that the exposure information be recorded for each jumper, each time the jumper exited the Channel Head.

It was determined from discussions with the previously mentioned licensee personnel that on August 24, 1984, a worker made at least four partial and/or full jumps into Steam Generator No. 23, and the health physics technician covering the job did not record the workers exposure information after each jump. The technician did not read the worker's special external whole body dosimeters until after the fourth jump, and this resulted in the worker exceeding his quarterly administrative exposure limit of 1250 millirem. The actual dose received during the jumps was 1350 millirem.

The health physics technician stated that he did not record the workers exposure information after each jump, as required by Procedure No. EHS 3.403, because he was determining the exposure allowed the worker by knowing the dose rate at the Manway (300-350 millirem per minute), and calculating the time it would take for the worker to receive the administrative limit of 1250 millirem.

Procedure No. EHS 2.006, "Dissemination of Information Relative to Environmental Health and Safety Procedures." required that procedures and procedure changes be reviewed with the Radiation Protection Section personnel. Section 2.1.5 of Procedure No. EHS 2.006 states, "A required Reading Acknowledgement Form (EHS 2.006-1.0, Addendum 1) denoting the procedure/revision number and title, the Radiation Protection Section individual's name required to read the procedure, his/her initials indicating awareness and understanding of the procedure contents, and verification by a Radiation Protection Supervisor shall be completed for all new procedures or revisions to procedures".

It was determined through discussion with the Radiation Protection Manager, and the Contractor Training Coordinator that as of August 31, 1984, the licensee did not have a copy of the Reading Acknowledgement Form (EHS 2.006-1, Addendum 1) indicating that the health physics technician covering the Steam Generator job on August 22, 1984, had read and understood the procedure contents of Procedure No. EHS 3.403, "Steam Generator Channel Head Entry".

During the initial interview of the health physics technician on August 28, 1984, the technician informed the inspector that he did not remember reviewing Procedure No. EHS 3.403, but during a subsequent interview the technician stated that he had reviewed the procedure.

Section 2.2.6 of Procedure No. EHS 2.006 states that "Completed required Reading Acknowledgement Forms...be filed in the Radiation Protection files".

The failure to follow procedures represents a violation of Technical Specification 6.11 (84-24-01).

4. Personnel Selection, Qualification and Training

The inspector reviewed the selection, qualification and training of the Contractor Radiation Protection Technician covering the jumps into Steam Generator No. 23 on August 22, 1984, with respect to criteria contained in the following:

- Technical Specification 6.3, "Facility Staff Qualifications", and
- ANSI N18.1, 1971, "Selection and Training of Nuclear Power Plant Personnel"

The evaluation of the licensee's performance relative to these criteria was determined by discussion with the Radiation Protection Manager and by reviewing the technician's resume.

Within the scope of this review the following was identified:

- a. The technician's resume did indicate that he met the requirements of Section 4.5.2 of ANSI N18.1, 1971, but the resume did not indicate any power plant experience.
- b. The technician had only been on site for nine days and he only worked in the Primary Auxiliary Building.
- c. The technician had not previously entered or worked in Containment prior to August 22, 1984.
- d. The technician was trained by a "talk-thru" with reference to his responsibilities and duties while covering the steam generator jumps.
- e. The technician did not receive Steam Generator Mock-Up Training as directed for all senior health physics technicians without previous Indian Point 2 steam generator channel head exposure control experience.

This is another example of failure to provide adequately trained technicians to control significant radiological work during outage operations. This area will be re-examined during a future inspection (84-20-03).

5. Exposure Control

External Exposure Control Program

The External Exposure Control Program for the Steam Generator operations was reviewed against criteria contained in 10 CFR 20.1(c), "Purpose". The licensee's performance relative to these criteria was determined by interviewing an ALARA Engineer and a Radiation Protection Supervisor, serving in an ALARA capacity, and by reviewing appropriate records.

The review indicated that for all jobs associated with the steam generators such as Nozzle Seals, Manway Repairs, Eddy Current Testing, Sludge Lancing and Secondary Side Inspection, the actual man-rem exposure was significantly in excess of the estimated man-rem exposure. The estimated exposure was 389 man-rem, and the actual exposure was 661.6 man-rem as of August 27, 1984. Although no one was overexposed, it is apparent that additional attention should be given to the ALARA concept.

Another instance of failure to apply ALARA practices occurred on August 28, 1984, on the 46' elevation of Containment, where it was observed that a contractor worker waiting to work in Steam Generator No. 23, was waiting in an area where the dose rate was 15 millirem per hour. The worker had been waiting in the area for approximately 30-45 minutes. Two junior technicians were controlling this area, but they took no action to relocate this worker to a low dose area (2-3 millirem per hour) located about fifty feet away. This area will be re-examined during a future inspection (84-24-04).

Internal Exposure Control

The licensee's internal exposure control program was reviewed with respect to criteria contained in 10 CFR 20, "Standards for Protection Against Radiation" and Procedure No. NEM-A-06, Revision 3, "Whole Body Counting". The licensee's performance against these criteria was determined by discussion with a Radiation Protection Supervisor, a Dosimetry Technician, and by reviewing appropriate documents.

Within the scope of this review, no violations were identified.

6. Posting and Access Control

The licensee's posting and access control to the following areas was reviewed:

- Radiation areas
- High radiation areas

The review was with respect to criteria contained in the following:

- 10 CFR 20, "Standards for Protection Against Radiation"
- Technical Specification 6.12, "High Radiation Areas".

The evaluation of licensee performance in this area was based on:

- independent radiation surveys by the inspector
- observations by the inspector and
- discussions with cognizant licensee personnel

Within the scope of this review, no violations were identified.

During inspection 50-247/84-22, a licensee representative stated that all metal access gates had not been installed, but they would be installed when containment was breached. During this inspection it was noted that containment had been breached. The licensee was in the process of installing the remaining high radiation area metal gates.

The completion of installation of all high radiation area gates will be verified during a future inspection (84-24-02).

7. Surveys

The licensee's survey program was reviewed against the criteria contained in 10 CFR 20.201, "Surveys". The licensee's performance relative to these criteria was determined by discussions with a Radiation Protection Supervisor and by reviewing records.

Within the scope of this review, no violations were identified.

8. Exit Interview

The inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on August 31, 1984. The inspector summarized the purpose, scope and findings of the inspection. At no time during the inspection was written material provided to the licensee by the inspector.