

U. S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-247/82-15

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 Station Unit 2

Inspection At: Buchanan, New York

Inspection Conducted: July 26-30, 1982

Inspector: David J. Collins
D. J. Collins, Radiation Specialist

Dec 6, 1982
date

Approved by: M. Shambaky
for E. G. Greenman, Acting Chief, Facilities
Radiation Protection Section, RPB, DETP

12/7/1982
date

Inspection on July 26-30, 1982 (Report No. 50-247/82-15)

Inspection Summary:

Routine unannounced safety inspection of the Radiation Protection Program by a region-based inspector (34 hours), including: preparations for steam generator testing and other outage tasks, Radiation Protection Technician training; high radiation area controls; licensee actions on previously identified items.

Inspection Results: One violation was identified: Failure to determine package had been fabricated in accordance with design prior to shipment of radioactive material. (Details, 4).

DETAILS

1. Persons Contacted:

1.1 Consolidated Edison Company

- * J. Balu, Regulatory Affairs
- K. Burke, Director, Regulatory Affairs
- * J. Cullen, Radiation Protection Manager, Acting General Manager, Environmental Health and Safety
- A. Farraro, Training Administrator
- H. Hoffman, Quality Assurance and Reliability
- A. Homyk, Radiological Engineer
- E. Imbimbo, Senior Radiation Protection Instructor
- * C. W. Jackson, Vice President, Nuclear Power
- * L. J. Kawula, Acting General Manager, Administrative Services
- H. Morrison, Operations Superintendent
- M. O'Kelley, RadWaste General Supervisor
- T. Teague, ALARA Engineer

1.2 U.S. Nuclear Regulatory Commission

- * R. S. Barkley, NRC Technical Intern
- P. S. Koltay, Resident Inspector
- * T. A. Rebelowski, Senior Resident Inspector

* Indicates persons attending the exit interview on July 30, 1982

2. Followup on Corrective Action Relating to Notices of Violation

- 2.1 (Closed) Violation (79-24-01): Failure to have all documents referenced in Certificate of Compliance for radwaste shipping packages. The Inspector reviewed the Certificates and the referenced documents for shipping packages. Licensee actions were as stated in the response letter to Region I dated February 10, 1980. Shipping packages are addressed further in Detail 4 of this report.
- 2.2 (Closed) Violation, Severity Level III (81-10-01): Nine examples, failure to adhere to Technical Specification (TS) 6.11, Radiation Protection Procedures. The dosimetry device control corrective measures taken by the licensee, as described in NRC Region I Confirmatory Action Letter No. IAL 81-23, dated May 7, 1981, have been implemented. Procedures are in place and used to detect unauthorized use of dosimetry devices by personnel and in areas outside the main control areas.
- 2.3 (Closed) Violation, Severity Level III (81-10-02): Failure to control access to high radiation areas. The Inspector reviewed Health Physics, Operations and Security procedures, interviewed personnel, verified personnel training and toured areas of the

plant. Training has been provided to each group in regard to their responsibilities. The procedures and training provide adequate control and instructions to preclude unauthorized access to high radiation areas.

- 2.4 (Closed) Violation, Severity Level IV (81-13-01): Failure to perform suitable airborne radioactivity sampling. The inspector determined that the corrective actions, described in the licensee's March 12, 1981 letter, were implemented.
 - 2.5 (Closed) Violation, Severity Level V (81-13-02): Failure to post a radiation area. The inspector verified the corrective actions described in the licensee's March 12, 1981 letter, were implemented.
 - 2.6 (Closed) Violation, Severity Level V (81-13-03): Failure to adhere to Radiation Protection procedures regarding Radiation Work Permits (RWP). The inspector determined the actions described in the licensee's March 12, 1981 letter, had been implemented.
3. Inspector followup on previously identified items
- 3.1 (Closed) Inspector Follow Item (80-02-02): Review HP Training. The Inspector reviewed training records for 12 technicians (licensee and contractor), and determined that signoffs were implemented for hands-on training and procedure understanding.
 - 3.2 (Closed) Inspector Follow Item (80-02-03): Review of neutron Quality Assurance exposure of dosimetry devices. The Inspector reviewed HPI 4.12, Revision 4, February 26, 1982, "TLD Badge-Film Badge Quality Control," and the data generated from the exposed films. The licensee routinely exposes dosimetry packets to known gamma, beta, beta-gamma, Neutron and Beta-Gamma-Neutron fields of radiation as a Quality Assurance check on the accuracy of the dosimetry vendor. Standards are set for evaluation, and management review is mandated for discrepant reports.
 - 3.3 (Closed) Inspector Follow Item (80-02-04): Review whole body counting frequency. HPP 4.2, Revision 3, March 26, 1980, "Bioassay and Whole Body Counting," indicates an acceptable annual frequency for routine Whole Body Counts. In addition, criteria for special whole body counts are provided in the procedure.
 - 3.4 (Closed) Inspector Follow Item (80-02-06): Review improvements in air sampling. The Inspector determined that breathing zone air sampling is routinely used to evaluate exposures to airborne radioactive materials.
 - 3.5 (Closed) Inspector Follow Item (81-02-01): Review licensee's termination dosimetry report. The Inspector's review of the exposure report and termination report to the individual and the State of New York indicated the licensee had properly reported the exposures.

- 3.6 (Closed) Inspector Follow Item (81-02-03): Routine review of dosimetry tests. The inspector reviewed the results of Quality Assurance tests of dosimetry devices as part of HPI 4.12 and also the results of tests which are periodically performed using dosimetry packets exposed by a third party consultant. The tests show acceptable performance to the licensee's standards. The third party exposes and returns the badges to the licensee; the licensee submits the badges to their dosimetry vendor for evaluation. The licensee sends the reported values to the third party, who evaluates and reports the results to the licensee.
- 3.7 (Closed) Inspector Follow Item (81-13-06): Review content of HP Technician Retraining Program (scope). Inspector review of the training manuals relating to HP technician training indicated that adequate training is mandated. File review indicates the training is being provided.
- 3.8 (Closed) Inspector Follow Item (81-13-07): Review training documentation to verify practical factors, and training for contractor technicians. The inspector interviewed technicians, training staff, and supervisors; and reviewed training documentation to assure that practical demonstration of skills was performed by technicians under supervisory review. The practical factor review assures that the technician understands and can implement the station procedures. Additionally, procedure review sign-offs are used when new procedures or revisions are issued. The station HP technician training is applied to contractor technicians prior to assignment within the plant.
- 3.9 (Closed) Inspector Follow Item (80-02-05)
(Closed) Inspector Follow Item (81-02-04)
(Closed) Inspector Follow Item (81-02-05)
(Closed) Inspector Follow Item (81-13-09)
- The four items address the establishment and operation of portions of the licensee Respiratory Protection Program. For administrative purposes these items are being combined. The Respiratory Protection Program will be inspected in subsequent inspections.
- 3.10 (Closed) Unresolved Item (81-19-03): Control of issuance of radiation monitoring devices. Inspector review of the physical arrangements, procedural controls, audits and records indicate that intentional misuse has been made extremely difficult. There have been infrequent instances where personnel have been observed to be wearing dosimetry devices without the required attachment to authorize use of the devices outside the main control areas, but these situations have been corrected. Licensee management and supervision are aware of the potentials for misuse, and Health Physics and Security personnel maintain a watch to assure that use of dosimetry devices is authorized.

4. Transportation and Radioactive Waste Shipping Packages

The licensee packages and ships radioactive wastes in LSA boxes, barrels and Type B shipping casks. 10 CFR 71.12(b) authorizes a General License for persons using a package for which a Certificate of Compliance has been issued by the NRC. 10 CFR 71.53(c) requires determination that the packaging has been fabricated in accordance with the approved design.

The licensee shipped 13,432 Curies of licensed radioactive material in Chem Nuclear cask 14-195H on July 23, 1982 (USNRC Certificate of Compliance Number 9094). The licensee did not determine prior to use, that the cask was in accord with the approved design.

Failure of the licensee to determine fabrication according to the certificate of compliance prior to use of the cask is a violation of the requirement of 10 CFR 71.53(c). (82-15-01)

Prior to the end of the inspection, the licensee obtained, from their sole vendor of radioactive material shipping packages used pursuant to 10 CFR Part 71, a listing of all the vendor's Part 71 shipping packages, including:

- a. Model numbers,
- b. Serial numbers,
- c. Vendor identification numbers,
- d. Construction prior to or after January 1, 1979,
- e. NRC Quality Assurance program approval number,
- f. Statement of fabrication in accord with the approved Quality Assurance program.

Included in the listing were the packages used by the licensee, and those for possible use by the licensee. Possession of evidence of the appropriate determinations placed the licensee in compliance with the regulations as of July 30, 1982. The licensee's use of the vendor as a sole source of shipping packages precludes a recurrence of violations of this type. The requirement for documentary evidence has been included in the QA program.

5. Licensee action on enforcement conference commitments

An enforcement conference was held at NRC Region I on August 28, 1981. Licensee management made commitments to Region I during that conference, which were documented in Management Meeting Report Number 81-18. Excepting reports of the independent audit of the radiation protection program, and security department audit of high radiation area keys, all commitments have been met as follows:

1. Radiation Work Permit Procedure (Report Section A).

HPP 2.1, Revision 4, September 2, 1981, "Radiation Work Permits and Radioactive Work Authorizations," places the following requirements for work in radiation areas:

1. General RWP's are not permitted except for inspection and routine operations functions. Job specific RWP's are required.
 2. Radioactive work authorizations are written to establish initial controls and descriptions of work to be performed. A new RWP and survey are required for daily activities. RWP's are generally written for one day, RWA's are generally written for one week, or until the expected job completion, whichever is shorter.
 3. Specific wording is contained in the procedure, detailing the actions needed to change radiological controls for an RWP. The general term "Per HP" is no longer permitted.
 4. Supervisory personnel are required to review and document daily RWP activities.
2. Independent assessment of RWP Activities (Report Section B).

During outages, an independent contractor team performs daily reviews of RWP activities and reports to licensee supervision. The contract written for the 1981 outage was extended into mid-1981, and a new proposal is in the bidding process for the 1982 outage. The contract is expected to be for one year. The contract will be let prior to the start of the outage.

3. High radiation area access control (Report Section C).
1. Security personnel and others assigned as monitors at high radiation area access points were provided with specific training in their assignments prior to September 30, 1981. The instructions included the verification of authorization for access, guarding of access control points, actions needed for departure, sign-in and -out, and recording of dose. The training was documented and tested.
 2. The HP computer and an access authorization list approval are used for control of access. HP supervision can authorize access.
4. TLD/Film badge control (Report Section D).

1. Documents reviewed:

HPI 2.25, Revision 4, March 5, 1982, "Instructions to Security Desk Guard"

HPI 4.17, Revision 3, March 5, 1982, "Lost, Damaged or Off-scale Dosimetric Device Investigation".

Dosimetry Audits from 8/27/81 thru 7/14/82.

2. Inspector review indicated that the loss rate for the period had been about 0.35%. No pattern was exhibited. Anomalies were investigated, and lost badges were deleted from the access computer. Badges not signed out of the area were investigated and access prohibited until authorized by HP supervision.
 3. Audits were conducted twice per month of all issued dosimetry, and a different contractor group was audited periodically.
 4. Physical barriers had been erected so that only authorized individuals could reach the badge storage racks.
 5. Security, HP, management personnel, and radiation workers were instructed that dosimetry devices were not to be worn outside the controlled areas without an indicator that use was authorized. The indicator is a green tape strip at present. HP management is actively seeking a more tamper proof identifier. Security guards at the access control points routinely request return of dosimetry when personnel are leaving the controlled areas.
5. Independent Audit of Radiation Protection Program (Report Section E).

An independent audit group performs on-going reviews and interfaces directly with department management and senior management. Part of this review includes various radiation protection activities. The review is an interactive exchange which results in continuing review, and comment. The review is conducted by a contractor organization.

6. Selection and Qualification of Contractor Health Physics Personnel

RP-AD-4, Revision 1, March 10, 1982, "Radiological Control Evaluation Program," Appendix I, Verification of Contractor Health Physics Technicians/ Supervisors Qualifications, indicates that contractor personnel must meet the qualifications of ANSI 18.1 - 1971. The program requires verification of experience gained at other sites. Licensee management routinely verifies experience. Contractor personnel are evaluated and qualified by testing with the same material as routinely applied to licensee Health Physics Technicians. Inspector review of 12 contractor personnel's records and interviews indicated that the requirements were being met.

No violations were identified.

7. Training

7.1 Special training for preparation for the outage is being conducted by Power Generation Maintenance in familiarizing steam generator maintenance personnel with the plant equipment. Inspector interviews with these personnel indicated that enough time was being permitted to become thoroughly familiar with the installed mockup to assure exposures incurred during the outage would be ALARA for these assignments. Full dress training had not yet begun, but is planned.

- 7.2 Recently hired personnel are starting a course designed to lead to fully qualified Health Physics Technician status at the end of the two-year training period. The course is contained in the station Training Manual, has indicated prerequisites, testing standards, performance evaluations, practical training, classroom training, and laboratory training to assure that proficiency is obtained and maintained in all aspects of work. The course is composed with a classroom-practical cycle which instructs and then reinforces by practical work within the plant. Adequate safeguards are contained in the procedures within the station Health Physics program to assure these individuals perform only work that they are qualified to perform after supervisory review, and with qualified supervision.
- 7.3 Radiation worker training is required of all personnel requiring unescorted access to the controlled areas. This training consists of classroom lectures, testing with pass/fail standards, practical factors, plant tours, and emergency plan training.

No violations were identified.

8. Staffing

The present licensee Radiological Controls organizational structure is included as Figure 1 of this report. Not indicated are five additional professional positions. For this outage, the licensee intends to utilize approximately 90 contractor Health Physics technicians and four contractor supervisors. Licensee radiation protection management personnel are expected to be assigned to cover all shifts. Contractor technicians and supervisors will be subject to the licensee's present permanent staff qualifications, testing, and appropriate specialized training to assure that the individual is qualified to perform the assigned task. Contractor personnel will be integrated into the present structure. Additional clerical staff will be used as needed.

9. Procedure Review

Inspector review of the proposed special procedures for generator work indicated that the licensee intends to integrate Health Physics precautions into the maintenance procedure. Prerequisites are spelled out and sign-offs are required. Management approval prior to commencement of work, management and ALARA reviews, and special precautions for dosimetry and protective clothing will be required.

10. Exit Interview

The inspector met with the individuals noted in Details 1, at the conclusion of the inspection on July 30, 1982. The inspector summarized the purpose, scope and findings of the inspection as presented in this report.

The licensee acknowledged the findings.

The licensee obtained a statement from the vendor which corrected the violation discussed in Details 4. Addition of the requirement for documented evidence of construction prevents recurrence of this type of violation. The inspector stated there was no further corrective action required in this matter.

CONSOLIDATED EDISON COMPANY
 INDIAN POINT STATION
 RADIOLOGICAL CONTROLS ORGANIZATION

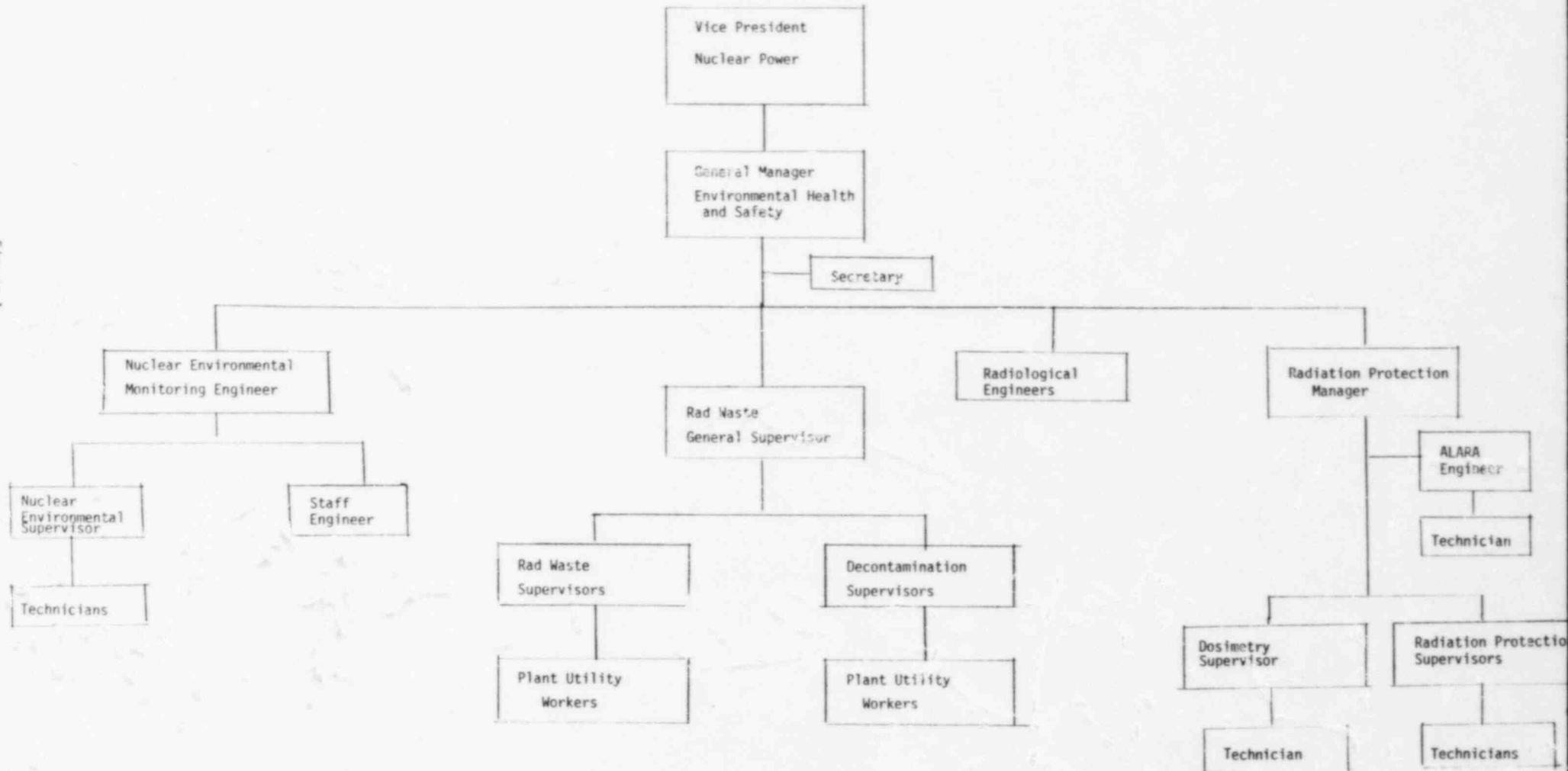


Figure 1