U. S. NUCLEAR REGULATORY COMMISSION
Region I

Report No. 84-23

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: August 20-24, 1984

Inspector: Richard K. Struckmeyer 9/27/84
R. Struckmeyer, Radiation Specialist date

Approved By: M. Shanbaky 10/1/84
M. M. Shanbaky, Chief, Facilities Radiation Protection Section, RPB date

Inspection Summary: Inspection on August 20-24, 1984 (Report No. 50-247/84-23)
Areas Inspected: Routine, unannounced inspection of the licensee's radioactive waste management program. Areas reviewed included: management controls, radioactive effluent release records, effluent control procedures, instrument calibrations, testing of air cleaning systems, and licensee action on previously identified items. The inspection involved 32 inspector-hours onsite by one regionally-based inspector.

Results: Within the areas inspected, no items of noncompliance were identified.

Region I Form 12
(Rev. February 1982)

DETAILS

1. Individuals Contacted

Consolidated Edison - Indian Point 2

J. Barlok, Test Engineer
* M. Blatt, Director, Regulatory Affairs
* A. Budnick, Acting Manager, Nuclear Power Quality Assurance
W. Carson, Test Engineer
* B. Homyk, Nuclear Supervisor, Chemistry
* C. Jackson, Vice President, Nuclear Power
* G. Lewis, Chief Operations Engineer
J. Murphy, Instrumentation and Controls Supervisor
S. Profeta, Nuclear Supervisor, Chemistry
J. Quirk, Test and Performance Engineer
R. Redding, Operations Staff

U. S. Nuclear Regulatory Commission

* T. Kenny, Senior Resident Inspector
P. Koltay, Resident Inspector

* Denotes those present at exit meeting on August 24, 1984.

2. Licensee Action on Previous Inspection Findings

(Closed) Violation (247/81-22-03): Failure to follow procedure for radioactive releases. The inspector reviewed the licensee's actions that were intended to prevent recurrence of missing and incorrect information. This item has been combined with items 247/84-23-02 and 247/84-23-03.

3. Management Controls

The inspector reviewed the management structure as it pertains to the Indian Point Nuclear Generating Station Unit 2 liquid and gaseous radwaste program. Responsibilities in the area of effluent release (discharge) permits are shared by Operations and Chemistry. The Semiannual Radioactive Effluent Release Reports are prepared by Chemistry, which also performs reactor coolant radiochemical analyses. The Chemistry Manager reports through the General Manager, Technical Support, to the Vice President, Nuclear Power.

Tests of air filtration systems and electronic calibrations of effluent monitors are performed by Test Engineers, who report through the Test and Performance Engineer to the General Manager, Technical Support.

4. Reactor Coolant Chemistry

Analyses of dissolved oxygen, fluoride, chloride, gross activity, and E-bar are required by the Technical Specifications. The inspector reviewed selected analytical results for 1983 and 1984 and found that the licensee is meeting its Technical Specifications requirements. The inspector also reviewed selected procedures in this area and found them acceptable.

The chemistry department uses a routing sheet to direct new and revised procedures to each of the Chemistry technicians, who are supposed to indicate that they have read and understood the procedure by signing the routing sheet. The inspector noted that several of the procedures (e.g. IPC-A-21, IPC-A-033 and IPC-A-052) were not reviewed by all chemistry technicians until three or more months following their approval. The inspector discussed with the licensee methods to ensure prompt review of procedures by chemistry technicians. Documentation of technician review of new procedures may be accomplished by the proper use of sign off sheets. The licensee stated that such a method will be instituted. This will be reviewed in a future inspection (247/84-23-01).

5. Effluent Release Records

The inspector reviewed selected radioactive liquid and gaseous release permits for 1983 and 1984 to date, and determined that the licensee's procedural requirements for releases were generally being followed. However, the following liquid release permits lacked the necessary signature, as required by Procedure SOP 5.1.5, "Liquid Chemical and Radioactive Releases," to authorize the releases:

Permit Number	Date
66	1/9/83
101	4/4/83
512	8/25/83

The inspector noted that Procedure SOP 5.1.5 does not specify whose signature is required for authorization of liquid radioactive release permits.

No Technical Specifications limits for release of radioactive effluents were exceeded. The inspector determined that the Chief Operations Engineer has supervisory responsibility over the personnel who prepare release permits. Subsequent to the selection of a new individual to fill the position of Chief Operations Engineer in late 1983, the above-noted problem concerning authorization of permits has not recurred. In a telephone conversation subsequent to the inspection, the licensee stated that the personnel responsible for the release permits have been reminded of the necessity for properly completing all permits, including the signature required for authorization. The effectiveness of the licensee's actions, including the upgrading of Procedure SOP 5.1.5, will be reviewed in a future inspection of this area (247/84-23-02).

In addition, the inspector noted that liquid radioactive release permit number 154 lacked the data concerning the radioanalysis sample number, and the date and time of sample. Permit numbers 213 and 223 (on 6/14/84 and 7/2/84, respectively) indicated that the actual quantity of liquid radwaste discharged exceeded the quantity initially stated to be in the tank specified for release. It was also noted that numerous airborne radioactive waste release permits in June, 1984, lacked the calculation of the final quantity (curies) released, as required by step 4.1.18 of Procedure SOP 5.2.4, "Calculation and Recording of Radioactive Gaseous Release." However, this calculation is performed independently by Chemistry for the purpose of ensuring that release limits are not exceeded for each month and quarter, and for preparation of the Semiannual Radioactive Effluent Release reports. The licensee stated that all effluent release permits are reviewed by Chemistry after the releases have been made. In the event that this review discloses missing data or mistakes on a permit, it is Chemistry's responsibility to reconcile such matters, where possible, by bringing them to the attention of appropriate Operations personnel. The problems noted above are an indication that this review process has not been entirely successful. The inspector discussed with the licensee this administrative problem and the need for instituting mechanisms to preclude repetition of occurrences of missing or erroneous data on release permits. This will be reviewed in a future inspection in this area (247/84-23-03).

6. Effluent Monitor Calibrations

The licensee's Technical Specifications require calibration of effluent monitors at each refueling outage (normally about every 18 months). The Test and Performance group has responsibility for the calibration of the monitor electronics, as well as the determination of correct monitor response when exposed to radionuclide sources. Functional tests of the effluent radiation monitors are performed quarterly. Following the functional test, Chemistry determines whether each radiation monitor's response has changed. It accomplishes this by exposing the monitor to a known source (corresponding to the geometry and radionuclide mix appropriate for the monitor), and comparing the response to the known value. For gaseous and particulate monitors, the monitor reading must be within a range of 0.75 to 1.33 times the known value. The range for liquid monitors is 0.50 to 2.0. If the response of a particular monitor is found to be outside this range, Chemistry will calculate a new "calibration factor" which relates the monitor response to the true value.

Sources used in determining the calibration factor are prepared and analyzed by Chemistry using either a Ge(Li) or intrinsic germanium detector in the laboratory. These laboratory detectors are calibrated once a year using NBS traceable liquid, gaseous and solid sources (corresponding to the various geometries encountered by the effluent monitors). The inspector discussed with the licensee its method of preparing liquid calibration standards from NBS traceable sources, and noted that this activity is not controlled by a procedure. The licensee stated that a procedure had not

been considered necessary because the preparation of these standards, which consists of diluting the NBS traceable solution into the desired quantity of water, is a standard procedure familiar to laboratory chemists. The inspector stated that due to the importance of this activity with respect to the calibration of the liquid effluent monitors, a method of documenting the process should be instituted. The inspector further stated that an effective way for the licensee to ensure proper calibration is to establish a procedure in which the method is clearly stated, and which requires the chemist to document what was done. This will be reviewed in a future inspection of this area (247/84-23-04).

7. Tests of Air Cleaning Systems

The inspector reviewed the licensee's air filtration system tests with regard to the Technical Specifications requirements. The inspector reviewed the results of the HEPA filter and charcoal adsorber in-place tests, and the laboratory tests on charcoal samples, for the tests conducted during the previous refueling outage in 1982, as well as those which have been completed during the current outage. Tests are required for the following air filtration systems: Containment, Control Room, Fuel Storage Building, and Post-Accident Containment Vent.

The inspector noted that all required tests were performed, and that the results of the tests generally met Technical Specification requirements either at the time of the initial test, or following maintenance to correct any problems found in the course of performing the tests. The current test of the control room charcoal adsorber did not meet the requirement. The licensee stated that a maintenance request had been written for replacement of the charcoal, but that this had not yet been done because of painting being done in the Control Room.

When tested during the 1982 outage, the charcoal adsorber in one train of the Containment Air Filtration System also did not meet the Technical Specification requirement for methyl iodide removal at the design flow (60 fpm). However, when retested at a lower flow (40 fpm), the removal criterion was fulfilled. The charcoal adsorbers in the remaining three trains were tested only at 40 fpm, and met the criteria at this flow. The licensee stated that the problems encountered with the charcoal adsorber in this system have been under discussion with the Office of Nuclear Reactor Regulation. The inspector stated that the resolution of this problem would be reviewed in a future inspection in this area (247/84-23-05).

8. Exit Interview

The inspector met with the licensee representatives (identified in Paragraph 1) at the conclusion of the inspection on August 24, 1984. The inspector summarized the purpose and scope of the inspection and the inspection findings. At no time during this inspection was written material provided to the licensee by the inspector.