U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-286/84-12

Docket No. 50-286

License No. DPR-64 Priority -- Category C

Licensee: New York Power Authority
10 Columbus Circle
New York, New York 10019

Facility Name: Indian Point Nuclear Generating Station, Unit 3

Inspection At: Buchanan, New York

Inspection Conducted: May 21-25, 1984

Inspectors: Richard K. Struckmeyer — 7/20/84
Richard K. Struckmeyer — date

Approved by: Walter J. Pasciak — 7/20/84
Walter J. Pasciak, Chief, Effluents Radiation Protection Section, Radiological Protection Branch — date

Inspection Summary: Inspection on May 21-25, 1984 (Report No. 50-286/84-12)

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, and testing of air cleaning systems. The inspection involved 32 inspector-hours onsite by one regionally-based inspector.

Results: Within the areas inspected, no items of non-compliance were identified.

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DETAILS

1. Individuals Contacted

*M. Albright - Acting Superintendent of Power
J. Boccio - I&C Supervisor
G. Bolton - Nuclear Production Technician A
*J. Brons - Resident Manager
*J. Cirilli - Quality Assurance Superintendent
*R. Claar - Quality Assurance Engineer
S. Davis - Quality Assurance Engineer
*J. Gillen - General Chemistry Supervisor
*F. Gumble - Site Reactor Engineer
L. Kelly - Supervisor, Performance & Reliability Group
*M. Kerns - Chemistry Supervisor
J. McGrady - Director of Quality Assurance
M. Morrissey - Performance Supervisor, Performance & Reliability Group
*S. Munoz - Technical Services Superintendent
*J. Perrotta - Radiological and Environmental Services Superintendent
S. Sandike - Senior Nuclear Chemistry Technician

*Denotes those present at exit meeting on May 25, 1984.

2. Management Controls

The inspector reviewed the management structure as it pertains to the Indian Point Nuclear Generating Station Unit 3 liquid and gaseous radwaste program. The Chemistry Department has primary responsibility in this area. Two chemistry supervisors, who have similar responsibilities, report to the General Chemistry Supervisor. The chain of authority proceeds upward through the Radiological and Environmental Services Superintendent, to the Superintendent of Power, to the Resident Manager. The licensee is in compliance with Technical Specifications in this area.

3. Effluent Release Records

The inspector reviewed selected radioactive liquid and gaseous release permits, including associated procedures and calculations for 1983 and 1984. The inspector determined that the licensee has controlled, explicit procedures for control of effluents, and that procedural requirements for calculation of radiation monitor set points were followed. Procedure AP-11, which is used by the licensee to assure that regulatory or administrative limits are not exceeded, requires that the actual monitor set point be entered. The inspector noted that the calculated set point frequently exceeds the maximum radiation monitor reading, in which case the set point becomes the maximum reading of the monitor. For the purpose of ensuring releases do not exceed regulatory or administrative limits, this is conservative. On several of the permits reviewed, the calculated set point value had been entered, rather than the actual value, as the procedure states. The inspector suggested that the instruction in Procedure

AP-11 should be more closely followed, or that the procedure should be modified to allow use of the calculated value in these cases. This will be reviewed in a future inspection (50-286/84-12-01).

The inspector also reviewed semiannual radioactive effluent release reports covering the periods from January 1 to June 30, 1983, and from July 1 to December 31, 1983. The licensee complied with regulatory requirements in this area.

Radioactive liquid release calculations are performed according to Procedure RE-CS-050 (Rev. 3). Section 3.3 of this procedure pertains to the generation of monthly liquid release reports. Subsection 3.3.2.a requires entry of the permit number for each steam generator radioactive release on Table 3 of the Procedure, which is kept as a record of these releases. Subsection 3.3.3.6 requires entry of permit numbers for all types of radioactive liquid releases on Table 4, which is submitted to the Radiological and Environmental Services Superintendent monthly, and is used to provide the operations superintendent the necessary information to control liquid releases in accordance with Procedure AP-11. The inspector reviewed selected records for the preceding two years and found that the licensee was generally following its procedural requirements in this regard. However, in March 1984, several steam generator blowdown permit numbers had not been entered on Tables 3 and 4. The licensee acknowledged this oversight and stated that it would be corrected.

4. Effluent Control Instrumentation

The inspector examined several liquid and gaseous effluent monitors and their associated readouts in the control room. This equipment was operational at the time of the inspection. The licensee's Technical Specifications require calibrations of these monitors at each refueling outage (normally about every 18 months). Calibrations are performed according to Procedure 3PC-R13 (Rev. 3), "Process Radiation Monitor Calibration".

The licensee also has procedures for quarterly calibration checks (3PT-Q11, Rev. 5) and monthly demonstration of control function operability (3PT-M36, Rev. 10). Calibrations, calibration checks, and operability tests are performed by the Instrumentation and Control (I&C) Department. The quarterly calibration checks are performed to ensure that the operation of process and effluent monitors is consistent between calibrations.

The Chemistry Department performs a quarterly Calibration Factor Verification Program using Procedure RE-CS-030 (Rev. 3). This procedure is designed to ensure that the calibration factors (established for each process and effluent radiation monitor at the time of its calibration) remain within acceptable bounds, as determined by the use of control charts. The log of the Calibration Factor Verification Program (Table 2 of Procedure RE-CS-030) requires entry of the date and time at which a calibration factor is verified. It also requires entry of the result of

the external source check (calibration) performed by I&C, but does not specify that the date of this check be entered. Chemistry personnel reviewing the verification program may erroneously assume that I&C's external source check was performed on or about the same date as Chemistry's calibration factor verification, when in fact the former may precede the latter by several days or longer. Thus, the external source check could conceivably be performed in the quarter previous to that in which the calibration factor is verified, and Chemistry personnel may utilize the wrong portion of the control chart when attempting to confirm whether the monitor's response is within acceptable limits. The proper method would be to use the part of the control chart corresponding to the date of the external source check. To ensure that this is done correctly, the log of the Calibration Factor Verification Program should require entry of the date of the source check. The licensee stated that the log (Table 2 of RE-CS-030) would be modified. This item will be reviewed in a future inspection (50-286/84-12-02).

The licensee uses an NBS-traceable multi-nuclide source to generate curves of efficiency vs. energy for each applicable geometry used with its laboratory Ge(Li) and instrinsic Ge detectors. These detectors are in turn used for the 18-month calibration of process and effluent monitors via the generation of Calibration Factors. The inspector reviewed selected records pertaining to these laboratory detectors and determined that the efficiency factors apparently were correctly determined. One problem concerning documentation of results was noted. A record of a count made with an NBS-traceable source, using the previous set of efficiency factors, had been erroneously attached to and filed with the record of newly calculated efficiency factors. Thus, the radionuclide activity based on the count of the source did not appear to match the known activity of the NBS-traceable source. The licensee stated that this would be corrected. No other examples of documentation problems were found.

The inspector noted an apparent discrepancy between the reported result of a source check and the acceptable range of values based on the control chart for the monitor. A memo of March 15, 1984 from the I&C Supervisor to one of the Chemistry Supervisors stated the result of the source check following the electronic calibration for the R-12 (Reactor Containment Building Ventilation noble gas monitor) was 1.5 K cpm (1,500 counts per minute). This was approximately one order of magnitude below that value expected on the basis of the control chart. The licensee stated that this was probably attributable to a typographical error, but was unable to provide documentation to confirm this. The inspector stated that the performance of the R-12 monitor would remain unresolved pending the result of its investigation of the discrepancy (50-286/84-12-03).

5. Testing of Air Cleaning Systems

The inspector reviewed the licensee's air filtration system testing with regard to the Technical Specifications requirements. The inspector reviewed the results of the HEPA filter and charcoal adsorber in-place tests conducted in 1982 and 1983 for the Containment, the Control Room, and the

Fuel Storage Building Emergency filtration systems. The tests met the Technical Specification requirements. The inspector noted that the licensee has an adequate method for scheduling air filtration system tests, and for logging actual dates on which tests were performed, thus ensuring that the Technical Specifications requirements for frequency of these tests will be met.

The inspector also reviewed selected records of the monthly operability tests required for the Control Room and Fuel Storage Building Emergency filtration systems. These tests appear to have been performed adequately and on time.

6. Audits

The inspector reviewed the licensee's program for audit of the liquid and gaseous radwaste programs. The licensee's 1984-1985 Biennial Audit Schedule was prepared in accordance with its Safety Review Committee Procedure SCRP 18.1, Rev. 3, "SRC Delegation of Audit Functions". The following 1983 audits covered aspects of plant operation related to the radwaste program: Audits 83-01 and 83-23 covered Technical Specifications Appendix A, Section 4 Surveillance Requirements, including requirements for testing and calibration of the Process and Area Radiation Monitoring Systems, for sampling of Plant Effluent Radioiodine and Particulates, and for sampling of reactor coolant and secondary coolant. These audits also covered the requirements for air filtration systems (containment, control room, and fuel storage building).

Audit 83-17 covered Technical Specifications, Appendix B (Environmental), including procedures for release permits (AP-11), radioactive liquid release calculations (RE-CS-050), and airborne radiation discharges (RE-CS-039), as well as the requirements of 10 CFR 20, Appendix B, Table II.

Audits 83-05 and 83-06 were performed in the areas of plant staff organization and training, respectively. Items identified in these audits were followed up and corrected as necessary.

This review indicated that the licensee is meeting its Technical Specification requirements for audits in this area.

7. Unresolved Item

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. An unresolved item disclosed during this inspection is discussed in Paragraph 4.

8. Exit Interview

The inspector met with the licensee representatives (identified in Paragraph 1) at the conclusion of the inspection on May 25, 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.