U.S. ATOMIC ENERGY COMMISSION

DIRECTORATE OF REGULATORY OPERATIONS

REGION I

RO Inspection Report No: 50-286/74-14 Docket No: 50-286

Licensee: Consolidated Edison Company of New York, Inc. License No: CPPR-62

4 Irving Place Priority:

New York, New York Category: B

Location: Indian Point 3, Buchanan, New York

Type of Licensee: PWR, 1050 MWe (W)

Type of Inspection: Routine Health Physics & Chemistry

Dates of Inspection: August 5-8, 1974

Dates of Previous Inspection: July 24 - August 2, 1974

Reporting Inspector: R. J. Meyer 8/21/74

R. J. Meyer, Radiation Specialist Date

Accompanying Inspectors: R. Hyson 8/21/74

R. Hyson, Radiation Specialist Date

Date

Date

Date

Date

Other Accompanying Personnel: NONE

Date

Reviewed By: John Mann for

P. J. Knapp, Chief, Facilities Radiological Protection Section Date

SUMMARY OF FINDINGS

Enforcement Action

None

Safety Items

None

Licensee Action on Previously Identified Enforcement Action

None (Health Physics and Chemistry)

Unusual Occurrences

None

Other Significant Findings

A. Current Findings

The inspection was a review of program status relative to the areas of health physics and chemistry. The review showed that the existing organization and program encompassing Units 1 and 2 will be expanded to Unit 3. Responsibilities will remain as currently vested. Existing procedures are being revised to provide for differences in plant and equipment. Training programs are continuing. Fuel load date, according to the licensee, remains as November, 1974.

B. Status of Previously Reported Unresolved Items

None (Health Physics and Chemistry)

Management Interview

The following individuals attended the management interview held at the conclusion of the inspection on August 8, 1974.

W. Stein, Manager, Nuclear Power Generation Department
R. Van Wyck, Manager, Nuclear Services
A. Chiefetz, Director, Radiation Safety
J. Kelley, Chemistry Director
J. Cullen, Health Physics Supervisor

F. Graham, Station Manager (Acting)
J. Halpin, Technical Engineering (Acting Director)
S. Contone, Operations Engineer, IP3
M. Byster, Quality Assurance
W. Ferreia, Quality Assurance

The following subjects were discussed:

A. General - The inspector stated that the areas inspected were specific to the integration of the existing health physics and chemistry program with operation of Unit 3 and that no violations had been noted.

B. Organization - The inspector described his understanding of the existing organization with respect to the health physics and chemistry function and stated that it appeared to be consistent with that described in the FSAR. (Details, Paragraphs 2a - b)

C. Training - With respect to the inspector's questions regarding training, the licensee stated that they would be reviewed and action taken as discussed. (Details, Paragraph 3a - d)

D. Procedures - The inspector stated that inspection findings showed that radiological control and chemistry procedures appeared to be in accordance with the defined indices and other program parameters. (Details, Paragraph 4a - b)

E. Facilities - The inspector stated that facility layout appeared consistent with the FSAR, Regulatory Guide 8.8 and Part 20. With respect to questions on access control to Unit 3 the licensee stated that current plans are to utilize the existing Units 1 and 2 control point. (Details, Paragraph 5a - c)

F. Instrumentation - The inspector discussed instrumentation in general and the below noted specifics:

1. Lack of reflash capabilities on control room annunciators for area and process monitors. (Details, Paragraph 6a - b)

2. Verification of primary calibration data for process and effluent radiation monitors. The licensee stated that this area would be reviewed. (Details, Paragraph 6a - b)

3. Calibration techniques employed in surveillance testing of the above monitors. The licensee stated that this item would be reviewed. (Details, Paragraph 6a - b)

4. Drifting of alarm setpoints currently being experienced on Unit 2 fixed radiation monitors with respect to this occurring in like equipment at Unit 3. (Details, Paragraph 6c)

G. Radwaste Systems - The inspector stated that his observations showed the radwaste systems to be installed and in agreement with that described in the FSAR. He further stated that he had reviewed draft pre-op test procedures for the radwaste systems and noted that tank volume verification was not included. The licensee stated that they would be verified and documented. (Details, Paragraphs 7 and 8)

DETAILS

1. Persons Contacted

W. Stein, Manager, Nuclear Power Generation Department
R. Van Wyck, Manager, Nuclear Services
A. Chiefetz, Director, Radiation Safety
J. Kelley, Chemistry Director
J. Cullen, In-Plant Health Physics Director
J. Higgins, Chemistry General Supervisor
E. Imbimbo, Health Physics Supervisor
R. Gayette, Instructor (SRO)
L. Kawula, Test Engineer
T. Uhl, Test Engineer
D. Whittier, Pre-Op Test Engineer
R. Rosa, Environmental Coordinator

2. Organization - Chemistry and Health Physics

a. The inspector reviewed the existing organization for Units 1 and 2 with respect to integrating Unit 3 to the operational phase. As evidence by licensee statements, organization charts and Administrative Directives the integration is continuing on schedule. The inspector's review included the areas as noted below:

(1) Changes in management
(2) Changes at staff level
(3) Qualifications of new employees
(4) Organization complete and operating

b. The inspector's review showed that qualifications of responsible individuals are consistent with that described in Section 12 of the FSAR and Section C.1.c of Regulatory Guide 8.10.

3. Initial Training

a. The inspector's review showed that training programs and subject material are defined by procedure. A review of training records showed that training is continuing as described by procedures. Training is consistent with that described in the FSAR, ANSI 18.1 and Regulatory Guide 8.10 with exceptions as noted in following paragraphs.

b. General Plant Personnel - Personnel are tested upon completion of training however, no grading system for acceptance criteria has been established to evaluate test results. Licensee is reluctant to use a numbered grade system. A review of tests showed that questions relating to understanding of ALAP and 10 CFR Part 19 were not included. The licensee stated that acceptance criteria would be established and test questions with respect to ALAP and 10 CFR Part 19 would be formulated.

c. Radiation Protection Personnel - Procedure requires that technicians take written tests as they progress through the training program. It was noted that tests are taken during the first two months of employment and training, however at the end of the two month period (probationary) technicians refuse to take tests. The licensee is reviewing a procedure change and alternate methods for evaluating capabilities.

d. Contractor Personnel - No training program is specified, however, a handout describing radiation area markings, emergency signals, and responsibility to stay with their escort is provided to each individual. The licensee stated that they felt providing a qualified plant employee in constant attendance with these types of individuals is more appropriate than training. This area will be further reviewed during a subsequent inspection.

4. Chemistry and Radiological Control Procedures

a. The inspectors review showed that procedures currently being implemented at Units 1 and 2 have been expanded and/or revised to provide for operation of Unit 3. Procedures were reviewed for consistencies with the following areas:

(1) AEC Regulations
(2) License and Technical Specifications
(3) Regulatory Guides
(4) FSAR
(5) Protective equipment and instrumentation
(6) Program for review and change.

5. Facilities

a. The inspector reviewed facility layout and systems locations. The review included visual observations, discussions with licensee representatives and P and ID's. The review showed the facility to be in general agreement with that described in the FSAR. It was noted that design features included shielding and equipment locations in general keeping with

Regulatory Guide 8.8 and consistent with 10 CFR Part 20. The below listed areas and items were reviewed specific to the above:

(1) General location and layout of major processing equipment
(2) Waste processing systems
(3) Radioactive material storage areas
(4) Equipment and laundry decontamination areas
(5) Radiochemistry and health physics laboratories
(6) Control of access to high radiation areas
(7) Access control to controlled areas

b. With respect to Item (7) above, the current plans are to use the existing Units 1 and 2 access control point. According to the licensee, a tunnel will be constructed from Unit 3 to permit the use of the existing access control point. Current plans also include provisions for a control point at Unit 3 to accommodate the watch personnel only, because of the physical location and logistics involved in using the existing control point. According to the licensee, access control remains under review.

c. Ventilation systems are in general installed but not functional. Air flows and directions will be verified as part of the preoperational testing program. It was determined that vital systems are supplied with emergency power.

6. Instruments and Equipment

a. Portable and fixed radiation monitoring instruments and personnel dosimeter inventories and availability were reviewed with respect to conformance to the FSAR, ANSI 13.1 and Regulatory Guides 8.3 and 8.5 as noted below:

(1) Portable instruments

(a) Available instruments
(b) Calibrations and schedules
(c) Personnel dosimeter availability and inventories
(d) Film badge services

(2) Fixed instrumentation

(a) Installation
(b) Calibration
(c) Capabilities

b. With respect to Item (2)(a) above, monitoring equipment is installed with exception of the detectors. Halogen sampling and monitoring equipment, included as part of the updated PAB exhaust filtering system is not yet installed. With respect to Item (2)(b) above the inspector determined that the draft pre-operational test (TP 4.7.1) will not appropriately verify primary calibration data. Specifically, the procedure requires only one reference source check to make the verification. The licensee stated that calibration would be reviewed. It was also determined that radiation monitor annunciation in the control room does not have reflash capabilities. It was noted that procedures covering operator response to alarms provides for increased visual surveillance of the monitor readouts during periods when the annunciator is locked in on an alarm from one of the monitors.

c. During discussions and a review of surveillance procedures it was determined that Unit 2 fixed monitor experience has shown a chronic problem with upscale drifting on the alarm set points. In that like equipment has been installed at Unit 3, the inspector raised the point that this might be an inherent problem in that equipment. The licensee stated that they would review this area.

d. Other equipment and availability was reviewed as noted below:

(1) Protective clothing
(2) Respiratory protective equipment (program as defined is consistent with ANIS Z88.2 - 1969)
(3) Exhaust hoods
(4) Eye wash and safety showers

7. Liquid Waste Systems

a. The liquid waste system was reviewed to determine consistency with FSAR description, ASTMD 510-68, Regulatory Guide 1.21 and ALAP concepts. The review included visual observations, procedure review and discussions with the licensee specific to those areas noted below:

(1) Equipment and installation

(2) Normally and potentially contaminated waste streams (Study is currently being made to identify unmonitored release paths - Surveillance program will be based on results)

(3) Liquid waste monitor installation - local and control room

(a) Sensitivities (Not yet calibrated to verify)
(b) Automatic valve closure to terminate discharge
(c) Monitor is fail safe and provides alarm on malfunction

(1) Response procedures exist
(2) Monitor required for discharge

(d) Monitors not calibrated (Review of draft calibration procedure showed that it did not provide an adequate verification of vendor primary calibration data - Licensee will review this area)

(4) Tank volume and flow verification (Draft pre-op test procedure did not include tank volume verification - Licensee stated this will be accomplished and documented)

(5) Representative sample capabilities

(6) Methods to comply with technical specifications and AEC Regulations

(7) Pre-op tests reviewed (draft copies)

(8) Emergency power available to monitor

8. Gaseous Waste Systems

a. The gaseous waste systems and exhaust systems were reviewed to determine consistency with FSAR descriptions, ANSI 13.1 - 1969, ANSI N101.1 - 1972 and Regulatory Guide 1.52. The review included visual observations, procedure review and discussions with licensee specific to the areas noted below:

(1) Equipment and installation

(2) Normally and potentially contaminated waste streams (Study is currently being made to identify unmonitored release paths - Surveillance program will be based on the study results).

(3) Gaseous monitor installations - local and control room readouts

(c) PAB exhaust monitors (Not yet installed - will be as part of the updated PAB exhaust system - will include iodine monitoring capabilities)
(d) Sensitivities (Not yet calibrated and verified)
(e) Stack monitor provides valve closure to terminate discharge from decay tanks. PAB monitors will provide for diversion to filters.
(f) Monitors are fail safe and provide alarm on malfunction

(1) Alarm response procedures exist
(2) Monitor required for decay tank discharges

(g) Monitors not yet calibrated (Draft calibration procedures provides only a one point reference check to verify primary calibration data. Licensee will review this area).

(4) Tank volume and flow verification

(5) Representative samples

(a) Gas decay tanks
(b) Stack (sampling system not installed - design provides for isokinetic sample)
(c) Collection efficiencies and line loss

(6) Methods to comply with Technical Specifications and AEC Regulations.

(7) Filters systems (Filter system housings, exhaust ducts and associated equipment were in place. Filtering media has not yet been installed. According to the licensee, HEPA and charcoal filters will be in-place leak tested; carbon filter media will also be tested for iodine removal efficiencies).

(8) Other pre-op tests reviewed (draft copies)

(9) Emergency power to critical system components

(10) Procedural controls