

U.S. NUCLEAR REGULATORY COMMISSION  
REGION I

Report No. 50-213/89-18

Docket No. 50-213

License No. DPR-61 Priority \_\_\_\_\_ Category C

Licensee : Connecticut Yankee Atomic Power Company  
P.O. Box 270  
Hartford, Connecticut 06101

Facility Name: Haddam Neck Plant

Inspection At: Haddam Neck Site, Production Operation Services Laboratory,  
and Northeast Utilities Service Company (NUSCO)

Inspection Conducted: October 10-13, 1989

Inspector: Jason C. Jang 10-18-89  
J.C. Jang, Sr. Radiation Specialist, date  
ERPS, FRSSB

Approved by: Robert J. Bores 10-24-89  
R.J. Bores, Chief, Effluents Radiation date  
Protection Section, FRSSB, DRSS

Inspection Summary: Inspection on October 10-13, 1989 (Inspection Report Number  
50-213/89-18)

Areas Inspected: Routine, unannounced inspection of the operational radiological environmental monitoring program, including management organization, environmental sample collection, control of contractor activities, meteorological monitoring, audits, and an annual report.

Results: Within the scope of this inspection, no violations were identified. The licensee was implementing an excellent radiological environmental monitoring program.

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## DETAILS

### 1.0 Individuals Contacted

#### 1.1 Connecticut Yankee, Haddam Neck Plant

\*E. DeBartha, Station Services Superintendent  
\*G. Goncarovs, Chemist

#### 1.2 Northeast Utilities Service Company (NUSCO)

\*\*R. Crandall, Supervisor, Radiological Engineering Section  
\*\*J. Doroski, Sr. Engineer, Radiological Engineering Section  
\*\*W. Eakin, Engineer, Radiological Engineering Section  
R. Harris, Director, Nuclear Engineering  
\*\*R. Rodgers, Manager, Radiological Assessment Branch

#### 1.3. Production Operation Services Laboratory (POS)

G. Martel, Supervisor  
\*\*\*R. Nejfelt, Environmental Technician A  
\*\*\*P. Staehly, Engineer  
R. Waggoner, Environmental Technician A

\* Attended the exit meeting on October 13, 1989  
\*\* Attended the exit meeting on October 12, 1989  
\*\*\* Attended the exit meeting on October 11, 1989

Other licensee employees were also contacted or interviewed during this inspection.

### 2.0 Program Changes

The inspector reviewed the organization of the Radiological Environmental Monitoring Program (REMP) and discussed with the licensee any change made since the last inspection of this area. The inspector determined that the REMP remains the same as it was at the time of the last inspection of this area in May, 1988.

### 3.0 Direct Observation

The inspector examined selected environmental monitoring stations; including air samplers for iodines and particulates; TLD stations for the measurement of direct radiation; and milk and broad leaf vegetation sampling locations. All air sampling equipment at the selected stations was operational at the time of the inspection. The inspector also noted that air sampling equipment was calibrated as required. TLDs were placed at the designated monitoring stations. Milk and broad leaf vegetation samples were available at the identified sampling stations.

#### 4.0 Audits and Annual Reports

The inspector reviewed the following audit reports for the REMP. These audits are required by the Technical Specifications and/or licensee's procedures.

- o NRB Audit A25030; December 1, 1988
- o Internal audits; (1) POSL audits; May and November, 1988, May, 1989  
(2) RAB audit reports; June, 1988
- o Contractor audits; (1) Teledyne, March, 1989  
(2) Clean Harbors, October, 1988 and May, 1989

The inspector noted that the audit findings and recommendations were excellent. The audit responses submitted by the contractors (Teledyne and Clean Harbors) were very thorough. The inspector noted that the licensee was using the audit finding tracking system for audit followup items. The licensee's followup to identified items was prompt and thorough. No violations were identified in this area.

The inspector reviewed the Annual Radiological Environmental Reports for 1987 and 1988. These reports provided a comprehensive summary of the results of the REMP around the Haddam Neck site and met the Technical Specification reporting requirements. The inspector also reviewed the available 1989 analytical data for the REMP. No violations were identified in this area.

#### 5.0 Licensee Program for Quality Control of Analytical Measurements

The inspector reviewed selected quality control (QC) data submitted to the licensee by its contractor laboratories (Teledyne and Clean Harbors). These data indicated that the contractors' results for the most part were in agreement with the EPA cross-check values. The inspector noted that where the results did not agree, reasons for the differences were investigated and the discrepancies were resolved.

The inspector reviewed the following licensee's procedures to determine the implementation of the QC program for the REMP.

- o RAB 3-2, "Quality Control of Radiological Environmental Monitoring Program"
- o ES #512, "Preparation of Split and Spiked Samples"
- o RAB 3-1, "Quality Control of the Environmental TLD Monitoring Program"
- o RAB 3-6, "Quality Assurance in the Preparation, Review, and Approval of RAB Analyses and Calculations"

The inspector also reviewed the analytical data generated by contractor laboratories for the split and spiked samples. Generally good agreement was noted among the licensee's duplicate and spike samples. The licensee

evaluated the analytical data thoroughly for any anomalous results, from the preparation of the samples at the POSL to the contractor laboratory performance. The inspector also observed the preparation of the spiked samples using mixed gamma nuclides in accordance with Procedure ES #512, "Preparation of Split and Spiked Samples" for the contractor laboratories at the POSL. The inspector also reviewed monthly spiked TLD comparisons and the inspector had no questions in this area.

Based on the above review, the inspector determined that the licensee has an excellent QC program for the REMP.

#### 6.0 Meteorological Monitoring

The POSL has responsibility for the maintenance and calibration of the meteorological instrumentation except the wind speed calibration. The licensee has a contractor to perform the wind speed calibration. Calibrations of the meteorological instrumentation are performed quarterly and the system checks are performed weekly. The inspector reviewed the following procedures and the most recent calibration results for wind speed, wind direction, and temperature.

- o ES #201, "Wind Direction System Calibration"
- o ES #203, "Temperature/Delta Temperature System Calibration"
- o ES #205, "Wind Speed System Calibration"
- o ES #211, "Meteorological Tower Equipment Surveillance"

The inspector noted that all the calibration results were within the licensee's defined acceptance criteria. The inspector also reviewed the selected weekly meteorological tower equipment surveillance data. The inspector noted that most of the surveillance data were within the licensee's defined tolerance limit. The inspector further noted that when any parameters (wind speed, wind direction, temperature, delta temperature, and dew point) were out-of-tolerance, the licensee took immediate actions to return the measurements back into specifications. No violations were identified in this area.

#### 7.0 Exit Interviews

The inspector met with licensee representatives denoted in Paragraph 1.0 at the conclusion of the inspection on October 11, 1989 at the POSL, on October 12, 1989 at the NUSCO, and October 13, 1989 at the Haddam Neck Plant. The inspector summarized the purpose, scope, and findings of the inspection.