

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

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Region I

Report No. 50-29/80-01

Docket No. 50-29

License No. DPR-3 Priority -- Category C

Licensee: Yankee Atomic Electric Company

20 Turnpike Road

Westborough, Massachusetts 01581

Facility Name: Yankee Nuclear Power Station

Inspection at: Rowe, Massachusetts

Inspection conducted: January 15-17, 1980

Inspectors: T. J. Jackson
T. J. Jackson, Radiation Specialist (Intern)

3/3/80
date signed

T. J. Jackson
for M. M. Shanbaky, Radiation Specialist

3/12/80
date signed

Approved by: Robert J. Bores
R. J. Bores, Chief, Environmental and Special
Projects Section, FF&MS Branch

date signed

3/12/80
date signed

Inspection Summary:

Inspection on January 15-17, 1980 (Report No. 50-29/80-01)

Areas Inspected: Routine, unannounced inspection of the environmental monitoring programs for operation. Areas inspected included: The management controls for these programs, quality controls of analytical measurements, implementation of radiological environmental monitoring programs, security-package search, and a followup on licensee action on previous environmental inspection findings. This inspection involved 48 inspector-hours onsite by 2 regionally based NRC inspectors. Results: Of the 5 areas inspected, no items of noncompliance were found in 4 areas. One apparent item of noncompliance was identified in 1 area (Infraction - Failure to observe search requirements - Details 6).

DETAILS

1. Persons Contacted

Yankee Nuclear Power Station (YNPS)

- *H. Autio, Plant Superintendent
- *J. Staub, Technical Assistant to Plant Superintendent
- **N. St. Laurent, Assistant Superintendent
- *D. Rice, Technical Assistant
- J. Gedutis, Technical Assistant - Chemistry
- *L. French, Engineering Assistant
- *B. Drawbridge, Operations Engineer
- *E. Bingham, Plant OAQC
- *W. Billings, Chemistry Supervisor
- *S. Ellis, Security Administrator
- J. Shippee, I&C Supervisor
- J. Trejo, Health Physics Supervisor
- S. Racz, I&C Engineer

Green Mountain Security Service, Inc.

W. Howe, Chief of Security

- *Denotes those present at Exit Interview on January 17, 1980.
- **Contacted by telephone on January 28, 1980.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (77-04-01): Meteorological Monitoring Procedures Review and Approval. The inspector determined through discussions with the licensee and review of the contractor's (The Research Corp. of New England) meteorological instrumentation calibration procedures, that these procedures had been finalized and approved as required. The inspector had no further questions in this area at this time.

(Closed) Unresolved Item (77-04-02): Approval of Environmental Analytical Procedures. The inspector determined through discussions with the licensee and review of a YNPS internal memo dated April 2, 1979, regarding Approval of Environmental Lab Procedures by the Plant, that Yankee Environmental Laboratory (YEL) procedures had been approved by YNPS PORC. Responsibility for review of these procedures was delegated to YEL by the PORC at YNPS through the same memorandum. The inspector had no further questions in this area at this time.

3. Management Controls - Environmental Monitoring

Through discussion with licensee personnel, the inspector reviewed the licensee's organization responsible for managing the environmental programs, applicable procedures, and any changes made in the following areas since the last environmental inspection:

- a. Assignment of responsibility and authority;
- b. Provisions for audits and inspections of environmental activities;
- c. Provisions for identifying, documenting and reporting, correcting and following up on program deficiencies and inspection/audit results; and
- d. Review of program results.

One change was identified and reviewed by the inspector. Mr. C. Perino, Engineer, Yankee Atomic Electric has assumed the responsibility for review of the environmental programs and preparation of environmental radiological reports, replacing Mr. J. Jow.

4. Environmental Sampling and Control of Quality of Analytical Results

The inspector reviewed the current environmental sampling procedures and noted that procedures for all required sample media were included.

The inspector reviewed the environmental radioanalytical procedures which had been provided to the licensee by YEL. The inspector determined that the YEL Quality Control Audit Committee was delegated the responsibility for audits and review of proposed modifications to laboratory procedures for YEL on the basis of a memo from YNPS to YEL, approved at PORC meeting No. 79-31. The inspector stated that on the basis of this PORC approval, unresolved item 77-04-02 relating to the approval of YEL procedures is now closed. The inspector had no further questions in this area at this time.

5. Implementation of the Environmental Monitoring Program

a. Direct Observation

The inspector examined selected air sampling and TLD monitoring stations during a portion of the routine weekly air filter change and collection route. The inspector noted that the selected stations were located as required by the Technical Specifications (TS) and were operating at the time of inspection.

b. Review of Reports

(1) Annual Report

The inspector reviewed the Yankee Rowe Radiological Environmental Surveillance Report - January 1, 1978 to December 31, 1978. The inspector determined that the licensee had complied with the requirements of the TS in terms of environmental sampling frequencies and locations, measurements, evaluations and reporting schedules for this time interval.

(2) Non-routine Reports

The inspector reviewed the environmental aspects of those occurrences during 1979 when environmental TLD dosimeters were discovered missing, reported to the NRC as License Event Reports Nos. 50-29/79-15 and 50-29/79-19, dated July 30, 1979 and October 29, 1979, respectively. Two dosimeters were missing for April 1979 and 1 dosimeter was missing for July 1979. Based on the review of the data from other environmental TLD locations and subsequent data from the locations of missing TLDs, it appears that the missing dosimeters were isolated occurrences and had minimal effects on the environmental radiation monitoring system. The inspector had no further questions regarding this matter at this time.

The inspector also reviewed the circumstances of an air sample pump (A-3) failure (LER 50-29/79-1004X) on February 2, 1979, caused by a motor bearing failure. The inspector verified through review of air sample records from other locations at this time and subsequent samples from Station A-3 that this was an isolated occurrence and had no significant impact on the environmental radiation monitoring program. The inspector had no further questions regarding this matter at this time.

c. Other Records

(1) Thermoluminescent Dosimeters (TLDs)

The inspector reviewed the results of the December 1978 and all of 1979 environmental TLD measurements. The inspector discussed the TLD calibration, deployment, QA/QC, and readout procedures with the licensee. The licensee stated that participation had begun during 1979 in a TLD measurements intercomparison study sponsored by the University of Texas. The licensee stated that

results of this intercomparison were not yet available from the sponsor and would be forwarded for information to the inspector when received. The inspector noted that the environmental TLD reader was located within the plant and discussed with the licensee the ability to read-out environmental TLDs under emergency conditions. The licensee stated that the environmental TLD reader will be moved out of the plant and into the Furion House, which is offsite, in time for reading the January, 1980 environmental TLDs. The licensee stated that this will eliminate any possible problems associated with reading of environmental TLDs within the plant. The inspector had no further questions in this area at this time.

(2) Air Sampling

The inspector reviewed the records of the air monitoring program for 1979 and 1980 to the date of the inspection. The inspector discussed weekly checks of the sampling equipment by the licensee when samples were collected and filters changed. The inspector had observed some loose fittings on some of the air samplers and the licensee stated that a check of all joints and fittings would be included as part of the weekly equipment checks in the future.

The inspector determined that the licensee has an established program for calibration of dry gas flow meters and that calibrations are performed according to procedure OP-6606, "Totalizing Gas Flow Meter Calibration". The inspector noted that the calibration frequency of environmental air sampler gas flow meters was not specified in the calibration procedure. The licensee stated that the calibration frequency for the environmental gas flow meters is every 2 years and that a statement of this calibration frequency will be incorporated into the calibration procedure. The inspector had no further questions in this area at this time.

(3) Other Media

The inspector reviewed selected records of data analyses for other environmental media including: milk, water, vegetation, fish, soil, and river sediments for 1979. The inspector found no instances in which required samples were not collected or analyzed as per the TS.

The licensee stated that it is planned to move the location of environmental sample storage from within the plant to the Furlon House, which is offsite, by February, 1980. Samples will be stored at Furlon House between the time of their collection and transport to the YEL for analysis. The licensee stated that the purpose for this change is to remove one potential source of cross-contamination of environmental samples. The inspector had no further questions in this area at this time.

d. Meteorological Surveillance

The inspector examined the meteorological tower instrumentation and the associated read-out panel in the control room and noted that all of the required meteorological parameters were being collected at the time of the inspection except for the 33' wind direction indicator. The licensee stated that this instrumentation had been reported out of service on January 14, 1980 although the licensee had not documented the report. The licensee stated that a method of documenting problems with meteorological instrumentation would be reviewed. The licensee informed the inspector by telephone on January 21, 1980 that the 33' wind direction instrumentation had been repaired by TRC on January 18, 1980.

The inspector determined through review of records and discussion with the licensee that heaters on the 33' and 195' wind speed anemometers were out of service at the time of the inspection. The licensee stated that the purpose of these heaters is to prevent icing of the anemometers which could inhibit free movement of these instruments and thereby affect the accuracy of wind speed measurements. The inspector verified that the licensee's consultant, TRC (The Research Corporation of New England) had first informed the licensee in a letter dated May 7, 1979 that the 33' wind speed anemometer heater was not functioning. TRC informed the licensee in August, 1979 that both the 195' and 33' anemometer heaters were not functional and were still not functioning at the time of the inspection. The licensee stated that the anemometers had frozen in position several weeks earlier, an event which could have been prevented by operating heaters. The inspector discussed with the licensee the repair/replacement of the inoperable heaters. The licensee stated that the licensee had been attempting to obtain replacement heaters through TRC since May, 1979 but has thus far been unsuccessful. The inspector stated that this item will be re-examined during a subsequent NRC inspection (80-01-01).

The inspector reviewed the meteorological instrumentation calibrations performed since the last inspection of this area (50-29/78-21) and noted that calibrations had been performed as required. The inspector reviewed the calibration procedures which had been provided by TRC and adopted by the licensee in February, 1979. The inspector determined that the licensee's formal review and approval of meteorological instrumentation calibration procedures allows unresolved item 77-04-01 to be closed. The inspector had no further questions in this area at this time.

5. Exit Interview

The inspector met with licensee representatives (denoted in Detail 1) on January 17, 1980 at the conclusion of the inspection. On January 21, 1980, a telephone discussion was held between Mr. Jackson and Mr. D. Rice of Yankee Atomic Electric Company (YAEC). On January 28, 1980 a telephone discussion was held between Dr. Bores and Dr. Shanbaky of NRC Region I with Mr. St. Laurent. During these contacts/interviews, the scope and findings of this inspection were discussed, including the item of noncompliance. The licensee acknowledged the findings.

6. Security - Package Search

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