U. S. NUCLEAR REGULATORY COMMISSION

Region 1

Report No. 50-271/82-13

Docket No. 50-271

License No. DPR-28 Priority - Category C

Licensee: Vermont Yankee Nuclear Power Corporation
1671 Worcester Road
Framingham, Massachusetts 01701

Facility Name: Vermont Yankee Nuclear Power Station

Inspection At: Vernon, Vermont

Inspection Conducted: June 23 - 25, 1982

Inspectors: David J. Collins — September 23, 1982
D. J. Collins, Radiation Specialist — date

P. E. Clemons — October 14, 1982
P. E. Clemons, Radiation Specialist — date

Approved by: Edward J. Greenman — October 28, 1982
E. G. Greenman, Acting Chief, Facilities Radiation Protection Section, DEIP — date

Inspection Summary:

Inspection on June 23 - 25, 1982 (Report No. 50-271/82-13)

Areas Inspected: Routine, unannounced safety inspection of the Radiation Protection Program by two region-based inspectors (40 hours), including transportation activities; licensee action on previous inspection findings; licensee response to Immediate Action Letter 81-07; actions in response to NRC IE Bulletins and Circulars, and staffing.

Results: One violation in transportation was identified (failure to maintain records, Details, 5).

DETAILS

1. Persons Contacted

L. Anson, Plant Training Supervisor, VY
*E. W. Bowles, Training Supervisor, VY
R. Branch, Operations Supervisor, VY
F. Burger, Quality Assurance Coordinator, VY
*L. X. Bozek, Operational Quality Assurance Coordinator, VY
*D. A. Dyer, Operational Quality Assurance Coordinator, VY
*R. J. Kenney, Engineer - Assessment, VY
*B. N. Leach, Chemistry and Health Physics Supervisor, VY
W. Limberger, Quality Assurance Engineer, VY
*M. D. Lyster, Operations Superintendent
*J. T. McCarthy, Chemistry and Health Physics Assistant, VY
R. W. Morrisette, Chemistry and Health Physics Assistant, VY
*W. Murphy, Plant Manager, VY
*A. D. Parker, Quality Assurance Engineer, YAECo, NSD
*D. B. Pike, Manager, Operational Q.A. - YAECo, NSD
*L. L. Reed, Operational Quality Assurance Coordinator, VY
*D. Reid, Engineering Support Supervisor, VY

*Denotes those present at the exit interview on June 25, 1982.

2. Licensee Actions On Previously Identified Items

2.1 (Closed) Inspector Follow Item (50-271/81-16-01): A dedicated storage area is to be provided for compacted radioactive waste. The inspectors verified the North Warehouse (East end) has been designated for storage for low level radioactive compacted waste boxes.

2.2 (Closed) Violation (50-271/82-01-01): The dose rate from a wooden box, containing compacted radioactive waste, exceeded 5 millirem per hour, and it was not barricaded or posted as a radiation area. The inspectors verified the corrective actions indicated in licensee letter to Region I dated April 22, 1982, were as stated and adequate, excepting the storage area mentioned was not reviewed. Licensee management stated the space will be available by September 1982. The interim measures are adequate.

2.3 (Closed) Violation (50-271/81-07-01): Appendix A, Inspection No. 50-271/81-07 contained five instances as one violation. Excepting the audit response, the inspectors verified the actions in licensee letter to Region I dated October 16, 1981, to be as stated and adequate. The audit response is discussed in Details, 4.

2.4 (Closed) Immediate Action Letter (IAL 81-07) (50-271/81-07-02): In response to IAL 81-07 dated April 1, 1981, the licensee completed a review and evaluation of the application of the Quality Assurance

Program as applied to shipping packages. On June 24, 1982, the inspectors reviewed the point-by-point evaluation which was done on April 9, 1981. The evaluation was as stated and acceptable.

3. Licensee Responses to IE Bulletins and Circulars

3.1 (Closed) IE Bulletin 80-03 (80-BU-03): "Loss of Charcoal from Standard Type II, 2 inch, Tray Absorber Cells," dated February 6, 1980.

The Bulletin described the circumstances involved and required licensees to take actions. These actions included examination; replacement, if necessary; testing and reporting to Region I the results of the determination required, within 45 days.

The inspectors reviewed the required report dated March 20, 1980, which stated:

a. A visual inspection showed no indication of degradation of the integrity of the charcoal absorber cells.

b. A freon leak test had been performed and the bypass leakage through the charcoal absorber cells was within the plant technical specifications.

The actions were acceptable to meet the requirements of the Bulletin.

3.2 (Open) IE Bulletin 80-10 (80-BU-10): "Contamination of Non-Radioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to the Environment," dated May 6, 1980.

The Bulletin described the particular circumstances involved and required licensees to take actions to identify, analyze, sample, control, and monitor systems which are normally nonradioactive but could become radioactively contaminated and cause an unmonitored, uncontrolled release to the environment. The Bulletin required action within 45 days and a verification letter to Region I within an additional 15 days.

The licensee's verification letter to Region I, dated June 20, 1980, referred to a Vermont Yankee 1977 feasibility study investigating possible pathways for releases of radioactivity from the plant. The study was not made available to the inspectors until the week following the inspection. The report and its actions will be verified in a future inspection.

3.3 (Closed) IE Circular 80-14 (80-CI-14): "Radioactive Contamination of Plant Demineralized Water System and Resultant Internal Contamination of Personnel," dated June 24, 1980.

The Circular described an incident concerning a plant demineralized water system which could occur at other facilities and made specific recommendations for prevention. The review and corrective, preventive actions were to be available for review by Region I inspectors.

The inspectors examined reviews and recommendations by Health Physics and Plant Operations personnel concerning the demineralized water system. Immediate restrictions were placed and are continuing, on use of demineralized water. The only locations of demineralized water outside the plant controlled area are in the Health Physics and Chemistry areas. These two points are marked "not for human consumption".

Of the eleven available temporary connection points identified, six had backflow prevention devices and five needed some corrective actions. Plant Alteration Request 82-03 implementing the recommendations has been budgeted for 1982 and is under engineering review. Plant administrative procedures call for disconnecting temporary hosing after use.

The analysis and immediate actions taken were adequate. The actions under review appear to be adequate to prevent contamination by temporary cross-connections.

3.4 (Closed) IE Circular 81-07 (81-C1-07): "Control of Radioactively Contaminated Material," dated May 14, 1981.

The Circular described guidance from NRC for evaluating potential radioactive contamination and determining appropriate methods of control.

The analysis made by the Chemistry and Health Physics Department states that existing plant procedures and controls are adequate to prevent inadvertent release of radioactively contaminated material from the site. The inspectors reviewed the site procedures, found them adequate and responsive to the concerns and guidance contained in the Circular.

4. Audit Conducted in Response to Notice of Violation, Inspection Report 81-07

Licensee letter to Region I dated October 16, 1981, stated, "the annual Chemistry and Health Physics audit has been expanded to include a more detailed assessment of the effectiveness of quality assurance in the area of radwaste packaging, and this expanded audit was performed on September 14 - 18, 1981. All future audits in this area will include such an assessment."

The inspectors reviewed the report of the audit conducted September 14 -18, 1981 (audit report number VY 81-3B). It was noted that the audit addressed certain transportation activities very thoroughly. Licensee representatives stated that 10 CFR 50, Appendix B, criteria dealing with procurement document controls; control of purchased material, equipment, and services; test and operating status; and quality assurance records are addressed in audits conducted of the above activities and that transportation activities are included in the program.

5. Transportation of Radioactive Material

The inspectors reviewed NRC Certificates of Compliance Nos. 6574 and 9079 for Hittman Nuclear and Development Corporation shipping casks HN-200 and HN-100-Series 2. Vermont Yankee is a licensed user of these casks. Paragraph 8 of each Certificate of Compliance requires inspection of the packaging lid seals prior to each shipment, and replacement with new seals if inspection shows any defects or every 12 months, whichever occurs first. 10 CFR 71.62(c) requires the licensee to maintain QA records during the life of the package, of monitoring, inspection and auditing of work performance during maintenance and repair of the packaging.

Vermont Yankee Procedures OP 2511, "Radwaste Cask Drum and Box Handling," Revision 8, April 24, 1981, includes a signoff/initial verification of inspection or replacement of the packaging seals. The procedure does not require verification of the latest date of seal replacement, nor indication that the seal was replaced, if defective, or in place more than 12 months as required by the Certificates of Compliance. The licensee shipped radioactive material using Cask HN-100 Series 2 on June 2, 1982 (Shipment No. 82-40, 3.076 Ci), and Cask HN-200 on April 22, 1982 (Shipment No. 82-35, 78.200 Ci), but failed to maintain QA records of (1) verification of seal replacement within 12 months or, (2) replacement of defective seals. This item constitutes non-compliance with 10 CFR 71.62(c). (82-13-01).

No other violations were identified. The licensee had made 41 shipments of radioactive material in 1982 as of June 25, 1982, including 14 resin shipments (147.095 Ci) and three LSA box shipments (1.330 mCi).

6. Staffing

The current licensee Chemistry and Health Physics organization is shown on Annex A. The following changes have recently been made in personnel assignments:

6.1 Mr. D. Weyman, formerly Chemistry and Health Physics Supervisor, has assumed the position of Senior Chemistry and Health Physics Engineer, Vermont Yankee Nuclear Power orporation.

6.2 Mr. B. Leach, formerly Plant Health Physicist and Radiation Protection Manager, has assumed the position of Chemistry and Health Physics Supervisor. Mr. Leach retains the position of Radiation Protection Manager.

6.3 Mr. D. Mohler, formerly Shift Technical Advisor, has assumed the position of Plant Health Physicist. Mr. Mohler's qualifications are being reviewed by NRC management to determine conformance with Technical Specification 6.1.D.5. This issue is unresolved. (82-13-02).

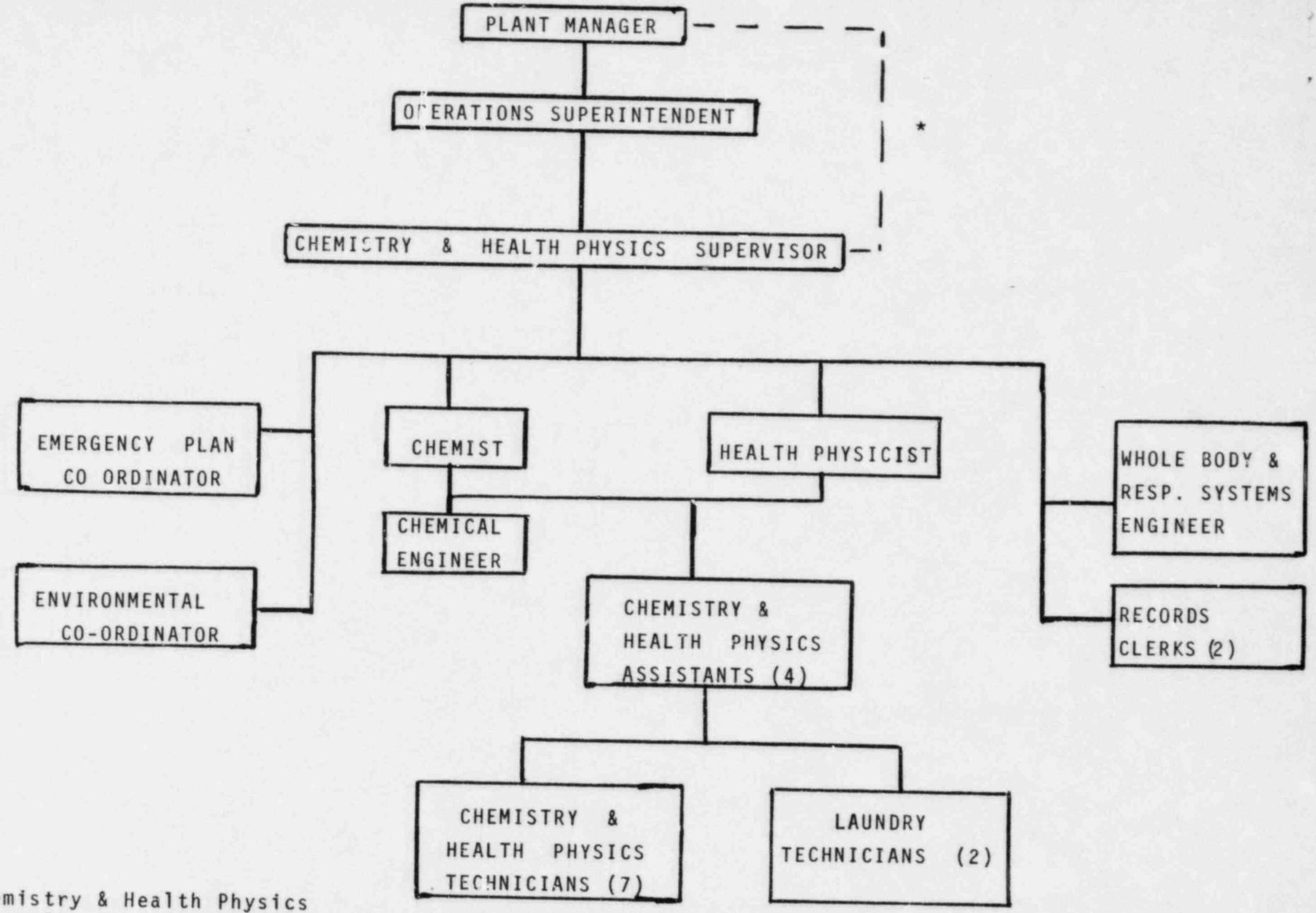
7. Unresolved Items

Items which need more information to determine acceptability are unresolved. An unresolved item within the scope of this inspection is discussed in Detail 6.3.

8. Exit Interview

An exit interview was held on June 25, 1982, with the individuals indicated in Details 1. The inspectors presented the inspection findings contained in this report.

Annex A



* Chemistry & Health Physics Supervisor has direct access to the Plant Manager in Health Physics matters