U.S. NUCLEAR REGULATORY COMMISSION REGION I

50-245/89-15 50-336/89-14 Report Nos. 50-423/89-10					
50-245 50-336 Docket Nos. 50-423					
DPR-21 DPR-65 License Nos. <u>NPF-49</u> Priority Category <u>C</u>					
Licensee: Northeast Nuclear Energy Company P.O. Box 270 Hartford, Connecticut 06141-0270					
Facility Name: Millstone Nuclear Generating Station, Units 1, 2, and 3					
Inspection At: Waterford, Connecticut					
Inspection Conducted: June 19-23, 1989					
Inspectors: J. Furia, Radiation Specialist ERPS, FRSSB					
J. Jang, Senior Radiation Specialist, ERPS, FRSSB date					
Approved by: $R. Bores, Chief, Effluents Radiation Protection Section, FRSSB \frac{7-\psi 5-89}{date}$					
Inspection Summary: Inspection on June 19-23, 1989 (Combined Inspection Report Nos. 50-245/89-15; 50-336/89-14; 50-423/89-10)					
Areas Inspected: Routine, unappounded inspection of the effluent					

Areas Inspected: Routine, unannounced inspection of the effluent, transportation and solid radioactive waste programs including: management controls; audits; quality assurance; and implementation of the above programs. Results: Within the areas inspected, no violations or deviations were noted.

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DETAILS

1.0 Individuals Contacted

1.1 Licensee Personnel

- * C. Clement, Superintendent, Unit 3
- * J. Waters, Chemistry Supervisor
- * J. Sullivan, Health Physics Operations Supervisor
- * M. Brennan, Health Physics , Unit 1 * S. Turowski, Radioactive Materials Supervisor
- * M. Ross, Operations, Unit 1
- * B. Kreiling, Health Physicist
- * C. Hinze, Quality Services Department
- * T. Burns, Chemistry, Unit 3
- * C. Palmer, Health Physics Supervisor, Support Services
 - A. Mozeak, Operations, Unit 2
 - R. Iliff, Operations, Unit 3
 - G. Seckinger, Assistant Radiation Protection Supervisor
 - P. Burke, Training Department
 - C. Libby, NU Quality Services
 - T. Brown, Unit 1, I&C
 - P. Smith, Unit 2, I&C R. Beckman, Unit 3, I&C

 - J. Flannigan, Operations, Unit 1
 - J. Heg, Operations, Unit 2

 - M. Pearson, Operations, Unit 3 D. Wilkens, Chemistry, Unit 1
 - T. Itteilag, Chemistry, Unit 2
- 1.2 NRC Personnel
 - * W. Raymond, Senior Resident Inspector
 - * P. Habighorst, Resident Inspector, Unit 2

* Denotes personnel who attended the exit interview on June 23, 1989.

2.0 Scope

This routine safety inspection reviewed the licensee's program for the areas of liquid and gaseous effluents, transportation, and solid radioactive waste.

3.0 Transportation and Solid Radioactive Waste

Processing of liquid plant effluents is the responsibility of the Operations Department of each unit. The packaging and transportation of solid radwaste is the responsibility of the Radioactive Materials Section of the Support Services Department for the site.

3.1 Radwaste

The licensee currently dewaters resins in High Integrity Containers (HIC), compacts low level Dry Active Waste (DAW), and periodically solidifies certain wastes. At Units 1 and 3, dewatering operations are conducted by a vendor under the direction of the Radioactive Materials Section. At Unit 2, dewatering of resins is the responsibility of the Operations Department, utilizing an in-plant system. DAW and contaminated items are processed, decontaminated or prepared for disposal by the Radioactive Materials Section. As part of this inspection, the following procedures were reviewed.

RW	6001/26001/36001,	Rev	3,	"Waste Classification Implementation
RW	6002/26002/36002,	Rev	4,	"Determination of the Waste Classification for Padioactive Waste Offered for Shallow Land Burial"
RW	6007/26007/36007,	Rev	1,	"Container Control and Accountability"
RW	6010/26010/36010,	Rev	3,	"Loading of Chem-Nuc Shipping Cask"
RW	6011/26011/36011,	Rev	1,	"Operating the Mobile Shield Assembly (Atcor Cask)"
RW	6012/26012/36012,	Rev	2,	"Packing Non-Compactable LSA Containers"
RW	6013/26013/36013,	Rev	1,	"8-120B Cask Operating Procedures"
RW	6014/26014/36014,	Rev	1,	"14-190H Cask Operating Procedures"
RW	6019/26019/36019,	Rev	0,	"Operating the Chem Nuclear Decontamination Trailer"
RW	6024/26024/36024,	Rev	1,	"Operating Procedure for the CPC B-400 Compactor"

As part of this inspection, the records of seven waste shipments were reviewed to ensure compliance with NRC and U.S. Department of Transportation requirements. The licensee currently utilizes an in-house developed computer program for the determination of proper waste and transportation classification. The licensee utilizes a combination of dose to curie and scaling factor techniques to determine package contents.

A review of the Unit 1 Final Safety Analysis Report (FSAR), Chapter 11.2, indicated that the licensee had not fully revised this document to reflect the installation and utilization of a vendor operated filtration and demineralization skid for use with the floor drain system. At the exit meeting, the licensee indicated that corrections will be made to the FSAR to properly reflect this change.

3.2 Transportation

Transportation services are the responsibility of the Radioactive Materials Section. This includes the selection of shipping containers, preparation of manifests and in conjunction with Health Physics, the surveying and wipe testing of all packages and transport vehicles. As part of this inspection, the following procedures were reviewed.

RW 6003/26003/36003, Rev 2, "Radioactive Materials Shipping Compliance" RW 6004/26004/36004, Rev 5, "Shipment of Radwaste" RW 6005/26005/36005, Rev 2, "General Radioactive Materials Shipment" RW 6006/26006/36006, Rev 2, Receipt of Radioactive Materials" RW 6009/26009/36009, Rev 1, "Radwaste Shipment Survey Procedure" RW 6025/26025/36025, Rev 0, "Radioactive Materials Shipment Truck Loading Procedure"

The procedures were found to be adequate for existing plant operations.

3.3 Training

In response to NRC IE Bulletin 79-19, the licensee has developed a comprehensive training program for personnel who perform tasks in the Radioactive Materials Section (both workers and supervisory personnel) and Quality Assurance/Quality Control Department. The requirements for initial training of employees are contained in Nuclear Training Manual (NIM) 3.145, Rev 0, "Millstone Radioactive Material Workers Training Program Implementing Procedure". Continuing training is conducted in accordance with NIM-2.02, Rev 0, "Millstone Radioactive Material Handlers Continuing Training". The training program was reviewed by the inspector and found to meet or exceed the requirements of Bulletin 79-19.

3.4 Quality Assurance/Quality Control:

The licensee's QA program includes mandatory Quality Control hold points during the processing and preparation for transport of radwaste, surveillances of selected waste processing parameters and audits of the Radioactive Materials Section. The inspector reviewed Audit A60492, conducted July 14, 1988 through August 11, 1988 and found it to be comprehensive in scope, technically accurate, with all identified items promptly addressed and resolved. The licensee has elected to apply its 10 CFR 50, Appendix B Quality Assurance program to the area of transport packages. A review of Audit A03367, conducted at Chem Nuclear Services, Inc. in December 1987, was determined by the inspector to meet the requirements of the licensee's Quality Assurance Program. The licensee's programs in this area were found to be outstanding.

4.0 Liquid and Gaseous Effluent Control

4.1 Program Changes

There were no significant changes in the licensee's program for handling liquid and gaseous effluents since the previous inspection in this area (November 1987).

4.2 Lic id and Gaseous Effluents Controls

The inspector reviewed the licensee's procedures and discharge permits to determine the implementation of the technical specification requirements (Liquid and Gaseous Effluents, and Offsite Dose Calculation Manual) for Units 1, 2, and 3.

The inspector reviewed selected liquid and gaseous discharge permits to determine compliance with the above technical specification requirements. The inspector determined that the licensee was meeting the requirements for sampling and analysis at the frequencies and lower limit of detections established in the Technical Specifications. All of the examined discharge permits met the requirements.

The licensee uses a computer program to perform offsite dose assessment in order to demonstrate compliance with technical specification requirements using Offsite Dose Calculation Manual methodology. The inspector performed hand calculations in order to verify the dose assessment methodology using selected gaseous discharge permits. The comparisons indicated good agreement.

No problems were identified in the areas of liquid and gaseous effluents control programs during this inspection.

4.3 Calibration of Liquid and Gaseous Effluent, and Process Monitors

The inspector reviewed the licensee's procedures to determine the implementation of the Technical Specifications (Radioactive Liquid and Gaseous Effluent Monitoring Instrumentation) requirements for Units 1, 2, and 3.

The inspector reviewed the most recent calibration records for the following monitors.

Unit 1

- o Radwaste Effluent Radiation Monitor
- o Service Water Effluent Radiation Monitor
- o Reactor Building Closed Cooling Water Radiation Monitor o Main Steam Line Radiation Monitor
- o Stack Gas Radiation Monitor
- o Stack High Range Radiation Monitor

Unit 2

o Steam Generator Blowdown Line Monitors

- o Clean Liquid Radwaste Monitor
- o Aerated Liquid Radwaste Process Radiation Monitor
- o Stack Gaseous Process Radiation Monitor

o High Range Stack Gas Radiation Monitor

o Stack Flow Instrument (Calibration and Functional Test)

Unit 3

- o Liquid Waste Radiation Monitor
- o Turbine Building Floor Drain Monitor
- o Ventilation Vent (Turbine Building) Monitor
- o Engineered Safeguards Building Gaseous Radiation Monitor

Based on the review of the above monitor calibration records, the inspector determined that the calibrations were performed as required by the appropriate procedures and technical specifications. The inspector also noted that the licensee was performing many of the surveillance tests more frequently than required by the Technical Specifications. No significant problems were noted in this area.

4.5 Implementation of the Effluent Control Programs

The inspector toured gaseous effluent sampling stations for all units to verify the operability and flow rates for the gaseous effluent sampling. All gaseous effluent sampling stations were operational with the appropriate flow rate (1-2 scfm) at the time of the inspection.

The inspector reviewed Semiannual Reports for 1987 and 1988. These reports provided total released radioactivity for liquid and gaseous effluents. The inspector also reviewed the Annual Reports for 1987 and 1988. These reports provided the calculated radiation dose commitments to the public.

The inspector reviewed a Quality Assurance Audit of the gaseous and liquid radioactive effluent control programs (Audit Number 24013, "REMODCM", performed in December 1988). The inspector noted that the audit which was conducted by a lead auditor appeared to be both quite thorough and of sufficient technical depth to adequately assess capabilities and performance in the areas being audited. No audit findings by the licensee audit team requiring corrective or followup action were identified.

Based on the above review, the inspector determined that the licensee was implementing effective liquid and gaseous effluent control programs.

5.0 Air Cleaning System

The inspector reviewed the licensee's procedures and surveillance test results to determine the implementation of the following technical specification (TS) requirements in the areas of air cleaning systems for Units 1, 2, and 3.

Unit 1

o TS 3/4,7.B "Standby Gas Treatment System"

Unit 2

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o TS 3/4. 6.5.1. "Secondary Containment Enclosure Building Filtration System"

o TS 3/4,7.6 "Control Room Emergency Ventilation System"

o TS 3/4.9.15 "Fuel Storage Pool Area Ventilation System"

Unit 3

o T5 3/4, 7.7, "Control Room Emergency Ventilation System" o TS 3/4, 7.9, "Auxiliary Building Filter System" o TS 3/4, 7.12, "Fuel Building Exhaust Filter System"

The inspector reviewed the most recent surveillance test results in the following areas to determine compliance with the above TS requirements.

o Ventilation System: Visual Inspection
o Ventilation System: Air Flow Capacity Test
o Ventilation System: Pressure Drop Test
o Ventilation System: In-Place Filter Test (HEPA Filter Banks)
o Ventilation System: In-Place Filter Test (Adsorber)
o Ventilation System: Laboratory Test Results for Charcoal Canisters

The inspector noted that the licensee performed all above tests as required by the Technical Specifications using appropriate procedures. All test results were acceptable with regard to the Technical Specification requirements. No violations were noted in this area.

6.0 Exit Interview

The inspector met with licensee representatives denoted in Paragraph 1 at the conclusion of the inspection on June 23, 1989. The inspector summarized the purpose and scope of the inspection, and discussed the findings. At no time during this inspection was written material provided to the licensee by the inspector.