

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

REGION I

Report No. 50-336/81-14  
Docket No. 50-336  
License No. DPR-65 Priority - - Category C  
Licensee: Northeast Nuclear Energy Company  
P.O. Box 270  
Hartford, Connecticut 06101  
Facility Name: Millstone Nuclear Power Station Unit 2  
Inspection at: Waterford, Connecticut  
Inspection conducted: December 1-4 and 14-18, 1981  
Inspectors: R. E. Baer 2/4/82  
R. E. Baer, Radiation Specialist date signed  
David J. Collins 2/4/82  
D. J. Collins, Radiation Specialist date signed  
Approved by: P. J. Knapp 2/5/82  
P. J. Knapp, Chief, Facility Radiological date signed  
Protection Section, Technical Inspection  
Branch

Inspection Summary:

Inspection on December 1-4 and 14-18, 1981 (Report 50-336/81-14)

Areas Inspected: Routine, unannounced inspection by regional based inspectors of the radiation protection program during refueling, including: radiation protection procedures; advanced planning and preparation; training; exposure control; posting and control; radioactive material control and surveys. The inspection involved 88 inspector hours onsite by two NRC regional based inspectors.  
Results: Of the seven areas inspected, no items of noncompliance were identified.

## DETAILS

### 1. Persons Contacted

\*Mr. E. C. Farrell, Station Services Superintendent  
\*Mr. A. G. Cheatham, Radiological Services Supervisor  
Mr. M. Brennen, Radiation Protection Supervisor, Unit 1  
Mr. J. Eldridge, Radwaste Supervisor  
Mr. D. Fitts, ALARA Coordinator, Unit 2  
Mr. S. Gilbert, Training Supervisor  
\*Mr. B. Granados, Health Physics Supervisor  
\*\*Mr. J. P. Kangley, Chemistry Supervisor  
Mr. J. E. Lane, Health Physicist  
\*\*Mr. D. R. Lipinski, Resident Reactor Inspector, USNRC  
Ms. M. Morales, Training Records Supervisor  
Mr. J. T. Shedlosky, Senior Resident Reactor Inspector, USNRC  
Mr. D. Stands, Radiological Assessment Branch, NUSCO  
Mr. D. Stump, Health Physics Training Coordinator  
Mr. F. Whitaker, Radiation Protection Supervisor, Unit 2

The inspector also interviewed several other licensee and contractor employees including health physics technicians, chemistry and maintenance personnel.

\*Denotes those present at the Exit Interview on December 4 and 17, 1981.

\*\*Denotes those present at the Exit Interview on December 4, 1981.

### 2. Radiation Protection Procedures

The inspector reviewed the following licensee procedures, which had been revised, to assure commitments to Technical Specification 6.11 were being met.

SHP 4904	External Radiation Exposure Control and Dosimetry Issue
SHP 4905	Radiological Surveys
SHP 4920	Contracted Health Physics Personnel Training Program
SHP 4921	Station Health Physics Personnel Training Program
ACP-602	Maintaining of Occupational Radiation Exposures ALARA
907/2907	Personnel Exposure Evaluation and Investigation

The above procedures had been reviewed and approved by the Station Operations Review Committee (SORC) and the station superintendent in accordance with the licensee's technical specifications and administrative procedures. The inspector reviewed records and made field observations

to verify the licensee's compliance with procedures SHP-4902, SHP4905, SHP-4920 and 907/2907.

No items of noncompliance were identified.

3. Advanced Planning and Preparation

The licensee developed a health physics refueling outage organization which used the plant health physics staff in most supervisory positions. Other supervisory positions were filled by personnel with previous plant experience, from Northeast Utilities Services Company. To augment its staff during the outage, supplemental health physics technicians were obtained from a contractor. Approximately 50 senior and 45 junior level technicians were used.

The inspector reviewed selected criteria, including resumes, training records, sign-off sheets and test results of 40 senior and 11 junior level technicians. All technicians designated as senior level met the qualifications of ANSI 18-1, 1971, "Selection and Training of Personnel for Nuclear Power Plants."

No items of noncompliance were identified.

4. Training

Training for radiation workers is conducted by the Training Department in accordance with the provisions of 10 CFR 19.12 and ACP-8.03, "Health Physics Training and Retraining for Company and Contractor Personnel," Rev. 2, September 8, 1978.

The inspector participated in the training (classroom and hands-on) and noted that the format had been revised in August 1981.

The inspector reviewed selected initial training records for contractor and licensee personnel and retraining records for licensee personnel. A contractor-supplied individual currently administers the classroom and hands-on training, with licensee personnel expected to resume instructing about mid-February.

The inspector noted that about 25% of all licensee station personnel undergoing radiation worker training received new employee training in calendar year 1981.

No items of noncompliance were identified.

5. Exposure Control

The inspector reviewed the exposure records for 19 individuals. The records showed that all the individuals had current NRC Form 4's, and appropriate station radiation exposure extensions, to account for the

individual's occupational radiation exposure in accord with the provisions of 10 CFR 20.101 and 10 CFR 20.102. No radiation overexposures were noted.

No items of noncompliance were identified.

6. Posting and Control

The inspector reviewed posting and control of radiologically controlled areas for compliance with the following requirements:

10 CFR 20.105, "Permissible Levels of Radiation in Unrestricted Areas."

10 CFR 20.203, "Caution Signs, Labels, Signals and Controls."

10 CFR 20.207, "Storage and Control of Licensed Materials in Unrestricted Areas."

During tours of the facility, the inspector verified that the licensee's controlled areas and radioactive material storage areas were in compliance with the above requirements.

No items of noncompliance were identified.

7. Radioactive Material Control

Control of radioactive material was inspected against the requirements of: 10 CFR 20.401, "Records of surveys, radiation monitoring and disposal", 10 CFR 20.105, 10 CFR 20.201, and 10 CFR 20.203.

The inspector toured the following areas:

- a. Unit 1 Primary/Auxiliary Building
- b. Unit 2 Reactor Building
- c. Radwaste handling and processing buildings
- d. Radwaste storage areas

The inspector noted that most areas within the Unit 2 Reactor Building were accessible and housekeeping within the radiologically controlled areas had enabled general access to most areas without the need for protective clothing or respiratory protection equipment. The areas requiring control were posted properly.

No items of noncompliance were identified.

8. Surveys

Radiation and contamination surveys are required under the provisions of: 10 CFR 20.201, Surveys, 10 CFR 20.202, Personnel monitoring, and 10 CFR 20.105, Permissible levels of radiation in unrestricted areas.

The inspector reviewed selected RWP's for:

- a. ALARA review and data entry
- b. Radiation/Contamination survey data
- c. Requirements for, and timely air sampling and analysis
- d. Whole body and extremity dosimetry selected and specified properly

The inspector reviewed selected survey data used for writing RWP's, assured that the data were available and utilized by health physics technicians in writing RWP's and were utilized and posted for review during job briefings for personnel.

In his tours, the inspector conducted independent radiation level measurements and compared the results with licensee data posted at the area and at the health physics checkpoint.

Licensee personnel appeared to be using consistent requirements when evaluating radiation, contamination and job evolutions for specification of protective clothing, dosimetry, health physics coverage and respiratory protection equipment.

No items of noncompliance were identified.

9. Exit Interview

The inspectors met with licensee management representatives (denoted in Paragraph 1) on December 4 and 17, 1981. The inspectors summarized the purpose and scope of the inspection and the inspection findings.