

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

Region I

Report No. 50-213/80-13

Docket No. 50-213

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

Licensee: Northeast Nuclear Energy Company

P.O. Box 270

Hartford, Connecticut

Facility Name: Haddam Neck

Inspection at: Haddam Neck Site, Connecticut

Inspection conducted: July 14-15, 1980

Inspectors: *Steven L. Terc*  
N. M. Terc, Radiation Specialist

8/28/80

date signed

date signed

date signed

Approved by *Dale E. Donaldson*  
R. J. Bores, Chief, Environmental and  
Special Projects Section, FF&MS Branch

8/28/80

date signed

Inspection Summary:

Inspection on July 14-15, 1980 (Report No. 50-213/80-13)

Areas Inspected: This inspection was limited to emergency planning areas addressed in an Immediate Action Letter (IAL 80-20), dated July 3, 1980. The inspection involved 8 onsite inspection hours by one regionally based inspector.

Results: Of the three IAL 80-20 areas inspected, no items of noncompliance were found. It was determined that the licensee's actions and results achieved had met the intent of the Immediate Action Letter.

## REPORT DETAILS

### 1. Individuals Contacted

#### Principal Licensee Employees

- \*R. H. Graves, Station Superintendent
- \*J. H. Ferguson, Station Services Superintendent
- \*R. M. Blewett, Quality Assurance Supervisor
- \*R. C. Crandall, NUSCO Senior Engineer Radiological Assessment Section
- E. C. Allen, Health Physics Foreman
- H. Ross, Health Physics Technician
- N. Bison, Health Physics Technician
- K. Steinmaier, Senior Radiation Protection Technician
- B. Granados, Radiation Protection Supervisor
- N. Burnett, Engineering Department
- C. Johnson, Health Physics Foreman
- D. Packer, Instructor, Training Department
- W. Landon, Instructor, Training Department

\*Denotes those present at exit interview.

### 2. General

On July 3, 1980, the Region I Office of Inspection and Enforcement issued an Immediate Action Letter (IAL 80-20) to the Northeast Nuclear Company involving three areas of the licensee's emergency planning program at the Haddam Neck Nuclear Station.

The licensee's resolution of each of the three areas addressed in IAL 80-20 is discussed below.

### 3. Procedures for Off-site Dose Projection and Assessment

During the Health Physics appraisal the licensee's emergency plan procedures, related to environmental radiation measurements and dose-assessment/projection were found to be unacceptable. The assignment of responsibility for certain response actions taken were not clear. There were ambiguities, errata and omissions and, as a consequence, implementation would not result in a timely determination of the hazards resulting from a possible gaseous release.

Subsequent to the appraisal, the licensee made extensive revisions to the environmental radiation measurement procedure. The auditor reviewed the revised procedure and determined that it provided the basis for adequate environmental measurements during accident conditions and in particular the measurement of airborne radioiodine.

A new dose projection procedure was also implemented. The revision uses straight forward calculations and provides reasonable assurance that timely projections can be made.

The new procedures were found to meet the intent of the Immediate Action Letter.

4. Procedures for Operability and Reliability Testing

During the appraisal, it was determined that the licensee did not have adequate procedures for testing reliability (i.e., reproducibility of results) of emergency survey instruments, in particular, instruments such as the Eberline PS2-2 Scaler, used in conjunction with a HP210 beta-gamma detector to determine airborne radioiodine adsorbed in the silver loaded silica-gel cartridges, used for environmental measurements during an emergency.

Since then, the licensee has developed a reliability test procedure with criteria for acceptance and rejection of emergency survey instruments. For the PS2-2/HP210 system, the licensee has taken a large sample of measurements, and using this data has performed statistical tests to insure the validity of his data-output. In addition the licensee has established a ninety-five percent confidence region of acceptability and criteria for rejection of the instrument.

Based on the above, the licensee's actions meet the intent of the Immediate Action Letter in this area.

5. Emergency Repairs/Corrections Action Procedure

During the audit, the licensee was found not to have a procedure for emergency repair/corrective action which provided guidelines for protecting the health and safety of the individuals performing these functions.

Since then, the licensee has developed a procedure for emergency repair/corrective actions. The procedure incorporates direction and guidelines for radiation protection, including selection of personnel, preplanning, briefing on expected conditions and hazards, special personnel dosimetry requirements, health physics instrumentation, dose control, and communications.

The new procedure "Emergency Repair" (EP 1.5-42) was determined to have met the intent of the IAL.

6. Action Levels for Classification of Emergencies

During the Health Physics Appraisal, the auditor noted that the licensee's implementation instructions were deficient in specifying appropriate and clear Emergency Action Levels (EALs) upon which to base a decision to initiate emergency response activities.

The licensee has subsequently revised and clarified the EALs to reflect existing instrumentation and equipment so that they can be unambiguously and readily understood by operations personnel in classifying the various emergencies.

Based on the above actions by the licensee has met the intent of the Immediate Action Letter in this area.

7. Training

The inspector reviewed a sampling of the training and retraining of individuals assigned to the functional areas of the emergency organization in reference to the aforesaid procedural changes and revisions.

The inspector interviewed licensee personnel and field tested procedures e.g. measurement of radioiodine by environmental monitoring teams; dose assessment and projection using in-plant instrumentation and meteorological data, and verified that the training/retraining in these areas had been satisfactorily completed.

Based on the above findings, the licensee's actions and results met the intent of the IAL.

8. Exit Interview

The inspector met with the Station Superintendent and other members of his staff on July 15, 1980. During this meeting the inspector summarized the purpose and scope of the inspection and the inspection findings. The inspector stated that the licensee had met the intent of the Immediate Action Letter (IAL 80-20).