U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-443/94-02

Docket No. 50-443

License No. NPF-86

Licensee: North Atlantic Energy Service Corporation
Post Office Box 300
Seabrook, New Hampshire 03874

Facility Name: Seabrook Nuclear Power Station

Inspection At: Seabrook, New Hampshire

Inspection Conducted: January 24 - 28, 1994

Inspector: Jason C Sang for Laurie Peluso, Radiation Specialist — Date: 2-10-94
Effluents Radiation Protection Section (ERPS)
Facilities Radiological Safety and
Safeguards Branch (FRSSB)

Approved by: Judith A. Joustra — Date: 2/10/94
Judith A. Joustra, Chief, ERPS, FRSSB,
Division of Radiation Safety and Safeguards (DRSS)

Areas Inspected: Announced safety inspection of the Radiological Environmental Monitoring Program (REMP) including: management controls, quality assurance audits, meteorological monitoring program (MMP), quality control program for analytical measurements, and implementation of the above programs and the Offsite Dose Calculation Manual (ODCM).

Results: Within the areas inspected, the licensee continued to maintain an effective REMP. No safety concerns or violations of NRC requirements were identified.

DETAILS

1.0 Individuals Contacted

1.1 Licensee Personnel

* B. Clark, Radiological Services Supervisor
* T. Cooper, Maintenance Group Procedures Department
* R. DeLoach, Director-Special Projects
* E. Desmarais, Independent Review Team Manager
* W. DiProfio, Station Manager
* S. Dodge, Radiological Services Department Supervisor
  R. Donald, Lead Auditor, Nuclear Quality Group
* B. Drawbridge, Executive Director-Nuclear Production
  D. Kochman, Senior Engineer
**J. Kwasnick, Senior Engineer
* W. Leland, Chemistry/Health Physics Manager
* N. Levesque, Electrical Maintenance Department Supervisor
* J. Linville, Chemistry Department Supervisor
* J. Peschel, Regulatory Compliance Manager
* P. Plazeski, Radiological Services Supervisor
* J. Rafalowski, Chemistry/Health Physics Project Supervisor
  J. Savold, Instrumentation and Controls Technician
**R. Sher, Environmental Science Supervisor
* J. Warnock, Nuclear Safety Assessment Manager

1.2 Nuclear Regulatory Commission (NRC) Personnel

* A. Cerne, Senior Resident Inspector
* R. Laura, Resident Inspector
* V. Ordaz, Reactor Engineer Intern

* Denotes those individuals present at exit interview on January 28, 1994.
**Denotes those individuals contacted by phone post exit.
Other licensee personnel were also contacted or interviewed during this inspection.

2.0 Purpose

The purpose of this inspection was to verify the licensee's capability to implement the REMP and the MMP according to the ODCM, and appropriate procedures during normal and emergency operations.

3.0 Management Controls

3.1 Organization

The inspector reviewed the organization responsible for the implementation of the REMP and discussed with the licensee any changes since the last inspection conducted in August 1992. There have been changes in the organization since the previous inspection. As of November 1993, the Environmental Engineering Department had been renamed Environmental Sciences and reports directly to the Executive Director of Engineering and Licensing. Prior to these changes, the Environmental Engineering Department reported through two levels of management to the Executive Director of Engineering and Licensing. These changes have had no negative effect on the implementation of the REMP.

Members of the Radiological Services Department continue to support Environmental Science and are responsible for the collection of environmental samples, the transfer of the samples to the environmental laboratory for analysis, TLD collection and analysis, and assist in performing the land use census.

3.2 Quality Assurance Audits and Surveillances

The inspector reviewed the Quality Assurance Audit Report as part of the evaluation of the implementation of the TS requirements. The Audit Report (#93-A10-02), dated November 28, 1993, was performed during September 27-October 01, 1993. The inspector noted that the audit covered the stated objectives, utilized a technical specialist, and was thorough and of sufficient technical depth to assess the REMP. The audit identified two findings and two observations; neither was of safety significance. Responses to the observations were generally timely and appropriate. One finding remained open and the other had been closed and subsequently escalated to a Station Information Report (SIR). The SIR was closed on January 24, 1994. The inspector reviewed the SIR and noted that it was a thorough, technical review which evaluated the basis for the findng. The SIR final response to the finding was appropriate.

The licensee stated that the next audit of the REMP was scheduled for September 1994. The inspector reviewed the audit schedule and plan and noted that the REMP audit was planned according to the frequency specified in the Technical Specifications and the scope of the audit plan was appropriate for the REMP.

summary of the analytical results of the REMP around the Seabrook site and met the TS reporting requirements. The reviewed results indicated that samples were collected and analyzed as required by TS. No obvious omissions or anomalous data were identified.

4.0 Radiological Environmental Monitoring Program

4.1 Direct Observations

The inspector examined selected sampling stations to determine whether samples were being obtained from the locations designated in the TS and the ODCM and whether air samplers were operable and calibrated. These sampling stations included air samplers for particulates and airborne iodines, milk, and a number of TLD stations for measurement of direct ambient radiation. The inspector witnessed the weekly exchange of charcoal cartridges and air particulate filters at selected sampling stations.

All examined air sampling equipment was operational at the time of the inspection and the TLDs were placed at the designated locations as specified in the ODCM. Milk samples were available from the locations described in the ODCM. Sample collection was performed according to the appropriate procedures.

The inspector reviewed the licensee's program deviation logs. The inspector noted one air sampler was out of service on several occasions during a four week period because the power had been inadvertently turned off. The licensee permantly corrected the situation during this inspection. The inspector also reviewed the analytical results for this air sampling station. The results indicated that the inadvertent loss of power had no adverse impact on sample collection.

No violations were identified.

4.2 Review of the REMP Procedures

The inspector reviewed the procedure manual as part of the evaluation of the implementation of the REMP in accordance with TS. The inspector noted that the procedures were concise and provided the required direction and guidance for implementing an effective REMP.

results of the volume meters for the air samplers. The calibrations were performed as scheduled and results were within the licensee's acceptance criteria.

Based on the above review and discussions with the licensee personnel, the inspector determined that the licensee has implemented an effective REMP.

4.3 IE Bulletin No. 80-10

As part of this inspection, the inspector reviewed the licensee's program concerning IE Bulletin No. 80-10 (issued May 6, 1980), "Contamination of Nonradioactive System and Resulting Potential for Unmonitored, Uncontrolled Release of Radioactivity to Environment". The inspector discussed the implementation of IE Bulletin No. 80-10 with members of the Chemistry Department. The inspector reviewed the site plan, several surveillance and chemistry procedures, and analytical results and determined that the procedures contained the steps required to effectively implement this program. Records of the analytical results indicated that samples were collected as required and the lower limits of detection specified in the TS were met. The inspector toured selected sampling locations such as the turbine building sump, the storm drain water compositor, and auxiliary boilers and an associated radiation monitor. The sampling locations are routinely sampled and analyzed and the results are reviewed by the responsible individual.

Based on the above reviews and discussion with the licensee, the inspector determined that the program is effective and facilitated the identification of sources of radioactive liquids within and from the facility.

5.0 Quality Assurance and Quality Control for Analytical Measurements

The inspector reviewed the licensee's programs for quality assurance (QA) and quality control (QC) to determine whether the licensee had adequate control with respect to sampling, analyzing, and evaluating data for the implementation of the REMP.

The quality control program for analysis of environmental samples is conducted by the Yankee Atomic Environmental Laboratory (YAEL), located in Framingham, MA. The YAEL conducts a blind duplicate program, an intralaboratory quality control program, and participates in the EPA-cross check program to verify the quality of laboratory analyses. The inspector reviewed selected results from these programs and noted that the reviewed results were within the licensee's acceptance criteria.

The inspector noted that the licensee continues to maintain an effective QA program to ensure that the routine and non-routine REMP sample results are thoroughly reviewed. Any analytical results that appear suspect are either recounted or reanalyzed and these results are reviewed thoroughly.

Based on the above reviews and discussion with the licensee, the inspector determined that the licensee had very good QA and QC programs.

6.0 Meteorological Monitoring Program (MMP)

The inspector reviewed the licensee's MMP to determine whether the instrumentation and equipment were operable, calibrated, and maintained. The Instrument and Controls (I&C) Department has oversight for calibration and maintenance of the meteorological instrumentation and equipment. Calibrations are performed quarterly, more frequent than TS requirement, and channel checks are conducted daily by the I&C technicians and members of the Operation Department.

Calibrations and channel checks were performed according to the requirements specified in the appropriate procedures. The inspector reviewed these procedures and the most recent calibration results for wind speed, wind direction, and delta temperature at the primary and back-up meteorological towers. All reviewed calibration results were within the licensee's acceptance criteria and all calibrations were performed according to the frequencies required by the procedure. The inspector witnessed the routine daily channel check and noted that it met the TS definition for a channel check.

Based on the above inspector observations, record review and discussions with the licensee personnel, the inspector determined that the licensee continued to implement the MMP effectively.

7.0 Exit Interview

The inspector met with the licensee representatives denoted in Section 1.1 of this inspection report at the conclusion of the inspection on January 28, 1994. The inspector summarized the purpose, scope, and findings of the inspection. The licensee acknowledged the inspection findings.