January 31, 2001

Mr. Ted C. Feigenbaum
Executive Vice President and Chief Nuclear Officer
Seabrook Station
North Atlantic Energy Service Corporation
c/o Mr. James M. Peschel
P.O. Box 300
Seabrook, NH 03874

SUBJECT: NRC's SEABROOK INSPECTION REPORT NO. 05000443/2000-009

Dear Mr. Feigenbaum:

On December 30, 2000, the NRC completed an inspection at your Seabrook Nuclear Power Station. The enclosed report presents the results of this inspection. The results were discussed on January 5, 2001, with Mr G. St. Pierre and members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspector reviewed selected procedures and records, observed activities, and interviewed personnel. The radiological controls instrumentation program was also inspected during this period. Additionally, reviews were conducted of your emergency preparedness and security programs.

Based on the results of this inspection, the inspectors identified one issue of very low significance (Green). The findings, involving the failure to properly install components inside the containment per an applicable design specification was determined to involve a violation of NRC requirements. However, because of the very low safety significance and because the issue has been entered into your corrective program, the NRC is treating this issue as a Non-cited violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Seabrook Station.

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Sincerely,

/RA/

Robert Summers, Acting Chief
Projects Branch 6
Division of Reactor Projects

Docket No. 05000443
License No: NPF-86

Enclosure: NRC Inspection Report No. 05000443/2000-009

cc w/encl:
B. D. Kenyon, President and Chief Executive Officer
J. M. Peschel, Manager - Regulatory Programs
W. A. DiProfio, Station Director - Seabrook Station
D. Roy, Training Manager - Seabrook Station
D. E. Carriere, Director, Production Services
L. M. Cuoco, Esquire, Senior Nuclear Counsel
D. A. Smith, Manager of Regulatory Affairs, Northeast Nuclear Energy Company
W. Fogg, Director, New Hampshire Office of Emergency Management
D. McElhinney, RAC Chairman, FEMA RI, Boston, Mass
R. Backus, Esquire, Backus, Meyer and Solomon, New Hampshire
D. Brown-Couture, Director, Nuclear Safety, Massachusetts Emergency Management Agency
F. W. Getman, Jr., Vice President and Chief Executive Office, BayCorp Holdings, LTD
R. Hallisey, Director, Dept. of Public Health, Commonwealth of Massachusetts
M. Metcalf, Seacoast Anti-Pollution League
D. Tefft, Administrator, Bureau of Radiological Health, State of New Hampshire
S. Comley, Executive Director, We the People of the United States
W. Meinert, Nuclear Engineer
S. Allen, Polestar Applied Technology, Incorporated
R. Shadis, New England Coalition Staff

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	05000443
License No.:	NPF-86
Report No.:	05000443/2000-009
Licensee:	North Atlantic Energy Service Corporation
Facility:	Seabrook Generating Station, Unit 1
Location:	Post Office Box 300 Seabrook, New Hampshire 03874
Dates:	November 19 - December 30, 2000
Inspectors:	Raymond Lorson, Senior Resident Inspector Javier Brand, Resident Inspector Greg Smith, Senior Physical Security Inspector David Silk, Senior Emergency Preparedness Inspector Laurie Peluso, Health Physicist
Approved by:	Robert Summers, Acting Chief Projects Branch 6 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000443-00-09, on 11/19-12/31/2000; North Atlantic Energy Service Corporation; Seabrook Station; Unit 1. Refueling and Outage Activities.

The inspection was conducted by resident inspectors, a regional radiation specialist, senior physical security inspector and senior emergency preparedness inspector. The inspection identified one Green finding which was a noncited violation. The significance of most/all findings is indicated by the color (green, white, yellow, red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). The significance of findings for which the SDP does not apply is indicated by "no color" or by the severity level of the applicable violation. A description of the NRC Reactor Oversight Process is enclosed as Attachment 1 of this report.

A. Inspector Identified Findings

Cornerstone: Barrier Systems

- Green. One finding was identified involving the installation of permanent structures inside the containment that did not meet the required separation distance to the containment liner as specified in structural drawing 101417. This specification required a separation of 0.5 inch be maintained between the containment liner and permanently installed structures located inside the containment. The inspector evaluated this finding using Appendix A (Phase 1) of the significance determination process and determined that the event was of very low significance (Green) since the issue did not involve an actual open pathway in the physical integrity of the containment.

  Criteria X of Appendix B, to 10 CFR 50, requires, in part, that a program for the inspection of activities affecting quality be established and executed to verify conformance with documented instructions, procedures and drawings. Contrary to the above, the licensee failed to ensure that structural components located inside the containment were properly installed per structural drawing 101417. This is a violation of 10 CFR 50, Appendix B. This low risk violation has been entered into the licensee's corrective action program under condition report 00-13771 and is being treated as a non-cited violation consistent with the NRC enforcement policy. (Section R20) (NCV 00-09-01)

B. Licensee Identified Violations

There were no violations identified by the licensee during this inspection.

TABLE OF CONTENTS

Report Details

Summary of Plant Status: The plant was in a refueling outage for the duration of the inspection period.

1. REACTOR SAFETY
Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

R01 Adverse Weather

a. Inspection Scope

The inspector reviewed the licensee's cold weather protection program to verify that mitigating systems were adequately protected from adverse weather conditions. The inspector performed field walkdowns of building structures and safety related components, reviewed the station cold weather operations procedure OS1090.09, and freeze protection control surveillance procedure, ON1490.06. The inspector also reviewed the deficiencies identified by the licensee during cold weather preparation walkdowns, and verified that corrective actions for previously identified deficiencies involving the licensee's cold weather protection program had been properly implemented.

b. Findings

There were no significant findings identified during this inspection.

R05 Fire Protection

a. Inspection Scope

The inspectors toured three areas important to plant safety to assess the condition of the fire detection and suppression equipment, fire barriers, and the presence of combustible materials. Station drawings and pre-fire strategy tables were used to verify that fire fighting equipment was available in the field where required and that applicable sections of the fire main were properly aligned and charged. The following areas were reviewed:

- Refueling Water Storage Tank Area
- Main Steam Pipe Chase (West Side)
- "A" Residual Heat Removal Pump Vault

b. Findings

There were no significant findings identified during this inspection.

R11 Licensed Operator Re-Qualification

a. Inspection Scope

On December 14, the inspector observed a licensed operator re-qualification training class performed in the plant simulator. The training scenario covered the operator's response to an event that involved several problems including a shutdown loss of cooling accident. The inspector observed crew communications, command and control, and attended the post training brief.

b. Findings

There were no significant findings identified during this inspection.

R12 Maintenance Rule Implementation

a. Inspection Scope

The inspector reviewed problems involving selected in-scope systems, structures, and components (SSCs) to assess the effectiveness of the maintenance rule program. The reviews focused on proper maintenance rule scoping, characterization of failed SSCs, safety significance classifications, 10 CFR 50.65 (a) (1) and (a) (2) classifications, and the SSC performance criteria. The following systems were reviewed:

- Control Building Air Conditioning
- Equipment Air Handling

b. Findings

There were no significant findings identified during this inspection.

R13 Maintenance Risk Assessments and Emergent Work Controls

a. Inspection Scope

The inspectors reviewed through direct observation, document review and/or interviews with plant engineers two emergent maintenance activities to determine whether the licensee properly evaluated and controlled these activities to minimize risk. The inspectors also performed an independent evaluation of the effectiveness of the licensee's troubleshooting activities and the planned and completed corrective actions (as described in the Plant Engineering Action Plan Register, and condition reports (CRs) 00-14233, and 00-13748). The following events were reviewed:

- An unexpected low pressure condition which developed in the "A" control building air conditioning chilled water system during a surveillance test on December 25, 2000.

- The failure of the containment enclosure emergency air cleanup system to establish the required differential pressure between the containment enclosure

area and all adjacent spaces as specified by Technical Specification (TS) surveillance requirement 4.6.5.1d.4. on December 5, 2000.

b. Findings

There were no significant findings identified during this inspection.

R19 Post-Maintenance Testing

a. Inspection Scope

The inspector reviewed the scope of the post-maintenance test activities, examined the post-maintenance test data, and observed a portion of the test activities following replacement of the "B" ocean service water pump. The inspector also review the advanced diagnostic report (CBM # 00-002) that evaluated debris found in the "A" residual heat removal pump motor lubricating oil following a post-maintenance test performed on November 14, 2000.

b. Findings

There were no significant findings identified during this inspection.

R20 Refueling and Outage Activities

a. Inspection Scope

The inspector reviewed the containment metal liner inspection performed during the outage per engineering procedure ES1807.032, "Inservice Inspection Procedure Primary Containment Section XI IWE Program." The inspection was designed to meet the requirements of ASME Section XI, IWE-3510.1 (a) and ASME Table IWE-2500-1 to ensure that the liner surface was free of defects that could affect either the structural integrity or leak tightness of the containment. The inspector observed the licensee's inspection activities, reviewed the corrective actions for identified discrepancies, and independently inspected a portion of the containment liner.

The inspector also reviewed the licensee's corrective actions for CR 00-13758 which described a NRC identified issue involving minor damage to the containment liner that was apparently caused by contact with a reactor vessel stud storage rack. The corrective actions included an evaluation of the liner condition and a change to operations procedure, OS 1015.18 to ensure that an adequate clearance would be maintained between temporary equipment and the containment liner.

b. Findings

The inspector observed seventeen examples where permanently installed structures were in direct contact with the containment liner. In some cases contact between the containment liner and the structures resulted in minor damage (scratches and gouges) to the liner. The identified structures included: a large cable tray, an angle support that was welded to structural steel, a wire mesh barrier wall, and several floor metal gratings. The inspector also identified several other examples where tubing, piping supports and floor grating were located in close proximity to the liner wall. The licensee implemented corrective actions to establish a clearance between the liner and the permanently installed structures.

The licensee evaluated this observation under CR 00-13771 and determined that the containment liner vapor barrier integrity would not have been challenged during a seismic event. Specifically, the maximum calculated horizontal displacement of the structures, during the design basis seismic event, would have been 0.199 inches which was less than the 0.375 inch containment liner wall thickness. Structural drawing 101417) required that a 0.5 inch separation criteria be maintained between the containment liner and permanently installed structures located inside the containment. The inspector evaluated this finding using Appendix A (Phase 1) of the significance determination process (SDP) and determined that the event was of very low significance (Green) since the issue did not involve an actual open pathway in the physical integrity of the containment.

Criteria X of Appendix B, to 10 CFR 50, requires, in part, that a program for the inspection of activities affecting quality be established and executed to verify conformance with documented instructions, procedures and drawings. Contrary to the above, the licensee failed to ensure that structural components located inside the containment were properly installed per structural drawing 101417. This is a violation of 10 CFR 50, Appendix B. This low risk violation has been entered into the licensee's corrective action program under CR 00-13771and is being treated as a non-cited violation consistent with Section VI.A.1 of the NRC Enforcement Policy. **(NCV 00-09-01)**

2. RADIATION SAFETY
Cornerstone: Occupational Radiation Safety (OS)

OS3 Radiation Monitoring Instrumentation

a. Inspection Scope (IP 71121 Attachment 3)

The inspector reviewed calibrations and daily source checks for field instrumentation utilized by radiation protection technicians and plant workers to measure radioactivity, including portable survey instruments, friskers, portal monitors, and small article monitors. The inspector reviewed calibration, operability, and alarm set points for instruments and equipment observed in the reactor, turbine, and radioactive waste buildings, specifically the continuous air monitors (CAMs), process monitors, and area radiation monitors (ARM). The inspector reviewed calibration and daily source checks for electronic dosimeters and whole body counters. The inspection included a review of

calibration documentation from 1999 and 2000, review of the associated procedures with the above instrumentation and equipment, discussions with responsible personnel, and a self assessment conducted by the Radiation Protection Department.

The inspector reviewed the following Condition Reports (CR) to ensure that the licensee's problems were being identified, characterized, prioritized, corrected, and resolved: 00-12370; 00-13097; 00-14200; 00-14236; and 0014218.

The inspector toured areas in the plant where self-contained breathing apparatus (SCBAs) were staged for use including the control room, the Technical Support Center (TSC) and the Operations Support Center (OSC). The inspector reviewed the equipment inspection surveillance records (April to December 2000) and verified that they were complete and ensured SCBA packs and bottles were appropriately staged and ready for use in the plant during an emergency. The inspector observed two technicians conduct the inspection of respiratory equipment. The inspector verified that the qualifications for control room operators and health physics technicians who utilize this equipment were up to date.

Findings and Issues

There were no significant findings identified during this inspection.

3. Safeguards
Cornerstone: Physical Protection

PP4 Security Plan Changes

a. Inspection Scope (71130.04)

An in-office review was conducted of changes to the Physical Security, Contingency, and Training and Qualification Plans, identified as Revisions 26, 11 and 11, respectively, submitted to the NRC on May 31, 2000, in accordance with the provisions of 10 CFR 50.54(p). A review of the Plan revisions was conducted to confirm that the changes were made in accordance with 10 CFR 50.54(p), and did not decrease the effectiveness of the Plans.

b. Findings

There were no significant findings identified during this inspection.

4. OTHER ACTIVITIES [OA]

OA2 Performance Indicator Verification

a. Inspection Scope

The inspector reviewed the licensee's process for identifying the data that is utilized to determine the values for the three emergency preparedness performance indicators (PI) which are: 1) Drill and Exercise Performance, 2) Emergency Response Organization Participation, and 3) Alert and Notification System Reliability. The review assessed data from 1999 and 2000. Classification, notification and protective action opportunities were verified by reviewing scenarios. Attendance records for drill and exercise participation was reviewed. Details of the siren testing and data collection were discussed with individuals responsible for that program.

The inspector also reviewed the performance indicator data for the safety system functional failures and for the reactor coolant system activity performance indicators.

b. Findings

There were no significant findings identified during this inspection.

OA6 Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. G St. Pierre January 5, 2001, following the conclusion of the period. The licensee acknowledged the findings presented.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

G. StPierre, Station Director
J. Grillo, Assistant Station Director
B. Plummer, Operations Manager
T. Nichols, Technical Support Manager
D. Sherwin, Maintenance Manager
J. Pandolfo, Security Manager
M. Ossing, NRC Coordinator
R. Anderson, Work Contact and Outage Manager
J. Sobotka, Regulatory Compliance Supervisor
T. Lucca, Technical Services Supervisor
D. Tailleart, Emergency Preparedness Manager
D. Young, Nuclear Emergency Preparedness Coordinator
D. Bodoh, I&C Technician, Instrument and Controls
B. Clark, Radiological Services Supervisor, Health Physics Department
W. Cox, Radiological Technical Specialist, Health Physics Department
C. Holdsworth, Health Physics Technician, Health Physics Department
T. Pepin, Health Physics Technician, Health Physics Department
R. Thurlow, Health Physics, Supervisor

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened: NCV 00-09-01; failure to properly install components inside the containment per the applicable drawing.

Closed: NCV 00-09-01; failure to properly install components inside the containment per the applicable drawing.

LIST OF ACRONYMS USED

ARM	Area Radiation Monitor
ASME	American Society of Mechanical Engineers
CAMS	Continuous Air Monitoring System
CR	Condition Report
OSC	Operations Support Center
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SSC	Structure, System, or Component
TS	Technical Specifications
TSC	Technical Support Center

Attachment 1

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.