

May 4, 2000

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 INTEGRATED INSPECTION REPORT NO. 0500443/2000-002

Dear Mr. Feigenbaum:

This refers to the inspection completed on April 2, 2000 at Seabrook. The enclosed report presents the results of this inspection.

Your staff placed an appropriate emphasis on safe plant operations during this period. Operations, maintenance and engineering activities were generally performed well. Specialist inspections were performed on your radiological environmental monitoring, security, and plant engineering improvement programs. No significant concerns were identified during these inspections.

The inspectors noted that poor control and oversight of painting activities resulted in the failure of two safety-related primary auxiliary building ventilation dampers during surveillance testing. Although the corrective actions for these test failures were comprehensive, corrective actions for previous painting related issues did not prevent this event. Your continuing investigation into the root causes for these test failures appeared appropriate.

In accordance with 10 CFR 2.790 of the NRC "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Sincerely,

/RA/

James C. Linville, Chief
Projects Branch 5
Division of Reactor Projects

Docket No. 05000443
License No: NPF-86

Enclosure: NRC Inspection Report No. 05000443/2000-002

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REGION I

Docket No.: 05000443
License No.: NPF-86

Report No.: 05000443/2000-002

Licensee: North Atlantic Energy Service Corporation

Facility: Seabrook Generating Station, Unit 1

Location: Post Office Box 300
Seabrook, New Hampshire 03874

Dates: February 28, 2000 - April 2, 2000

Inspectors: Raymond Lorson, Senior Resident Inspector
Javier Brand, Resident Inspector
Len Privity, Senior Reactor Inspector
Laurie Peluso, Health Physicist
Paul Frechette, Physical Security Inspector
Kathleen Modes, Health Physicist

Approved by: James C. Linville, Chief
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Division of Reactor Projects

EXECUTIVE SUMMARY

Seabrook Generating Station, Unit 1 NRC Inspection Report 05000443/2000-002

This integrated inspection included aspects of licensee operations, engineering, maintenance, and plant support. The report covers a 5 week period of resident and specialist inspection.

Operations:

- Poor control of painting activities resulted in the failure of two safety-related ventilation dampers during surveillance testing and required entry into Technical Specification 3.0.3. The licensee is performing an engineering evaluation to determine whether the ventilation damper failure would have caused any primary auxiliary building design temperature limits to be exceeded. The licensee's corrective actions following the test failures to prevent additional painting related problems were appropriate, and consistent with industry operating experience. However, the corrective actions for previous painting problems were not effective at preventing this painting related problem from occurring (Section 04.1).

Maintenance:

- The licensee established adequate configuration controls to minimize the plant risk during replacement of the '1B' vital battery. The licensee implemented proper corrective actions in response to inadvertently dropping two battery cells during the replacement (Section M1.1).
- The licensee responded well to address a self-identified curing problem with a replacement barrier penetration seal. The licensee planned to implement additional actions, as necessary, based on the vendor's cause and failure analysis of this problem (Section M2.1).

Engineering:

- The plant engineering group was monitoring system performance acceptably and taking appropriate corrective actions to resolve degraded conditions (Section E1.1).
- Personnel consistently entered items into the corrective action program to resolve problems as they were identified. Self-identification by Engineering of problems has improved. Some examples of thorough corrective action were evident, but some recurring problems evidenced the need for improved performance. Challenges still exist in control of online maintenance. (Section E1.1)
- The revised system engineering walkdown program was a good initiative to improve the station material condition. The system engineers were knowledgeable regarding current system problems, but did not identify some minor material problems during the walkdowns (Section E1.2).

Plant Support:

- The licensee effectively implemented the radiological environmental monitoring program (REMP). The licensee collected, analyzed, and evaluated radiological data using appropriate procedures. The annual report contained an accurate assessment of the data and a comprehensive summary of the REMP. The licensee implemented an effective program to validate the quality of the analytical results (Section R1.1).
- The licensee effectively implemented the meteorological monitoring program. The meteorological instrumentation was appropriately maintained and calibrated in accordance with the Technical Requirements Manual and the calibration procedure (Section R1.2).
- The audits of the REMP, meteorological monitoring program, and the environmental laboratory were appropriately conducted. The licensee met the quality assurance audit requirements (Section R7.1).
- Security and safeguards activities with respect to alarm station controls, communications, protected area access control of personnel and packages were effectively implemented, and met licensee commitments and NRC requirements (Section S1).
- Protected area assessment aids, protected area detection aids, and personnel search equipment were determined to meet the licensee's commitments and NRC requirements (Section S2).
- Security and safeguards procedures and documentation were properly implemented. Event logs were properly maintained and effectively used to analyze, track, and resolve safeguards events (Section S3).
- The security force members (SFMs) adequately demonstrated that they had the requisite knowledge necessary to effectively implement their duties and responsibilities (Section S4).
- Security force training was conducted in accordance with the training and qualification plan, and based upon interviews and inspector's observations was effective (Section S5).
- Management support was adequate to ensure effective implementation of the security program, as evidenced by adequate staffing levels and the allocation of resources to support programmatic needs (Section S6).
- Audits were comprehensive in scope and depth, and findings were reported to the appropriate level of management. The audit program was properly administered. The self-assessment program effectively identified and subsequently resolved potential weaknesses (Section S7).

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Report Details

Summary of Plant Status

The plant operated approximately 100% power for the duration of the inspection period

I. Operations

O1 Conduct of Operations

O1.1 General Comments (71707)

In general, routine operations were performed in accordance with station procedures and plant evolutions were completed in a deliberate manner with clear communications and effective oversight by shift supervision. Control room logs accurately reflected plant activities, and observed shift turnovers were comprehensive and thoroughly addressed questions posed by the oncoming crew. Control room operators displayed good questioning perspectives prior to releasing work activities for field implementation. The inspectors found that operators were knowledgeable of plant and system status.

O2 Operational Status of Facilities and Equipment

a. Inspection Scope (71707, 62707)

The inspectors routinely conducted independent plant tours and walkdowns of selected portions of safety-related systems during the inspection report period. These activities consisted of the verification that system configurations, power supplies, process parameters, support system availability, and current system operational status were consistent with Technical Specification (TS) requirements and Updated Final Safety Analysis Report (UFSAR) descriptions. Additionally, system, component, and general area material conditions and housekeeping status were noted.

The inspectors found that the plant conditions were acceptable, but identified some minor material deficiencies that were appropriately addressed by the licensee. During a plant tour, the inspector observed a poor work practice involving several painting personnel who were walking on cable trays in the turbine building. The inspector was concerned that this practice could result in either equipment damage or a personnel hazard. The licensee implemented appropriate corrective actions to address this concern.

O4 Operator Knowledge and Performance

O4.1 Inoperability of Both Primary Auxiliary Building (PAB) Ventilation Trains

a. Inspection Scope (71707/61726)

The licensee declared both primary component cooling water (PCCW) system trains inoperable and entered Technical Specification (TS) Section 3.0.3 on March 26, after the PCCW ventilation system failed to operate properly during monthly surveillance

testing. The inspector reviewed the licensee's corrective actions for this issue.

b. Observations and Findings

Two safety-related fans (PAH-FN-42A and 42B) are installed to maintain the ambient temperature conditions around the PCCW pumps, and other safety-related components within acceptable limits following a design basis accident. The air supply to the fans is provided through primary auxiliary building (PAB) isolation dampers that must open to allow the fan motors to start. The dampers also provide a tornado protection function for the PAB. The PAH fans and associated dampers were considered a necessary support system for the PCCW pump motors.

Isolation damper PAH-DP-357 failed to open as required during the 'A' train PCCW area ventilation system testing on March 26. The licensee investigated this problem and determined that the damper had been inadvertently painted shut during on-going painting activities within the PAB. The licensee subsequently tested the 'B' train and found that the associated ventilation isolation damper (PAH-DP-358) had also been painted shut. The licensee reported this condition per 10 CFR 50.72 (b)(2)(iii) as a condition that alone could have prevented the fulfillment of a safety function.

The initial corrective actions for this event included removal of the paint and successful testing of the dampers. The licensee implemented several follow-up corrective actions to prevent additional painting related problems. The corrective actions included temporary suspension of the painting activities, formation of an event team, personnel training, enhanced field oversight, and improved operational inspections. The inspectors concluded that these corrective actions appeared appropriate, but noted that the corrective actions for previous painting related condition reports did not prevent this problem. The inspectors identified that some of the painting inspection, and oversight actions discussed above were previously described in industry operating experience, but were not incorporated in the licensee's pre-job planning activities.

At the conclusion of the inspection period the licensee was in the process of performing an engineering evaluation to determine whether the PAB safety-related fans were necessary to prevent exceeding any safety-related equipment temperature limits. Following completion of the engineering review, the licensee will either retract the 10 CFR 50.72 report noted above or issue a 10 CFR 50.73 licensee event report, as appropriate.

c. Conclusion

Poor control of painting activities resulted in the failure of two safety-related ventilation dampers during surveillance testing and required entry into Technical Specification 3.0.3. The licensee is performing an engineering evaluation to determine whether the ventilation damper failure would have caused any primary auxiliary building design temperature limits to be exceeded. The licensee's corrective actions to prevent additional painting related problems were appropriate, and consistent with industry operating experience. However, the corrective actions for previous painting problems were not effective at preventing this painting problem.

II. Maintenance

M1 Conduct of Maintenance

M1.1 '1B' Vital Battery Replacement

a. Inspection Scope (61726/62707)

The inspector reviewed the scheduled replacement of the 1 'B' vital battery which commenced on March 6. The inspector reviewed applicable documentation, including the on-line maintenance plan, performed field walkdowns, and interviewed personnel.

b. Observations and Findings

The battery was replaced because it was nearing the end of its qualified service life. Prior to commencing the work activities, the licensee evaluated the risk associated with removal of the battery from service and controlled the plant configuration to minimize the potential for any plant challenges. The inspector found that the work documentation was adequate, and verified that the licensee established proper controls to ensure that the redundant battery train remained operable. The operations and security departments were observed to provide good support during the battery replacement activities.

The inspector reviewed the licensee's actions in response to inadvertently dropping two replacement battery cells during handling. The licensee established an event team and improved the controls for handling the remaining replacement battery cells. The battery replacement was completed satisfactorily without any further complications.

c. Conclusion

The licensee established adequate configuration controls to minimize the plant risk during replacement of the 1 'B' vital battery. The licensee implemented proper corrective actions in response to inadvertently dropping two battery cells during the replacement.

M2.1 Penetration Seal Degradation

a. Inspection Scope (62707)

The inspector reviewed the licensee's response to a penetration seal curing problem that was identified by a technician on February 28, during a seal repair activity. The inspector performed field walkdowns, interviewed personnel, and reviewed applicable information.

b. Observations and Findings

During the replacement of a penetration seal, the licensee identified a replacement seal with unacceptable wetness and peeling of the foam penetration material. The affected seal was immediately cleaned and replaced with satisfactory results, and a condition report (CR 00-1364) was promptly issued to evaluate this condition. The engineering department determined that the problem appeared related to the seal material used from a specific lot number (AD671). All available kits with the same lot number were immediately restricted from further use and sent to the manufacturer for a cause and failure investigation. The licensee planned to implement additional actions as required based on the vendor's findings.

The licensee's fire protection engineer determined, based on vendor test data, that the degraded seal condition would not have affected the operability of the seal since sufficient sealant material was installed and an adequate cell structure was produced. The inspector did not identify any immediate concerns with this assessment. The CR was closed and replaced with a non-conformance report (NCR 00-0021) to track the vendor's cause and failure analysis. The inspector noted a minor documentation problem, in that the operability assessment of the seal condition was not described in the CR prior to closure. The corrective action manager implemented actions to correct this issue.

c. Conclusion

The licensee responded well to address a self-identified curing problem with a replacement barrier penetration seal. The licensee planned to implement additional actions, as necessary, based on the vendor's cause and failure analysis of this problem.

III. Engineering

E1 Conduct of Engineering

E1.1 Review of System Engineering Performance

a. Inspection Scope (IP 37550)

The purpose of this regional initiative inspection was to assess the licensee's efforts in improving corrective actions in the newly restructured plant engineering group (PEG) with an emphasis in the system engineering area. This corrective action review included:

- Engineering's ability to identify and resolve problems effectively
- Engineering's monitoring of system performance and taking appropriate corrective actions when degraded conditions arise.

Four risk significant systems were reviewed. These were the residual heat removal (RHR), primary component cooling water (PCCW), emergency feedwater (EFW), and service water (SW) systems. Walkdowns were conducted with each system engineer as discussed in Section E2.2. The inspector reviewed a sample of existing problems as identified in the December 1999 system performance reports and as described in condition reports (CRs), work requests (WRs), and engineering work requests. Interviews and discussions were conducted with personnel in the plant engineering, operations, and work control groups. The inspector observed several meetings, including the plan-of-the-day meeting, the operations focus meeting, and the corrective action coordination meeting.

b. Observations and Findings

In 1998 and 1999 the NRC observed the need for improvements by system engineers in monitoring systems for degraded conditions and correcting problems appropriately within the confines of the Seabrook Station corrective action program (CAP). Partly in response to these and other third party observations, the licensee developed and began implementation of the T-2000 project initiative, "Team 2000 - Transforming to Excellence," during 1999. The licensee organized this initiative into 8 task teams or groupings as follows: design control, work control, performance monitoring, station support, corrective action, training and development, project management, and spare parts.

The inspector assessed four of these groupings, namely design control, work control, performance monitoring, and corrective action, by associating each condition report reviewed with one of these groupings. Twenty-four (24) CRs were reviewed as follows:

- 6 in RHR, 6 in PCCW, 3 in EFW, and 5 in SW
- 4 in other areas

A positive or negative engineering performance observation was assigned to each CR. Each of the four systems reviewed shared in the distribution of positive and negative observations, meaning that no one system was all positive or negative. Most (20) of the 24 CRs reviewed were categorized in the performance monitoring and corrective action areas. There were twice as many positive as negative observations, which indicated on a strict number basis, that the PEG was monitoring system performance and taking appropriate corrective actions acceptably as it was implementing the changes of the T-2000 project initiative.

The following assessment statements with supporting examples provide the results of the corrective action review.

- Personnel consistently entered items into the CAP to resolve problems as they were identified. For example, the inspector observed fresh paint on the spherical bearing surfaces of a PCCW piping support as a result of ongoing painting activities. The licensee issued a CR and appropriately evaluated this undesirable condition. During the walkdown of the RHR system, a deficiency tag was observed on valve RH-V-33. While a WR was issued in mid-1999 to repair

the valve, a CR was not issued at that time. The licensee noted that WRs have been reviewed daily since December 1, 1999, by a corrective action coordinating group to determine if a CR should also be issued. Since there could be other old work items (similar to RH-V-33) for which CRs should be issued, the licensee plans to screen more than 1000 WRs. This screening effort, which is expected to be completed by July 2000, would include WRs dated prior to December 1, 1999, for which work had not yet started. The inspector considered this action to be appropriate.

- Engineering's self-identification of problems has improved (from about 20% to 40%).
- Some examples of thorough corrective action were evident but some recurring problems evidenced the need for improved performance. Supporting examples included the good teamwork in resolving the "B" RHR pump vibration problem. Conversely, problems continue regarding the SW piping vacuum breaker leakage and the EFW pump discharge header being pressurized from main feedwater back leakage.
- Challenges still exist in work control to do online maintenance (OLM) with appropriate OLM assessments per procedure. The inspector reviewed CR 99-4083, which the licensee had identified. This CR cited a work package already completed on a risk significant component (PCCW heat exchanger temperature control valve), for which no OLM assessment was done. The licensee identified the need for better system engineer involvement early in the work control process to prevent recurrence of this problem. This early involvement is needed to support important work scope and planning decisions, such as the determination of a "Trip Critical" component on the WR form.

c. Conclusions

The PEG was monitoring system performance acceptably and taking appropriate corrective actions to resolve degraded conditions.

Personnel consistently entered items into the CAP to resolve problems as they were identified. Engineering's self identification of problems has improved. Some examples of thorough corrective action were evident, but some recurring problems evidenced the need for improved performance. Challenges still exist in control of online maintenance.

E1.2 System Engineering Walkdowns (37550)

a. Inspection Scope

The inspectors observed the system engineers perform walkdowns on the PCCW, RHR, SW, and EFW systems. The inspectors also reviewed the PEG guidelines (PEG-10), "System Walkdowns" for performing the system walkdown inspections.

b. Observations and Findings

The system engineering walkdown program was revised as part of the T-2000 project (Section E1.1). The walkdowns are performed quarterly to provide a focused review of the system material condition. The plant walkdown guideline required the system engineers to review open operator work-arounds and operational impact items quarterly, prior to the system walkdowns. The inspectors questioned whether the system engineers would be aware of an operational impact item on their system prior to the quarterly walkdown. The licensee planned to enhance the operational guidance to ensure that appropriate system engineering personnel would be promptly informed of new operational impact items. The inspectors concluded that the PEG 10 guidance provided clear direction for performing the system walkdowns.

The system engineers performed walkdowns in accordance with the PEG 10 guidance and appeared knowledgeable regarding current system problems. The system engineers were effective at identifying potential system impact items such as a chain fall located adjacent to a PCCW pump bearing oiler reservoir. The inspectors noted, however, some examples where the system engineers did not identify system deficiencies including:

- Paint on the load bearing surfaces of PCCW piping supports.
- Wetted RHR piping insulation due to valve packing and body-to-bonnet leaks.
- A damaged tubing support for a containment building spray system pressure transmitter.

The inspectors identified the above deficiencies to the licensee for resolution. The inspectors determined that none of the above items resulted in an immediate operability concern, however, these issues identified the need for further improvements in system engineering walkdowns. The inspectors concluded that the revised system engineering walkdown program was a good initiative to improve the station material condition.

c. Conclusion

The revised system engineering walkdown program is a good initiative to improve the station material condition. The system engineers were knowledgeable regarding current system problems, but did not identify some minor material problems during the walkdowns.

IV. Plant Support

R1 Radiological Protection and Chemistry (RP&C) Controls

R1.1 Implementation of the Radiological Environmental Monitoring Program (REMP)

a. Inspection Scope (84750)

The following was reviewed and observed to assess the effectiveness of the REMP:

Offsite Dose Calculation Manual (ODCM);
Technical Specifications (TS);
Selected sampling and analysis procedures;
Selected sampling techniques through observations and discussion;
Analytical data from January 1999 to January 2000;
REMP condition reports (99-2461, 99-2480, 99-2589, 99-2689, 99-2933, 99-3106, 99-4031, 99-4395, 99-4398);
Calibration, operation, and maintenance status of automatic sampling equipment;
Land Use Census for 1998 and 1999;
1998 Annual Radiological Environmental Operating Report (AREOR);
Quality Assurance Program including the Interlaboratory Comparison Program (June 1998-September 1999)

b. Observations and Findings

The observed sample collections were performed according to procedures. The technician was knowledgeable and understood the tasks. No obvious safety or procedural adherence concerns were observed. The REMP procedures provided appropriate guidance to perform sample collection and analysis of environmental media as required in the ODCM. The automatic air sampling equipment was operable during 1999, with few exceptions. The air sampling equipment calibration results were within the established tolerances, and calibrations were performed within the frequency specified in the procedure.

The analytical data for 1999 showed that no obvious increasing trends in the environment had occurred since pre-operation as a result of plant effluent. The data indicated that samples were collected and analyzed at the frequencies required. The correct analysis type was performed for each sample media. With the exception of a few samples, all samples were collected as required. The few exceptions were entered into the corrective action program (CAP) as required and corrective actions were acceptable. Issues identified in condition reports were appropriately addressed.

The annual land use census was implemented according to the ODCM requirements. The census including residence, milk and garden and was performed in 1998 and 1999 during the growing season, as required.

The 1998 Annual Radiological Environmental Operating Report provided a comprehensive summary of the analytical results, program discrepancies, land use census results, and quality assurance program results. The licensee met TS reporting requirements.

The Quality Assurance/Quality Control (QA/QC) program for analyses of REMP samples continued to be conducted effectively. The results for 1998 and 1999 QC program were within the acceptance criteria established in the procedures. The licensee continued to maintain oversight of the quality of the QA/QC program through frequent checks of analytical data against acceptance criteria, and procedural and ODCM requirements.

The licensee self-identified problems in the REMP and initiated condition reports. The licensee appropriately addressed and corrected the conditions and took measures to preclude recurrence.

c. Conclusions

The licensee effectively implemented the Radiological Environmental Monitoring Program (REMP). The licensee collected, analyzed, and evaluated radiological data using appropriate procedures. The annual report contained an accurate assessment of the data and a comprehensive summary of the REMP. The licensee implemented an effective program to validate the quality of the analytical results.

R1.2 Implementation of the Meteorological Monitoring Program (MMP)

a. Inspection Scope (84750)

The following was reviewed and observed to assess implementation of the MMP:

Instrument calibration results and procedures;
Operations Surveillance Log for daily channel checks;

Condition Reports (98-2411, 98-2674, 98-2818, 98-2938, 99-0111, 99-0483, 99-2270, 99-2573, 99-3869, 00-0554)

Updated Final Safety Analysis Report (UFSAR)
Technical Requirements Manual (TRM)

b. Observations and Findings

The licensee followed the procedures regarding meteorological monitoring. Weekly and quarterly calibrations were performed within the required frequencies. In addition, operations surveillance logs were appropriately maintained and sufficiently detailed. Issues identified in condition reports were appropriately addressed.

c. Conclusion

The licensee effectively implemented the meteorological monitoring program. The meteorological instrumentation was appropriately maintained and calibrated in accordance with the Technical Requirements Manual and the calibration procedure.

R7 Quality Assurance in RP&C Activities

R7.1 Quality Assurance Audit Program

a. Inspection Scope (84750)

The following was reviewed to assess the effectiveness of the quality assurance audit program:

Nuclear Oversight Audit Report No. 99-A10-03; and
Laboratory Quality Control Audit Committee (LQCAC) action for 1999.

b. Observations and Findings

The nuclear oversight auditors evaluated the effectiveness of the radioactive effluent technical specifications, the offsite dose calculation manual, and the REMP by conducting an annual audit. The inspector reviewed the REMP portion of the audit. The audit scope was appropriate. Three technical specialists assessed the REMP and MMP. The audit was objective and of sufficient technical depth to adequately evaluate the REMP and MMP. The audit included an assessment of corrective action effectiveness of previous condition reports. No findings were identified during the audit relative to the REMP and MMP.

The Laboratory Quality Control Audit Committee (LQCAC) action for 1999 was an evaluation of the licensee's environmental analytical measurements laboratory. The audit was conducted by members of five affiliated nuclear power stations. The audit focused on environmental analysis and measurements, and environmental dosimetry. The audit was objective and was of sufficient technical depth to adequately evaluate the laboratory's programs.

c. Conclusions

The audits of the REMP, MMP and the environmental laboratory were appropriately conducted. The licensee met the QA audit requirements.

S1 Conduct of Security and Safeguards Activities

a. Inspection Scope (81700)

The purpose of the inspection was to determine whether the conduct of security and safeguards activities met the licensee's commitments in the NRC-approved security plan (the Plan) and NRC regulatory requirements. The security program was inspected

during the period of March 27-30, 2000. Areas inspected included: alarm stations; communications; protected area (PA) access control of personnel and packages.

b. Observations and Findings

Alarm Stations. Multiple observations of operations in the central alarm station provided verification that the alarm station was equipped with appropriate alarms, surveillance and communications capabilities. Interviews with the alarm station operators found them knowledgeable of their duties and responsibilities. It was also verified, through observations and interviews, that the alarm station was continuously manned, independently and diversely so that no single act could remove the capability for detecting a threat and calling for assistance. Additionally, no operational activities were observed that would have interfered with the execution of the detection, assessment and response functions.

Communications. Document reviews and discussions with alarm station operators, demonstrated that the alarm stations were capable of maintaining continuous intercommunications, and communications with each security force member (SFM). Additionally, the alarm station operators were exercising the communication methods with the local law enforcement agencies as committed to in the Plan.

PA Access Control of Personnel, Vehicles, and Hand-Carried Packages and Material. On March 28, 2000, personnel and package search activities were observed at the personnel access portal. It was determined that positive controls were in place to ensure only authorized individuals were granted access to the PA and that all personnel and hand carried items entering the PA were properly searched. Observation of vehicle search activities was also conducted on March 28, 2000. The vehicle search was thorough, and accomplished in accordance with Plan commitment.

c. Conclusions

Security and safeguards activities with respect to alarm station controls, communications, and protected area access control of vehicles, personnel and packages were effectively implemented and met licensee commitments and NRC requirements.

S2 Status of Security Facilities and Equipment

a. Inspection Scope (81700)

The areas inspected were PA assessment aids, PA detection aids, personnel search equipment and testing, maintenance and compensatory measures.

b. Observations and Findings

PA Assessment Aids. On March 29, 2000, the effectiveness of the assessment aids was evaluated, by observing on closed circuit television, a walkdown of the entire perimeter of the PA. The assessment aids had generally good picture quality and zone

overlap. Additionally, to ensure Plan commitments are satisfied, the licensee has procedures in place requiring the implementation of compensatory measures in the event that alarm station operators are unable to properly assess the cause of an alarm.

Personnel and Package Search Equipment. On March 28, 2000, both routine use and performance testing of the licensee's personnel and package search equipment were observed. Observations and procedural reviews indicated that the search equipment performed in accordance with licensee procedures and Plan commitments.

PA Detection Aids. Multiple observations of an SFM conducting performance testing of the perimeter intrusion detection system (PIDS) were conducted. The testing consisted of multiple intrusion attempts in every zone. The appropriate alarms were generated in each attempt. The equipment was functional and effective and met the requirements of the Plan.

c. Conclusions

The licensee's security facilities and equipment were determined to meet the licensee's commitments and NRC requirements.

S3 Security and Safeguards Procedures and Documentation

a. Inspection Scope (81700)

The areas inspected were implementing procedures and security event logs.

b. Observations and Findings

Security Program Procedures. Verification that the procedures were consistent with the Plan commitments, and were properly implemented was accomplished by reviewing selected implementing procedures associated with PA access control of personnel, packages and materials, testing and maintenance of personnel search equipment and performance testing of PA detection aids.

Security Event Logs. The Security Event Logs for the previous fifteen months were reviewed. Based on this review, and a discussion with security management, the inspectors determined that the licensee appropriately analyzed, tracked, resolved and documented safeguards events that the licensee determined did not require a report to the NRC within 1 hour.

c. Conclusions

Security and safeguards procedures and documentation were being properly implemented. Event Logs were being properly maintained and effectively used to analyze, track, and resolve safeguards events.

S4 Security and Safeguards Staff Knowledge and Performance

a. Inspection Scope (81700)

The area inspected was security staff requisite knowledge.

b. Observations and Findings

Security Force Requisite Knowledge. Observations of a number of SFMs in the performance of their routine duties were conducted during the inspection period. These observations included alarm station operations, personnel, vehicle and package searches, and performance testing of the PIDS. Additionally, interviews of SFMs were conducted. Based on the responses, it was determined that the SFMs were knowledgeable of their responsibilities and duties, and could effectively carry out their assignments.

c. Conclusions

The SFMs adequately demonstrated that they had the requisite knowledge necessary to effectively implement the duties and responsibilities associated with their position.

S5 Security and Safeguards Staff Training and Qualification

a. Inspection Scope (81700)

The areas inspected were security training and qualifications (T&Q), and training records.

b. Observations and Findings

Security Training and Qualifications. On March 28, 2000, 12 randomly selected T&Q records of SFMs were reviewed. Physical and requalification records were inspected for armed and supervisory personnel. The results of the review indicated that the security force was being trained in accordance with the approved T&Q plan.

Training Records. Review of training records indicated that the records were properly maintained, accurate and reflected the current qualifications of the SFMs.

c. Conclusions

Security force personnel were being trained in accordance with the requirements of the T&Q Plan. Training documentation was properly maintained and accurate, and the training provided by the training staff was effective.

S6 Security Organization and Administration

a. Inspection Scope (81700)

The areas inspected were management support, effectiveness and staffing levels.

b. Observations and Findings

Management Support. Review of program implementation since the last program inspection disclosed that adequate support and resources continued to be available to ensure program implementation.

Staffing Levels. The total number of trained SFMs immediately available on shift met the minimum requirements specified in the Plan and implementing procedures. No performance issues were noted in the areas inspected.

c. Conclusions

The level of management support was adequate to ensure implementation of the security program, and was evidenced by the allocation of resources to support programmatic needs.

S7 Quality Assurance (QA) in Security and Safeguards Activities

a. Inspection Scope (81700)

The areas inspected were audits, problem analyses, corrective actions and effectiveness of management controls.

b. Observations and Findings

Audits. A review of both the annual physical security and the access authorization-fitness for duty program audits was conducted. The audits were thorough and in-depth. The audit teams included technical specialists from other utilities. None of the audit findings were indicative of programmatic issues.

Problem Analyses. A review of data derived from the security department's self-assessment program was accomplished. Potential weaknesses were being properly identified, tracked, and trended.

Corrective Actions. A review of the corrective actions implemented by the licensee in response to the 1999 QA audit and self-assessment program indicated that the corrective actions were technically sound and were performed in a timely manner.

Effectiveness of Management Controls. The licensee had programs in place for identifying, analyzing and resolving problems. The programs included the performance of annual QA audits, a departmental self-assessment program and the use of industry data such as violations of regulatory requirements identified by the NRC at other

facilities, as a criterion for self-assessment.

c. Conclusions

The review of the licensee's audit program indicated that the program was being properly administered. In addition, a review of the documentation applicable to the self-assessment program indicated that the program was being effectively implemented to identify and resolve potential weaknesses.

Management Meetings

X1 Exit Meeting Summary

The inspector presented the inspection results to members of licensee management on April 13, 2000, following the conclusion of the inspection. The licensee acknowledged the inspectors' findings.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

W. Diprofito, Unit Director
J. Vargas, Director of Engineering
J. Grillo, Assistant Station Director
G. StPierre, Operations Manager
B. Seymour, Security Manager
T. Nichols, Technical Support Manager
D. Sherwin, Maintenance Manager
W. Cash, Health Physics Manager
J. Peschel, Regulatory Programs Manager
M. Makowicz, Corrective Action Manager
M. Cambel, Health Physics Specialist
R. Godbout, Instrument and Controls Supervisor
W. Hinton, Instrument and Controls Technical Support
J. Kwasnick, Senior Radiation Scientist
J. Marchi, Audit Manager
M. Ossing, NRC Coordinator
J. Savold, Instrument and Controls Technician
M. Strum, NSARC
R. Thurlow, Health Physics Supervisor
S. Westing, Instrument and Controls Technical Support

INSPECTION PROCEDURES USED

IP 37550: Onsite Engineering
IP 61726: Surveillance Observation
IP 62707: Maintenance Observation
IP 71707: Plant Operations
IP 71750: Plant Support Activities
IP 83750: Occupational Exposure
IP 84750: Radioactive Waste Treatment, and Effluent and Environmental Monitoring

ITEMS OPENED, CLOSED, AND DISCUSSED

Open/Closed: None

LIST OF ACRONYMS USED

AREOR	Annual Radiological Environmental Operating Report
CAP	Corrective Action Program
CR	Condition Report
EFW	Emergency Feedwater
LQCAC	Laboratory Quality Control Audit Committee
MMP	Maintenance Manual Procedure
NRC	Nuclear Regulatory Commission
ODCM	Offsite Dose Calculation Manual
PA	Protected Area
PAB	Primary Auxiliary Building
PEG	Plant Engineering Group
PCCW	Primary Component Cooling Water
PEG	Plant Engineering Group
PIDS	Perimeter Intrusion Detection System
OLM	Online Maintenance
QA	Quality Assurance
QA/QC	Quality Control
REMP	Radiological Environmental Monitoring Program
RHR	Residual Heat Removal
SFM	Security Force Members
SW	Service Water
the Plan	NRC-approved Security Plan
TRM	Technical Requirements Manual
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report
WR	Work request