



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PA 19406

November 13, 2007

Mr. Gene St. Pierre
Site Vice President
FPL Energy Seabrook, LLC
Seabrook Station
c/o Mr. James M. Peschel
P.O. Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - NRC INTEGRATED INSPECTION
REPORT 05000443/2007004

Dear Mr. St. Pierre,

On September 30, 2007, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at the Seabrook Station, Unit No. 1. The enclosed report documents the inspection findings discussed on October 4, 2007, with Mr. M. Kiley and other members of your staff.

This 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 inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure, and your response (if any), will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Arthur L. Burritt, Chief
Projects Branch 4
Division of Reactor Projects

Docket No. 50-443
License No: NPF-86

Enclosure: Inspection Report No. 05000443/2007004
w/ Attachment: Supplemental Information

cc w/encl:

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Mr. Gene St. Pierre

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EA-07-244

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Sincerely,
Arthur L. Burritt, Chief /RA/
Projects Branch 4
Division of Reactor Projects

Docket No. 50-443
License No: NPF-86

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U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.: 50-443

License No.: NPF-86

Report No.: 05000443/2007004

Licensee: FPL Energy Seabrook, LLC (FPL)

Facility: Seabrook Station, Unit 1

Location: Seabrook, New Hampshire 03874

Dates: July 1, 2007 through September 30, 2007

Inspectors: William Raymond, Senior Resident Inspector
Steve Shaffer, Resident Inspector
Daneira Meléndez-Colón, Resident Inspector (Dresden)
Roy Fuhrmeister, Senior Project Engineer
Jeffrey Bream, Reactor Engineer
Dante Johnson, Reactor Engineer
Keith Young, Senior Reactor Inspector
Steve Barr, Senior EP Specialist
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Suresh Chaudhary, Senior Reactor Inspector
John Nicholson, Health Physicist

Approved by: Arthur Burritt, Chief
Projects Branch 3
Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000443/2007004; 07/1/2007-09/30/2007; Seabrook Station, Unit No. 1; Routine Integrated Report.

The report covered a three-month period of inspection by resident inspectors and announced inspections by regional specialist inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

Seabrook Station (Seabrook) began the period at rated thermal power and operated at or near full power for the entire report period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 - 2 samples)

a. Inspection Scope

The inspectors completed the two adverse weather protection inspection samples listed below.

- The inspectors reviewed FPL's response to an impending adverse weather event. The inspectors toured plant areas and monitored area temperatures to verify the adequacy of hot weather protection measures when ambient temperatures increased above 90° F between July 31 and August 4, 2007. The inspectors verified that FPL implemented actions in accordance with procedures ON1490.09, "Summer Readiness Surveillance," ON1490.10, "Operational Status Check of Station Ventilation/Cooling Systems," and ON1046.70, "Generator Step Up Transformer Auxiliaries Operation." The inspectors walked down equipment in the essential switchgear rooms, the switchyard and the emergency diesel generators to verify hot weather protection was effective. The inspectors also reviewed FPL actions to implement OS1246.02, "Degraded Vital AC Power (Plant Operating)," when the grid operator declared a capacity deficiency alert.
- The inspectors performed a detailed review of FPL's seasonal readiness procedures and preparations for hurricane season and extreme cold weather. Station procedures and system health reports were reviewed and systems subject to hurricane conditions and/or extreme cold weather were walked down to assess reliability and availability of those systems during hurricanes and extreme cold weather. The inspectors focused on the readiness of the essential switchgear rooms, diesel generator rooms, switchyard and emergency feedwater (EFW) pumps.

The inspectors also reviewed deficiencies previously identified during the implementation of adverse weather protection and verified that FPL had entered these deficiencies into the corrective action program for resolution. The references used during the inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04Q - 3 samples)

Enclosure

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors completed three partial walkdown inspection samples. The inspectors performed a walkdown of each system to verify that the critical portions of the systems, such as valve, switches, and breakers, were correctly aligned in accordance with FPL's procedures. The inspectors compared the system lineups to applicable piping and instrumentation drawings and operational lineup procedures. Documents reviewed are listed in the Attachment. The inspectors performed partial system walkdowns on the three systems listed below

- A emergency feedwater (EFW) pump when the B EFW pump was out of service for testing on July 10, 2007.
- 1A/1C 125 Vdc station batteries when the 1D station battery was out of service for testing on July 24, 2007.
- B emergency diesel generator (EDG) when the A EDG was out of service for maintenance on August 2, 2007.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q - 10 samples)

.1 Quarterly Walkdowns

a. Inspection Scope

The inspectors completed ten fire protection quarterly walkdown inspection samples. The inspectors assessed FPL's control of transient combustibles and ignition sources; the operational status and material condition of the fire detection, fire suppression, and manual fire fighting equipment; the material condition of the passive fire protection features; and the compensatory measures for out-of-service or degraded fire protection equipment. The following ten areas were inspected:

- EDG Building Train A, 21'-6";
- EDG Building Train B, 21'-6";
- A Residual Heat Removal Vault, all elevations;
- A Essential Switchgear Room, 21'-6";
- B Essential Switchgear Room, 21'-6";
- Primary Auxiliary Building, 53';
- Primary Auxiliary Building, charging pump cubicles;
- Fuel Storage Building, 7' elevation;
- Fuel Storage Building, 10' elevation; and
- Fuel Storage Building, 21'-6" elevation.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures (71111.06 - 1 sample)a. Inspection Scope

Internal Flooding Area. The inspectors completed one internal flooding inspection sample. Based on a review of the UFSAR, the inspectors selected the main steam and feedwater pipe chase tunnels and adjoining areas for the review. For these areas the inspectors verified the condition of water tight doors and cable tray seals by plant walkdown. The inspectors verified the adequacy of abnormal and emergency operating procedures for coping with internal flooding in the main steam and feedwater pipe chase tunnels and adjoining areas and that identified flood control deficiencies were entered into the corrective action program.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07A - 1 sample, 71111.07B - 2 samples).1 Annual Reviewa. Inspection Scope

The inspectors completed one annual heat sink performance inspection sample. The inspectors reviewed FPL's program for monitoring the B EDG jacket water heat exchanger DG-E-42B. The inspectors reviewed data used by the system engineer to trend the heat exchanger in accordance with FPL's commitments to Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment." The inspectors also reviewed a sample of condition reports to verify that heat exchanger monitoring and maintenance issues were identified and corrected. The references used for this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified.

.2 Biennial Reviewa. Inspection Scope

The inspectors reviewed FPL's program for maintenance, testing, and monitoring of risk significant heat exchangers (HXs). The inspectors verified that the FPL's HX monitoring program conformed to FPL commitments to NRC Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment." In addition, the inspectors evaluated whether any potential common cause heat sink performance problems could affect multiple HXs in mitigating systems or result in an initiating event. Based on risk significance and prior inspection history the HXs listed below were selected for review.

- A Emergency Diesel Generator (EDG) Jacket Water Cooler HX (DG-E-42-A)
- B Primary Component Cooling Water (PCCW) HX (CC-E-17-B)

The inspectors reviewed system health reports, engineering evaluations, design specifications and calculations, and chemical control methods to ensure that the selected components conformed to FPL's commitments to Generic Letter 89-13. The inspectors also compared the surveillance test and inspection results to the established acceptance criteria to verify that the results were acceptable and that the HXs operated in accordance with design.

The inspectors walked down the selected HXs, the SW forebay area, and the cooling tower area to assess the material condition of these systems, structures, and components. Finally, the inspectors discussed system health reports, methods of controlling biotic fouling, and the methods for ensuring heat exchanger operability with the service water and heat exchanger system engineers.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program (71111.11Q - 1 sample)

.1 Quarterly Resident Inspectors Review

a. Inspection Scope

The inspectors observed the performance of licensed operators during a simulator demonstration examination on September 12, 2007. The inspectors reviewed the simulator physical fidelity to verify similarities between the Seabrook control room and simulator. The inspectors assessed operator performance associated with high-risk activities, the Emergency Plan, previous lessons learned items, and the correct use and implementation of procedures. The inspectors observed the training evaluator critique of the operator performance and verified that deficiencies were adequately identified, discussed, and entered into the corrective action program. The documents reviewed for this inspection are listed in the Attachment.

b. Findings

No findings of significance were identified

1R12 Maintenance Effectiveness (71111.12Q - 2 Samples)

a. Inspection Scope

The inspectors performed two quarterly maintenance effectiveness inspection samples. The inspectors evaluated maintenance rule implementation for two systems: the enclosure building air handling (EAH) system and the charging (CS) system. The documents reviewed for this inspection are listed in the Attachment. For each system the inspectors reviewed the following items: the application of maintenance scoping and reliability and availability performance criteria; the corrective actions for deficient conditions; the extent-of-condition reviews for common cause issues; and the contribution of deficient work controls or work practices to degraded conditions. The inspectors also assessed corrective actions and maintenance rule functional failure evaluations based on 10 CFR 50.65 requirements and the guidance in Nuclear

Management and Resources Council (NUMARC) 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation (71111.13 - 4 samples)

a. Inspection Scope

The inspectors completed five maintenance risk assessment and emergent work control inspection samples. The inspectors reviewed the scheduling and control of one planned maintenance activity and four emergent work troubleshooting activities to evaluate the impact on plant risk. The inspectors performed interviews with operators, risk analysts, maintenance technicians, and engineers to assess their knowledge of the risk associated with the work, and to ensure that other equipment was properly protected. The compensatory measures used to mitigate plant risk during maintenance were evaluated against FPL's procedures, Maintenance Manual 4.14, "Troubleshooting", Revision 0 and Work Management Manual 10.1, "On-Line Maintenance," Revision 3. Specific risk assessments were performed using FPL's "Safety Monitor" a computer software application that allows plant personnel to evaluate the impact of changes in plant configuration on accident risk. The inspectors reviewed the risk associated with the planned and emergent work activities described below.

- Troubleshooting activities for a main steam isolation valve (MSIV) alarm and indication problem on July 12, 2007.
- Inspection and testing of the A emergency diesel generator (EDG) during maintenance overhaul on August 2, 2007.
- Troubleshooting and repair of a glycol leak on the supplemental emergency power system per WO 0728177 and CR 07-11483 on August 31, 2007.
- Troubleshooting and repair activities for a leak on A service water line 1801-04 on September 5, 2007.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15 - 4 samples)

a. Inspection Scope

The inspectors completed four operability evaluation inspection samples. The inspectors reviewed the condition reports listed below to verify that the identified conditions did not adversely affect safety system operability or plant safety. The evaluations were reviewed using criteria specified in NRC Regulatory Issue Summary 2005-20 and Inspection Manual Part 9900, "Operability Determinations and Functionality Assessments for Resolution of Degraded or Nonconforming Conditions Adverse to Quality or Safety." In addition, where a component was determined to be inoperable, the inspectors verified that the impact on technical specification (TS) limiting conditions for

operation were properly addressed. The inspectors performed field walkdowns and interviewed personnel. The following items listed below were reviewed.

- CR 07-09943 that evaluated the potential for reverse flow in the control building air system (CBA).
- CR 07-09853 that evaluated the operability fan 1-DAH-FAN-26B for the B EDG relative to substitute parts that were installed in the motor starter cubicle.
- CR 07-11520 that evaluated the operability of the A service water line 1801-04 upon discovery of a through-wall leak in the supply piping to the A component cooling water heat exchanger.
- CRs 07-11726, 07-11758, 07-11783, 07-11828, and 07-11829 that evaluated the operability of main steam drain line 5917-06 and feed water drain line 4633-07 after both were damaged by an aerial lift.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modification (71111.17A - 1 sample)

.1 Annual Review

a. Inspection Scope

The inspectors completed one annual review permanent modification inspection sample. The inspectors reviewed design change 06MMOD-0514, "Seabrook Fuel Storage Building (FSB) Cask Handling Crane Single Failure Proof Upgrade Modification". This upgraded the existing FSB cask handling crane, 1-FH-RE-1, to a single failure proof design in accordance with NUREG 0654, "Criteria for Protective Actions for Severe Accidents." The inspectors reviewed the design of the new crane lifting system and controls, including the mechanical qualifications, electrical design, and modifications made to the exiting structures. Walkdowns of the FSB were performed to verify compliance with the design documents. The inspectors reviewed the post-modification testing for the design change, including the cask handling crane functional test, the load cell calibration, and the crane load test. The inspectors also performed interviews with engineers and project staff and reviewed FPL's 10 CFR 50.59 safety evaluation screening for the modification. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19 - 6 samples)

a. Inspection Scope

The inspectors completed six post-maintenance testing inspection samples. The inspectors reviewed post-maintenance testing (PMT) activities to ensure that the PMT was appropriate for the scope of the maintenance in accordance with FPL procedures MA 3.5, "Post-Maintenance Testing;" the acceptance criteria were clear and

demonstrated operability of the affected component; and the PMT was performed in accordance with procedures. The inspector reviewed the following PMT activities.

- A EDG testing completed on August 4, 2007, following a maintenance overhaul controlled by 27 WOs that included both preventative and corrective maintenance items.
- A EDG surveillance test OX1426.01 completed on August 4, 2007, following maintenance conducted in accordance with WO 0703353.
- Supplemental emergency power system testing completed on August 23, 2007, following completion of a planned maintenance outage.
- A RHR system testing on August 28, 2007, after completion of planned system modifications.
- A VT-2 examination and operational hydrostatic testing of service water line 1801-04 on September 14, 2007, following completion of a weld repair on that line.
- Fuel storage building cask handling crane functional testing on September 13, 2007, per ES-07-01-06 following crane modifications.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22 – 6 samples)

a. Inspection Scope

The inspectors completed six surveillance testing inspection samples. The inspectors witnessed performance of and/or reviewed test data for the risk-significant STs to assess whether the SSCs tested satisfied TS, UFSAR, and procedure requirements. The inspectors verified that test acceptance criteria were clear, consistent with design documentation and demonstrated operational readiness; that test instrumentation had current calibrations and the range and accuracy for the application; and that tests were performed, as written, with applicable prerequisites satisfied. The STs reviewed are listed below. Documents reviewed for the inspection are listed in the Attachment.

- RS1739, "Incore to Excore AFD Surveillance," Revision 7, on July 9, 2007.
- OX1436.03, "Electric Emergency Feedwater Pump Q, 18 Month and Comprehensive Test," Revision 9, on July 10, 2007.
- OX1456.49, "Train B ESFAS Slave Relay K615 Quarterly Go Test," Revision 7, on July 11, 2007.
- LX0556.04, "1D Station Battery Service Test," Revision 3, on July 17, 2007.
- EX1804.031, "Portable Tower Makeup Pump Operability 18 Month Surveillance Test," Revision 04, on July 23, 2007.
- OX1426.03, "Emergency Power Sequencer 18 Month Operability Test," Revision 7, on August 1, 2007.

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modifications (71111.23 - 1 sample)

a. Inspection Scope

The inspectors completed one temporary plant modification inspection sample. To complete the sample the inspectors reviewed temporary alteration no. TALT07-0332. The purpose of this modification was to provide temporary power in the fuel storage building during the completion of upgrades to the cask handling crane. The inspectors verified that the details of the modification itself and that the process used for its implementation did not adversely affect operator implementation of emergency and abnormal operating procedures or the capability of risk significant systems to meet their design basis as described in the UFSAR and TS. The inspectors reviewed any associated 10 CFR 50.59 evaluations and screenings and walked down the modification to verify that it was installed in accordance with design documents and that FPL controlled the modification implementation in accordance with station procedures. The inspectors also examined the combined affect of this modification and other outstanding temporary modifications on plant operations and reviewed FPL's actions to address problems with the temporary modification process that were identified in the corrective action program.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert and Notification System (ANS) Evaluation (71114.02 - 1 sample)

a. Inspection Scope

The inspectors performed an onsite review to assess the maintenance and testing of the Seabrook ANS. During this inspection, the inspectors interviewed site EP staff responsible for implementation of the ANS testing and maintenance. Condition reports (CRs) pertaining to the ANS were reviewed for causes, trends, and corrective actions. The inspectors reviewed FPL's original ANS design report to ensure compliance with those commitments for system maintenance and testing. Planning Standard 10 CFR 50.47(b)(5) and the related requirements of 10 CFR 50, Appendix E, were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Staffing and Augmentation System (71114.03 - 1 sample)

a. Inspection Scope

A review of ERO augmentation staffing requirements and the process for notifying the ERO was performed to ensure the readiness of key staff for responding to an event and to ensure timely facility activation. The inspectors reviewed procedures, CRs, and call-in drills associated with the ERO notification system. The inspectors also interviewed

personnel responsible for testing the ERO augmentation process. The inspectors compared qualification requirements to the training records for a sample of ERO members. The inspectors verified that the EP department staff received required training as specified in the emergency plan. Planning Standard 10 CFR 50.47(b)(2) and related requirements of 10 CFR 50, Appendix E, were used as reference criteria.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes (71114.04 - 1 sample)

a. Inspection Scope

Since the last NRC inspection of this program area, Emergency Plan Revisions 51, 52, 53, and 54 were implemented based on FPL's determination, in accordance with 10 CFR 50.54(q), that the changes resulted in no decrease in effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. The inspectors performed a sampling review of the Emergency Plan changes and changes to other lower-tier emergency plan implementing procedures to evaluate for any potential decreases in the effectiveness of the Emergency Plan. This review was not documented in a Safety Evaluation Report and does not constitute formal NRC approval of the changes. These changes remain subject to future NRC inspection in their entirety.

b. Findings

Seabrook EALs are based on the scheme described in NUREG-0654/FEMA-REP-1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," Revision 1, November 1980 (NUREG-0654). In 1994 FPL added the following mode applicability note to EALs 6b, 6e, and 6f using the provisions of 10 CFR 50.54(q): "This initiating condition does not apply in Modes 5 and 6 or when the reactor is defueled." During an EAL review conducted in 2007 in response to RIS 2007-01, "Clarification of NRC Guidance for Maintaining a Standard Emergency Action Level Scheme," FPL determined that the mode applicability note added in 1994 was inappropriate. The note was inappropriate because, when it was added, the affected EALs no longer adhered to the NUREG-0654 EAL scheme.

RIS 2007-01 highlighted similar inappropriate uses of 10 CFR 50.54(q) to modify EAL schemes. The RIS stated that if a licensee identified a decrease in emergency plan effectiveness caused by EAL changes completed through the inappropriate application of 10 CFR 50.54(q), the NRC expected the licensee to immediately take action to achieve compliance with regulations. NRC EGM-07-003, "Enforcement Guidance Memorandum - Disposition of Violations of 10 CFR 50.47(b)(4) for Failure to Maintain a Standard Emergency Action Level Scheme," stated that the NRC would consider enforcement discretion for licensees who identified a decrease in emergency plan effectiveness that the NRC determined was non-willful and that resulted from EAL changes described in RIS 2007-01.

The EGM specified three conditions for discretion. First, the licensee had to complete the necessary EAL changes by May 13, 2007. Second, discretion was appropriate if the necessary EAL changes were limited to the Unusual Event or Alert classification levels. Third, enforcement discretion would be considered on a case-by-case basis for changes that affected the Site Area Emergency or General Emergency levels.

FPL did not complete the necessary changes to EALs 6b, 6e, and 6f until June 1, 2007 (Seabrook Emergency Plan Revision 54), and EAL 6e and 6f were for the Site Area Emergency level. Because FPL did not complete the necessary changes before May 13, 2007, and two of the three affected EALs were at the Site Area Emergency level, this issue will require further NRC management review and is being documented as an unresolved item (**URI 05000443/2007004-01, FPL did not maintain NUREG-0654 EAL scheme**).

1EP5 Correction of Emergency Preparedness Weaknesses (71114.05 - 1 sample)

a. Inspection Scope

The inspectors reviewed self-assessments and audit reports to assess FPL's ability to evaluate Seabrook's program and its performance. The inspectors reviewed EP-related CRs initiated between January 2006 and August 2007, including planned and implemented corrective actions. The inspectors also reviewed EP drill reports, self-assessments, Quality Assurance surveillance reports, and the required 10 CFR 50.54(t) audits performed for 2006. Planning Standard, 10 CFR 50.47(b)(14) and the related requirements of 10 CFR 50, Appendix E were used as reference criteria.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety

2OS1 Access to Radiologically Significant Areas (71121.01 - 1 sample)

a. Inspection Scope

During the period September 4 to 6, 2007, the inspectors performed the following activity to verify that FPL properly implemented physical, administrative, and engineering controls for access to locked high radiation areas, and that workers were adhering to these controls when working in these areas. Implementation of these controls was reviewed against the criteria contained in 10 CFR 20, Seabrook TSs, and FPL procedures. This activity represents the completion of one sample relative to this inspection area.

- (1) On September 4, 2007, the inspectors evaluated the administrative, physical, and engineering controls for operating the Shepard Model 81 beam (400 Curie) irradiator, used for calibrating portable radiation monitoring instruments. The inspectors attended the pre-job briefing, reviewed the Radiation Work Permit (07-004, Task 1), verified that the electronic dosimetry dose/dose rate alarm

setpoints were appropriate, observed the technician perform pre-use safety interlock checks, reviewed the irradiator operations log/ maintenance history, and observed the technician operate the irradiator for instrument calibrations.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation and Protective Equipment (71121.03 - 9 samples)

a. Inspection Scope

During the period September 4 to 6, 2007, the inspectors performed the following nine activities to evaluate the operability and accuracy of radiation monitoring instrumentation, and the adequacy of the respiratory protection program relative to maintaining and issuing self-contained breathing apparatus (SCBA). Implementation of these programs was reviewed against the criteria contained in 10 CFR 20. These activities represent the completion of nine samples relative to this inspection area.

- (1) The inspectors reviewed the UFSAR to identify area, process, and emergency monitors that are installed at Seabrook for the protection of workers, and reviewed the current calibration records for selected instrumentation, including the volume control tank area monitor (RM-6540), the incore seal table radiation monitor (RM 6534), spent fuel area monitor (RM-6549), and the waste gas process area monitor (RM-6551). The inspectors discussed with the systems engineer the area monitoring system health report and instrument reliability trends.
- (2) The inspectors selected hand-held radiation instruments, air monitors, contamination monitors, and electronic dosimeters currently in use in the plant, and reviewed the associated calibration records. Included in this review were the calibration records for selected electronic dosimeters (DMC-2000), radiation survey instruments (RO-20, RSO-5, ASP-2, FH-40, E-140N), contamination monitors (RM-14, SAM-9, ARGO4AB-Zeus 46, SPM-906), counting room instruments (Tennelec 175 & 43431, Ludlum 2200), and air monitors (AMS-4).
- (3) The inspectors observed a technician performing the pre-use safety checks on the Shepard Model 81 beam irradiator, reviewed the source(s) activity/dose rate data, and observed the technician perform calibrations of RSO-5 (Serial No. B176B), FH40 (Serial No. 13504), ASP-2 (Serial No. 1194), and RO-20 (Serial No. 3658).
- (4) The inspectors evaluated FPL's program for assuring quality in the radiation monitoring instrumentation and respiratory protection programs by reviewing audits (Nos. SBK -06-01 & 02, SBK-07-04), selected daily quality summary reports for the period January 2005 to August 2007, nuclear assurance field observation reports (07-0047, 07-0060, 06-0047, 05-0130), and 18 condition reports related to these program areas. The inspectors determined if problems were identified in a timely manner, the extent of condition and cause evaluation were performed, previous radiation surveys remained valid, and corrective actions were appropriate to preclude repetitive problems.

- (5) The inspectors determined that there were no incidents of personnel internal exposure that resulted in a committed effective dose equivalent CEDE > 50 mrem that would require an in-depth evaluation of whole body counting and bioassay techniques. However, the inspectors reviewed whole body counting instrument calibration and daily quality control data to confirm that the instrumentation was operable and available for use. Additionally, the inspectors reviewed the most current Part 61 analysis of the site's dry active waste stream for difficult-to-measure radioisotopes and determined that the isotopic mix did not significantly change from past analyses and that current whole body counting system parameters do not need to be changed.
- (6) The inspectors reviewed relevant condition reports initiated since the last inspection to determine if radiation worker and radiation protection technician errors that resulted from training deficiencies or human factors were evident and if the resulting corrective actions were adequate.
- (7) The inspectors verified calibration dates and observed a technician perform daily source checks on a variety of instruments including portable survey instruments (RSO-5, FH40, ASP2, RO-20), gas flow proportional counters (Tennelec 175 & 43431), an alpha counter (Ludlum 2200), contamination survey monitors (RM-14, SAM-9), and personnel contamination monitors (ARGOS, SPM 906).
- (8) The inspectors evaluated the adequacy of the respiratory protection program regarding the maintenance and issuance of self-contained breathing apparatus (SCBA) to emergency response personnel. Training and qualification records were reviewed for licensed operators, radiation protection personnel, and fire brigade members, who would be required to wear SCBAs in the event of an emergency. Four SCBAs staged for use in the control room and three SCBAs staged in the turbine building were physically checked and the maintenance and hydrostatic/regulator test records for other selected SCBAs were also reviewed.
- (9) The inspectors reviewed the calibration records of the SCBA regulator testing equipment, verified that technicians were qualified to maintain and test regulators, reviewed the testing procedure, and observed a technician performance test two regulators. The inspectors also verified that air used to fill the SCBAs met the Grade D quality criteria of the Compressed Gas Association.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151 - 8 samples)

a. Inspection Scope

The inspectors reviewed FPL submittals from the second quarter of 2006 to the second quarter of 2007 for the Seabrook performance indicators (PIs) listed below. To verify the accuracy of the PI data reported during this period, the data was compared to the PI

definition and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Indicator Guideline," Revision 5.

Cornerstone: Mitigating System

- High pressure safety injection mitigating systems performance index (MSPI)
- Auxiliary feedwater system MSPI
- Emergency AC power system MSPI
- Residual heat removal system MSPI
- Support cooling water system MSPI

The inspectors reviewed the consolidated data entry MSPI derivation reports for the unavailability and unreliability indexes (UAI and URI) for the monitored systems; the monitored component demands and demand failure data for the monitored systems; and the train and system unavailability data for the monitored systems. The inspectors verified the accuracy of the data by comparing it to corrective action program records, control room operators' logs, maintenance rule performance and scope reports, system performance/health reports, the reactor trips database, the equipment/operability issues database, the site operating history database, key performance indicator summary records, operating data reports and the MSPI basis document.

Emergency Preparedness Cornerstone

- Drill and exercise performance
- Emergency response organization (ERO) drill participation
- Alert notification system (ANS)

The inspectors reviewed FPL's process for identifying the data for the three emergency preparedness PIs listed above. Classification, notification and protective action opportunities were reviewed from licensed operator simulator sessions and site ERO drills and exercises. Attendance records for drill and exercise participation were reviewed for completeness and accuracy. Test results of the ANS testing were also reviewed.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems (71152 – 1 sample)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As specified by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of all items entered into Seabrook's CAP. The review was accomplished by accessing the computerized database for CRs. In accordance with the baseline inspection modules the inspectors also selected a sample of items across all seven cornerstones for

additional follow-up and review. The inspectors assessed Seabrook's threshold for problem identification, the adequacy of the cause analyses, extent of condition review, operability determinations, and the timeliness of the specified corrective actions.

.2 Annual Sample: Review of Seismic Gap Fire Penetration Seal Issues

a. Inspection Scope

The inspectors selected condition reports (CR) CR 04-03296 and 06-02905 for detailed review. CR 04-03296 documented a number of seismic gap fire penetration seal failures requiring repair and requested a one hundred percent review of the seals because of those failures. CR 06-02905 documented identification of degraded seismic gap fire penetration seals in the containment enclosure ventilation area (CEVA).

Specific documents reviewed are listed in the Attachment. To determine whether FPL was appropriately identifying, characterizing and correcting these problems, the inspectors assessed FPL's problem identification threshold, cause analyses, extent of condition reviews, operability determinations and the prioritization and timeliness of corrective actions.

b. Findings and Observations

No findings of significance were identified. The inspectors determined that FPL properly implemented their CAP to address these issues. The apparent cause evaluations were detailed and thorough. The operability determination provided justification for continued operation. Corrective actions and recommendations for seismic gap fire penetration seals appeared appropriate. FPL continued to implement scheduled corrective actions at the time of this inspection. Inspector walkdowns of a sample of accessible seismic gap fire penetration seals in the CEVA did not identify additional degraded seals.

4OA3 Event Follow Up (71153 - 1 sample)

.1 (Closed) LER 05000443/2007002-00, Incorrect valve Stroke Time Renders Emergency Feedwater Pump Inoperable

The inoperable emergency feedwater pump issue was previously reviewed and documented in NRC Inspection Report 0500443/200706 as a non-cited violation of very low safety significance (Green). The inspectors reviewed the accuracy of the licensee event report (LER) and verified compliance with the reportability requirements in 10 CFR 50.73 and NUREG 1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73," Revision 2. No additional findings of significance were identified. This LER is closed.

4OA5 Other Activities (60853)

.1 Independent Spent Fuel Storage Installation

a. Inspection Scope

The inspectors reviewed construction documents and records associated with the construction of the Seabrook independent spent fuel storage installation (ISFSI) pad. Documents reviewed are listed in the Attachment. The inspectors discussed construction activities with cognizant personnel. The inspectors toured the construction site and observed work activities. The inspectors verified that the construction details for

the ISFSI pad were bounded by the design parameters for the dry cask storage system selected for use at Seabrook. The inspectors also verified that the design specifications for the ISFSI pad were met in the construction documentation.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

The resident inspectors presented the inspection results to Mr. M. Kiley on October 4, 2007. FPL acknowledged that none of the material reviewed by the inspectors during the period was proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION**KEY POINTS OF CONTACT**Licensee personnel

R. Belanger	Plant Engineer
D. Berko	Assistant Plant Manager
B. Buerger	Project Manager, Projects
J. Buyak	Senior Radiation Protection Technician, (Respiratory Protection)
D. Carlino	Special Projects Coordinator, Mechanical Maintenance
D. Flahardy	RP Technical Supervisor
G. Flanders	Senior Radiation Protection Technician, (Instrumentation)
P. Freeman	Engineering Director
R. Guthrie	Systems Engineer, Radiation Monitoring System
G. Kilby	Regulatory Compliance Engineer
M. Kiley	Plant Manager
T. Lehmann	Project Lead, Projects
M. Makowicz	Plant Engineering Manager
B. McCormack	System Engineer
E. Metcalf	Operations Manager
K. Nuzzo	Planner, Projects
M. O'Keefe	Regulatory Compliance Supervisor
D. Perkins	Rad Services Supervisor
J. Peschel	Manager, Regulatory Programs
V. Robertson	Senior Nuclear Analyst, Regulatory Compliance
G. Sessler	System Engineer
M. Scannell	Senior Health Physicist
D. Sherwin	Maintenance Manager
G. St. Pierre	Site Vice President
R. Thurlow	Radiation Protection Manager
E. Trump	Fire Protection Systems Engineer
J. Tucker	Security Manager
P. Wells	Corporate Director of Licensing & Performance Improvement
P. Willoughby	Regulatory Compliance Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSEDOpened

05000443/2007004-01	URI	FPL did not maintain NUREG-0654 EAL scheme
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Closed

05000443/2007002	LER	Incorrect Valve Stroke Time Renders Emergency Feedwater Pump Inoperable. (Section 40A3)
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LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

OX1446.01, AC Power Source Weekly Operability surveillance, Revision 8
0532211, Winter Readiness Removal
1-BM-Winter-Removal-000, Winter Readiness Removal
1-BM-MM-INSUL-FC-000, Inspection of Outside Piping Insulation
1-BM-MM-INSUL-I1-000, Routine Maintenance for the Removal/Repair/Replacement of Insulation
1-BM-WINTER-READY-000, Winter Readiness Preparations
1-BM-WINTER-REMOVAL 000, Winter Readiness Removal
1-ASH-E-218-INSP-000, Donkey Boiler NH State Inspection
ON1490.09, Rev. 1, Chg. 1, Summer Readiness Surveillance
ON1490.06, Rev. 4, Chg. 2, Winter Readiness Surveillance
OS1023.10, Rev. 8, CHG. 3, Service Water Pump House Ventilation System Operation
OS1200.03, Rev. 13, CHG. 1, Severe Weather Conditions
Work Order (WO) 0723740, 0707920, Inspection of Outside Piping Insulation
Condition Reports 07-08918, 07-09025, 07-09206, 07-09929, 07-10092, 07-12029, and 07-12599

Section 1R04: Equipment Alignment

OS1036.01, Aligning the Emergency Feedwater System for Automatic Initiation, Revision 8
OS 1426.01, Diesel Generator A and B Weekly Surveillance, Revision
OS 1048.13, vital Bus 1A Operation, Revision 0
OS 1048.15, vital Bus 1C Operation, Revision 0
Emergency Feedwater Drawings B20579 through B20582
B Emergency Diesel Generator Drawings B20624 and B20463 through 20467

Section 1R05: Fire Protection

Seabrook Station Fire Protection of Safe Shutdown Capability (10CFR50, Appendix R)
Seabrook Station Fire Protection Pre-Fire Strategies
Areas: DG-F-2A-A, DG-F-2A-B, RHR-F-1B-Z, RHR-F-1D-Z, RHR-F-2B-Z, RHR-F-3B-Z,
RHR-F-4B-Z, CB-F-1A-A, CB-F-1B-A, FSB-F-1-A

Section 1R06: Flood Protection

MA 5.7, Station Barriers, Penetration Seals, and Fire Barriers, Revision 5
UFSAR Sections 3.4, 3.6

Section 1R07: Heat sink Performance

Procedures

ES1850.017, "SW Heat Exchanger Program," Revision 0
CP4.2, Chlorine Management Program, Revision 13
EN0801.001, Cooling Water Tunnel Surveillance, Revision 4
ES04-01-03, Analog and Digital Eddy Current Inspection of Heat Exchanger Tubes, Revision 1

ES 1850.017, Service Water Heat Exchanger Program, Revision 0

Engineering Evaluations and Calculations

DG-E-42B Fouling, Temperature and Thermal Performance Monitoring Data

4.3.08.62F, Minimum Flow Required for SCC Heat Exchangers and PCCW Heat Exchanger 'B',
Revision 1

4.4.08.78F, Diesel Generator Service Water Flow Rate, Revision 1

C-S-1-25115, EDG Heat Exchanger Performance After Tune Plugging, Revision 0

EE-06-038, Evaluation of 1-CC-E-17-A Train [A] PCCW Heat Exchanger Fouling Event,
Revision 0

S-S-1-E-0073, Primary Component Cooling Water Heat Exchanger, Revision 4

Design Basis Documents and Generic Letter 89-13 Program Documents

NYN-90037, Response to Generic Letter 89-13, February 9, 1990

NYN-90176, Supplementary Response to Generic Letter 89-13, September 24, 1990

NYN-91169, Supplementary Response to Generic Letters 89-13 and 90-04, October 18, 1991

System Health Reports

Service Water System, 2nd Quarter 2007

Service Water System, 1st Quarter 2007

Heat Exchanger Performance Program Health Report, 2nd Quarter 2007

Heat Exchanger Performance Program Health Report, 1st Quarter 2007

Miscellaneous

1-CC-E-17-B Performance Data

1-DG-E-42-A Performance Data

Engineering Program Excellence Guide, Service Water Reliability August 2005
Recommendations, August 2005

PEG 208, Service Water System Performance Guidelines, Revision 3

Quality Report 2004-0059

Quality Report 2004-0072

Quality Report 2005-0090

Quality Report 2006-0020

RES-95-316, Revision 0

Seabrook UFSAR, Section 9.2, Water Systems, Rev. 8

Condition Reports

04-09782, 05-04724, 05-09282, 05-04727, 05-14503, 05-12389, 05-15594, 06-00181, 06-04171, 06-04257, 06-13940, 06-13978, 06-13138, 06-12995, 06-13247, 06-13248, 07-05831, 07-0775

Drawings

DG-E-42-A, Emergency Diesel Generator Jacket Water Heat Exchanger Tube Plugging Map A,
October 15, 2006

DG-E-42-A, Emergency Diesel Generator Jacket Water Heat Exchanger Tube Plugging Map B,
October 15, 2006

DG-E-42-A, Emergency Diesel Generator Jacket Water Heat Exchanger Tube Plugging Map C,
October 15, 2006

PID-1-CC-B20210, Primary Component Cooling Loop B Overview, Revision 3

PID-1-CC-B20211, Primary Component Cooling Loop B Detail, Revision 21

PID-1-CC-B20212, Primary Component Cooling Loop B Detail, Revision 13

PID-1-CC-B20213, Primary Component Cooling Loop B Detail, Revision 13
PID-1-CC-B20214, Primary Component Cooling Loop B Detail, Revision 7
PID-1-CC-B20215, Primary Component Cooling Loop B Detail, Revision 6
PID-1-CC-820687, Chlorination System Detail, Revision 16
PID-1-SW-B20792, Service Water System Nuclear Overview Detail, Revision 5
PID-1-SW-B20794, Service Water System Nuclear Overview Detail, Revision 32
PID-1-SW-B20795, Service Water System Nuclear Overview Detail, Revision 36

Work Orders

0516577

NRC Documents

Generic Letter 89-13, "Service Water Problems Affecting Safety Related Equipment," July, 18, 1989

Section 1R11: Licensed Operator Regualification

Simulator Demonstration Examination #25, Revision 9
OS1201.08, TAVG/Delta T Instrument Failure, Revision 11
OS1201.02, RCS Leak, Revision 12
OS1231.03, Turbine Runback/setback, Revision 10
E-0, Reactor Trip or Safety Injection, Revision 44
ES-0.1, reactor Trip response, Revision 33
FR-S.1, Response to Nuclear Power Generation/ATWS, Revision 27
FR-H.1, Response to Loss of Secondary Heat sink, Revision 31
Form NT-5701-2, Site Specific Generic Crew Critical Tasks, Revision 22
From NT-5701-3, Crew Simulator Evaluation, Revision 18

Section 1R12: Maintenance Rule Implementation

System Health Report for Enclosure Air Handling System
Condition Reports 06-06379, 06-07694, 07-00457, and 07-04210
Schulz Failure Analysis Report for EAH-FN-5A Motor Failure dated 7/21/07
Condition Reports for EAH system 2005-2007
Condition Reports for EAH failures 2004 – 2007
FSAR Section 6.2.3, Secondary Containment Functional Design
TS 3.6.5, Containment Enclosure Emergency Cleanup System
Drawing 1-MAH-B20495, Revision 15

Section 1R13: Maintenance Risk Assessments and Emergent Work Evaluation

ASME Code Case N-513-1, "Evaluation Criteria for Temporary Acceptance of Flaws in Moderate Energy Class 2 o 3 Piping Section XI, Division 1"
Maintenance Support Evaluation (MSE) # 07MSE175, "SW Piping Repair Line No. 1801-04-153-24"

Section 1R15: Operability Evaluations

Seabrook Station Updated Final Safety Analysis Report:
Chapter 6.8, "Emergency Feedwater System,"
Chapter 7.4, "Systems Required for Safe Shutdown,"

Chapter 9.2, "Water Systems," and
Chapter 10.3, "Main Steam Supply System"

Section 1R17: Permanent Plant Modifications

06MMOD514, Seabrook Fuel storage Building (FSB) Cask Handling Crane Single Failure Proof Upgrade Modification, DCN#00
50.59 Screen 07-002, for 06MMOD514, Revision 0
10 CFR 50, Appendix B
ES07-01-07, Cask Handling Crane Load Test, Revision 01
ES07-01013, Cask Handling Crane Weigh Scale Calibration Procedure, Revision 0
ES07-06-06, Cask Handling Crane Functional Test, Revision 0
Work Order 0700428, Cask Handling Crane Testing

Section 1R19: Post Maintenance Testing

Work orders (WO) 0702523, 0541243, 0541251, 0541244, 0702554, 0719498, 0702551, 0608241, 0543897, 0702619, 0702587, 0702556, 0702202, 0719006, 0702599, 0615475, 0712712, 0702598, 0702593, 0641451, 0621439, 0541245, 0722943, 0723751, 0703353, 0702526, 0643290, 0301478, 0706409, 0706416, 07-11123, 07-11124
Procedures
OX1461.04, Rev 0, "SEPS Monthly Availability Surveillance"
OX1413.01, Rev 10, 'A' Train RHR Quarterly Flow and Valve Stroke Test and 18 Month Valve Stroke and Observation"

Section 1R22: Surveillance Testing

IX1656.935, "Power Range NI Rescaling Calibration," Revision 6
RX1734, Incore Power Distribution Analysis, Revision 2
RS1739, "Incore to Excore Calibration Data Procedure," Revision 7
Technical Specification Table 4.3.1.2.A.Q and Note (3)
Work Orders (WO) 0704159, 0700860
Core Operating Limits Report for Cycle 12, October 26, 2006
LX0556.04, Station Battery Service Test, Revision 3

Section 1R23: Temporary Plant Modifications

Temporary Alteration 07-72, Temporary Power for 1-FH-RE-1
Technical Specification 3.9.12.b
Condition Report 07-08984
Drawing 1-NHY-310871, Revision 2

Section 1EP2: Alert and Notification System (ANS) Evaluation

Seabrook Station Public Alert and Notification System, FEMA-REP-10 Design Report (through Addendum 6, dated December 2003)
Procedure SIR.10, WS-3000 and WPS-4000 Siren Bi-Weekly Functional Test (Rev. 00)
Procedure SIR.25, Public Alert and Notification System Whelen WS-3000 and WPS-4000 Siren Maintenance and Testing Program (Rev. 01)
Procedure SIR.45, Siren Activation Control Repeater System Maintenance and Testing Program (Rev. 00)

Procedure SIR.50, Massachusetts Local Town Siren Activation Control System Maintenance and Testing Program (Rev. 00)

Procedure SIR.70, New Hampshire Local Town Siren Activation Control System Annual Maintenance and Testing Program (Rev. 00)

Siren functional test result records from January 2006 through July 2007

Section 1EP3: Emergency Response Organization (ERO) Staffing and Augmentation System

Seabrook Station Radiological Emergency Plan (SSREP) (Rev. 54);

Chapter 8, Organization

Chapter 9, Emergency Response Outline

Appendix A, Emergency Response Organization Position Definitions

Procedure EPDP-11, Emergency Response Organization (ERO) Maintenance Program (Rev. 11)

Seabrook ERO Staffing Succession Plan - 8/30/07

Section 1EP4: Emergency Action Level (EAL) and Emergency Plan Changes

Procedure EPDP-02, Control of EP Program Changes (Rev. 18)

Procedure 5059M, 10 CFR 50.59 Resource Manual (Rev. 10)

Seabrook Change Review Committee Packages for SSREP Revisions 51, 52, 53, and 54

Section 1EP5: Correction of Emergency Preparedness Weaknesses

Seabrook Emergency Preparedness Drill and Exercise Manual (Rev. 32)

Procedure EPDP-17, Government Notification of EAL Reviews and 10 CFR 50.54(t) Audit Results (Rev. 6)

Seabrook Drill Reports: CFD 06-01, CFD 06-02, CFD 06-03, CFD 07-01, CFD 07-02

Nuclear Assurance Quality Reports: 06-0011, 06-0012, 06-0013, 06-0024, 06-0031, 06-0034, 07-0053, 07-0056, 07-0059, 07-0063

Audit Report No. SBK-06-10 (2006 10 CFR 50.54(t) audit report)

All EP-related CRs and Drill Reports from January 2006 through July 2007

Section 2OS1: Access Control to Radiologically Significant Areas

Procedures:

HD0965.14, Rev 1 Use of the PosiCheck 3

HD0955.19, Rev 8 Use of the Model 81 Shepard Beam Irradiator

HD0958.11, Rev 5 Radiological Characterization of Irradiators

HD0955.31, Rev 3 Determination of Portable Instrument Response Check Data

HD0963.28, Rev 9 Calibration & Trouble Shooting of MGP Instruments DMC 2000 Dosimeters

HD0961.32, Rev 0 Canberra Whole Body Counting System Calibration

HD0965.02, Rev 15 Repair, Inspection, Inventory, and Maintenance of Respiratory Equipment

HD0963.02, Rev 14 Administrative Guidelines for Radiation Protection Instrumentation

HD0955.54, Rev 0 Operation of the TSA Model SPM-906 Portak Monitor

HD0961.29, Rev 24 Internal Dosimetry Assessment

HD0955.62, Rev 0 Use of the ARGOS 4AB

HD0955.39, Rev 2 Use of the Shepard Model 89 Box Calibrator

HD0963.50, Rev 0 Setup and Calibration of the Thermo Eberline FH40GL

HD0963.27, Rev 7 Calibration of the Eberline RO-2/2A/20 Ion Chamber and the Bicron RSO-5 Ion Chamber

Condition Reports:

05-15001, 05-13817, 05-14106, 06-15140, 06-00999, 06-08881, 06-16181, 06-04314, 06-04315, 06-00980, 06-07771, 06-10597, 07-02651, 07-03014, 07-03711, 07-04616, 07-04774, 07-10101

Nuclear Quality Assurance Reports:

Audits: SBK-07-04, Triennial Fire Protection Functional Area Audit
SBK-06-01, Fire Protection Program Functional Area Audit
SBK-06-02, Radiation Protection, Process Control, Radwaste Programs

Field Observations: 05-0130, In-Plant Radiation Monitoring
06-0047, Surveillance of Accident Monitoring Instrumentation
07-0060, In-Plant Radiation Monitoring Instrumentation
07-0047, Annual Fire Brigade Hands-On Training Assessment

Daily Quality Summary Reports: January 2005-August 2007

Instrument Calibration Records:

Volume Control Tank Area Monitor (1-RM-R-6540)
Waste Gas Process Area Monitor (1-RM-R-6551)
Incore Seal Table Area Monitor (1-RM-R-6534)
Spent Fuel Pool Area Monitor (1-RM-R-6549)
Whole Body Counting Systems (Fast Scan & Chair Systems)
Electronic Dosimeters (Serial Nos. 190586, 017559, 219747)
RO-20 (Serial Nos. 3658, 2502)
RO-2 (Serial Nos. 3199)
RO-2A (Serial No. 3193)
RSO-5 (Serial Nos. B176B, B179B)
ASP2 (Serial Nos. 0988, 0933)
FH40 (Serial Nos. 13507, 13131)
E-140N (Serial Nos. 1876, 1731)
SAM-9 (Serial Nos. 104, 48, 9A)

ARGOS (Serial Nos. 105, 106, 107)
RM-14 (Serial No. 7659)
SPM 906 (Serial Nos. 4, 5)

Section 2OS3: Radiation Monitoring Instrumentation

Self-Contained Breathing Apparatus:

Control Room (Technical Support Center)

Bottle/Regulator: 4107/ABY053894, 4122/MW133329, 4083/MV206126,
6342/ABY054991

Turbine Building (el 75'):
13004/MV204008, 10405/MW128061, 4150/MW121050,
10481/MV204007

Regulators Flow Tested: MW129108, M,W133305

Miscellaneous Documents:

Shepard Model 81 Source Characterization Charts
Radiation Monitor System 2nd Quarter 2007 Health Report
07-01 Isotopic Mix Data for 2007
Breathing Air Analysis for August 2007

Section 40A1: Performance Indicator Verification

NAP-206, "NRC Performance Indicators," Revision 1
Plant Engineering Guidelines – 29, "Mitigating System Performance Index Reporting," revision 7
EPDP-03, Emergency Preparedness Performance Indicators (Rev. 21)
Seabrook Emergency Preparedness Performance Indicator Records, 2nd Quarter 2006 Data
Seabrook Emergency Preparedness Performance Indicator Records, 3rd Quarter 2006 Data
Seabrook Emergency Preparedness Performance Indicator Records, 4th Quarter 2006 Data
Seabrook Emergency Preparedness Performance Indicator Records, 1st Quarter 2007 Data
Seabrook Emergency Preparedness Performance Indicator Records, 2nd Quarter 2007 Data

Section 40A2: Identification and Resolution of Problems

Procedures

MA 5.7, Station Barriers, Penetration Seals, and Fire Barrier Wrap, Rev. 4 and Rev. 5
MS0599.02, 18 Month Inspection of Technical Requirement Fire Rated Assembly Penetration Seals, Rev. 1
MS0599.16, Construction, Repair and Rework of Silicone Base Penetration Seals, Rev. 3
OE 3.6, Condition Reports, Rev. 10
OE 4.0, Types of Evaluations, Rev. 10
OE 4.3, Root Cause Analysis, Rev. 15
OE 4.8, Apparent Cause Evaluation, Rev. 14

Completed Surveillance Procedures

MS0599.16, Construction, Repair and Rework of Silicone Base, Penetration Seals, Rev. 3, Completed 2/18/07
MX0599.02, 18 Month Inspection of Technical Requirement Fire Rated Assembly Penetration Seals, Rev. 1, Completed 8/31/06 & 2/28/07

Drawings

4483C.02, BISCO Seal PB-021-EV101-7101, 4/2/86

Operability Determination

CR 04-01215, Operability Determination of Penetration Seals Between the Containment Enclosure Area (CEVA) and Adjacent Areas

System Health Report

Fire Protection System Health Report, 7/13/07

Condition Reports

04-01215, 04-01864, 04-01871, 04-03296, 06-02443, 06-02905, 06-02949, 07-08856, 07-08881

Work Orders

0615421, 0615432, 0617578, 0625313

Miscellaneous

BISCO Detail S-33, 3-Hour Fire Rated Gap Seal (Horizontal or Vertical), Rev. 1
CE-F-1-A, Containment Enclosure Ventilation Area, 8/20/03
Enclosure Air Handling (EAH) System Walkdown Report, 6/29/07
Technical Requirement 11, Fire Rated Assemblies
1-MS-CAT-12-SEAL-INSPECTION-00, 6 Month CAT 12 High Failure Seal Inspection, 2/28/07

4OA5 Other Activities

Specifications:

S-X-1-E-0159, "DFS Earthwork Specification", Rev. 1
S-X-1-E-0161; "Dry Fuel Storage Concrete Construction Specifications", Rev. 1 with Addendum A
S-X-1-E-0158; a. "Grading and Drainage Specifications:, Rev.0; and b. Erosion and sedimentations Specifications" Rev. 0
TECHNICAL REQUIREMENT # 06502, [Technical Requirements for Purchase of Ready-Mixed Concrete from Off-Site Supplier], Rev. 0, Enclosure 1

Design Change Notices (DCN):

MMOD 514 DCN # 06MMOD 514; "Seabrook Fuel Storage Building (FSB) Cask Handling Crane Single Failure Proof Modification," DCN 00
MMOD 502 DCN # 06MMOD502-1, "Dry Fuel Storage Pad and Apron Installation," Enclosure E & F
MMOD 505 DCN # 06MMOD505: "Dry Fuel Storage Grading and Storage," Rev. 0,

Drawing and Design Calculations:

a. HSM-Structural Analysis, Appendix 3.9.9
b. FPL011-calc-004, "Concrete Fill Design," Rev. 0
c. FPL011-calc-005, "Concrete Storage Pad Design," Rev. 0
d. FPL011-calc-006, "Concrete Apron Design," Rev. 0
Drawing No. SKM-06505, Rev. 2, "DFS Project Grading, Drainage, and Site Layout," Shts. 1100 through 1107, 1201 and 1202

Construction and Materials Inspection and Test Reports:

Miller Engineering & Testing, Reports: a. Proctor Soil Compaction Test Reports; b. Field Compaction Control Summaries; c. Gradation Test Results; d. Soil Field Reports; and e. Concrete Test Results
Certified Material Test Report (CMTR) for Rebars: Dayton Superior and Plymouth Tube Company
Rebar Fabrications Reports, HUTTUR Corp.
Concrete Construction Data Package

Placement Documents for Placement #1-4 Pad Placement, dates of placement, #1 06/14/07, #2 06/21/07, #3 06/25/07, #4 06/29/07, included concrete placement checklist, Miller Engineering & Testing concrete placement report, concrete truck data, report of concrete cylinder test, truck dispatch tickets, rejected load dispatch tickets, and photos of location of pour

Placement Documents for Fill Concrete Placement #1-9, dates 05/23/07 through 07/18/07, included concrete truck data, reports of cylinder tests, and dispatch tickets for individual trucks

Placement Documents for Pedestal Concrete Placement #1-9, dates 04/20/07 through

A-10

05/22/07, included concrete placement plan, concrete field placement report, concrete truck data, report of concrete cylinder test, batch tickets, and photos showing location of pour

Concrete Pad Rebar Documents, included shipping tickets, certificate of compliance, and chemical & Physical test reports

W/O # 0642957 Installation of Apron Sections on all sides of the DFS Pad, included concrete placement checklist, placement of grout and non-safety related concrete, and placement of backfill

Compaction Results for DFS Backfill, included field density test results, grain size distribution reports, and proctor test results

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LIST OF ACRONYMS

ADAMS	Agency-wide Documents Access and Management System
ANS	Alert and Notification System
CEVA	Containment Enclosure Ventilation Area
CFR	Code of Federal Regulations
CR	Condition Report
DCR	Design Change Request
DEP	Drill and Exercise Performance
EAH	Enclosure Air Handling
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
EFW	Emergency Feedwater
EGM	Enforcement Guidance Memorandum
EP	Emergency Preparedness
ERO	Emergency Response Organization
FPL	Florida Power & Light
FSB	Fuel Storage Building
GL	Generic Letter
HX	Heat Exchanger
IP	Inspection Procedure
IR	Inspection Report
ISFSI	Independent Spent Fuel Storage Installation
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records
PCCW	Primary Component Cooling Water
PEG	Plant Engineering Guideline
PI	Performance Indicator
PI&R	Problem Identification & Resolution
PMT	Post-Maintenance Testing
RES	Request for Engineering Services
RFO	Refueling Outage
RHR	Residual Heat Removal
RIS	Regulatory Issue Summary
RO	Reactor Operator
SCBA	Self-Contained Breathing Apparatus
SCC	Secondary Component Cooling
SG	Steam Generator
SW	Service Water
TS	Technical Specifications
UFSAR	Updated Final Safety Analysis Report
WO	Work Order