



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

July 25, 2007

South Carolina Electric & Gas Company
ATTN: Mr. Jeffrey B. Archie
Vice President, Nuclear Operations
Virgil C. Summer Nuclear Station
P. O. Box 88
Jenkinsville, SC 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NRC INTEGRATED INSPECTION
REPORT 05000395/2007003

Dear Mr. Archie:

On June 30, 2007, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your Virgil C. Summer Nuclear Station. The enclosed integrated inspection report documents the inspection results, which were discussed with you and other members of your staff on July 12, 2007.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, no findings of significance were identified. However, one licensee-identified violation, which was determined to be of very low safety significance, is listed in this report. Because of the very low safety significance and because it was entered into your corrective action program, the NRC is treating this violation as a non-cited violation (NCV) consistent with Section VI.A.1 of the NRC's Enforcement Policy. If you contest the NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the United States Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Virgil C. Summer Nuclear Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the

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Sincerely,

/RA/

Eugene F. Guthrie, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Docket No.: 50-395
License No.: NPF-12

Enclosure: NRC Integrated Inspection Report 05000395/2007003
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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Letter to Jeffrey B. Archie from Eugene F. Guthrie dated July 25, 2007

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NRC INTEGRATED INSPECTION
REPORT 05000395/2007003

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-395

License No.: NPF-12

Report No.: 05000395/2007003

Licensee: South Carolina Electric & Gas (SCE&G) Company

Facility: Virgil C. Summer Nuclear Station

Location: P. O. Box 88
Jenkinsville, SC 29065

Dates: April 1, 2007 - June 30, 2007

Inspectors: J. Zeiler, Senior Resident Inspector
J. Polickoski, Resident Inspector
J. Dodson, Senior Project Engineer (Section 1R07)
H. Gepford, Senior Health Physicist (Sections 2OS1, 2PS1,
4OA1, and 4OA7)
J. Diaz, Health Physicist (Sections 2PS2 and 4OA1)

Approved by: Eugene F. Guthrie, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000395/2007-03; 04/01/2007 - 06/30/2007; Virgil C. Summer Nuclear Station; routine integrated inspection report.

The report covered a three-month period of inspection by resident inspectors, a project engineer, and two health physics inspectors. No findings of significance were identified by the NRC. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. 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

No findings of significance was identified.

B. Licensee-Identified Violations

One violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's corrective action program. This violation and the corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

The unit began the inspection period at 100 percent rated thermal power (RTP). On April 27, 2007, a planned power reduction to 90 percent was conducted to remove the "D" feedwater booster pump from service and repair a leaking pump outboard bearing seal and to conduct routine turbine valve movement testing. The unit was returned to 100 percent RTP on May 2. On June 22, a planned power reduction to 92 percent was conducted to remove the "A" feedwater booster pump from service and repair a leak from the pump casing vent valve piping connection, as well as conduct routine turbine valve movement testing. The unit was returned to 100 percent RTP on June 29 following leakage repairs to the "A" feedwater booster pump casing vent valve and the unexpected replacement of the pump's inboard and outboard pump seals due to excessive outboard seal leakage that occurred when the pump was initially secured. The unit remained at or near full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

Seasonal Weather Susceptibilities

a. Inspection Scope

The inspectors performed one adverse weather inspection for readiness of hot weather. The inspectors verified the licensee had implemented applicable sections of operations administrative procedure (OAP)-109.1, "Guidelines for Severe Weather." The inspectors walked down accessible areas of risk-significant equipment, including the control building heating, ventilation and air-conditioning (HVAC) systems with emphasis on verifying the reliability of the control room and solid state protection system room cooling. Also, the inspectors reviewed the licensee's corrective action program (CAP) database to verify that high temperature weather related problems were being identified at the appropriate level, entered into the CAP, and appropriately resolved.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors conducted three partial equipment alignment walkdowns (listed below) to evaluate the operability of selected redundant trains or backup systems with the other

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train or system inoperable or out of service (OOS). Correct alignment and operating conditions were determined from the applicable portions of drawings, system operating procedures (SOPs), Final Safety Analysis Report (FSAR), and technical specifications (TS). The inspections included review of outstanding maintenance work requests (MWRs) and related Condition Reports (CRs) to verify that the licensee had properly identified and resolved equipment alignment problems that could lead to the initiation of an event or impact mitigating system availability. Documents reviewed are listed in the Attachment to this report.

- “A” service water booster pump (SWBP) while “B” SWBP was out of service during planned and corrective maintenance;
- “B” residual heat removal (RHR) system while “A” RHR system was out of service for planned preventive maintenance; and,
- “A” and “B” high head safety injection (HHSI) system while “C” HHSI system was out of service for planned preventive maintenance.

b. Findings

No findings of significance were identified.

.2 Complete System Walkdown

a. Inspection Scope

The inspectors performed a detailed review and walkdown of the nuclear safety-related HVAC chilled water systems to identify any discrepancies between the current operating system equipment lineup and the designed lineup. This walkdown included accessible areas outside the containment. In addition, the inspectors reviewed completed surveillance procedures, outstanding MWRs, system health reports, and related CRs to verify that the licensee had properly identified and resolved equipment problems that could affect the availability and operability of the system. Documents reviewed are listed in the Attachment to this report.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors reviewed recent CRs, MWRs, and impairments associated with the fire protection system. The inspectors reviewed surveillance activities to determine whether they supported the operability and availability of the fire protection system. The inspectors assessed the material condition of the active and passive fire protection systems and features and observed the control of transient combustibles and ignition

sources. The inspectors conducted routine inspections of the following nine areas (respective fire zones also noted):

- Turbine building (fire zone TB-1);
- Service water pumphouse (fire zones SWPH-1, SWPH-3, SWPH-4 and SWPH-5.1/5.2);
- Intermediate building (fire zones IB-25.1.1, IB-25.2, IB-25.1.3 and IB-25.1.5);
- Auxiliary building 1DB1/1DB2 switchgear rooms (fire zone AB-1.29);
- HVAC chilled water pump rooms "A" and "B" (fire zones IB-7.2, IB-9, IB-23.1);
- Battery and charger rooms "A" and "B" (fire zones IB-2, IB-3, IB-4, IB-5, IB-6);
- Turbine driven emergency feedwater (TDEFW) pump room (fire zone IB-25.2);
- Auxiliary building 436' elevation (fire zone AB-1.18); and,
- Auxiliary building 397'/388' elevation (fire zone AB-1.4).

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors reviewed and walked down one area (i.e., the auxiliary building AB-374' elevation) regarding internal flood protection features and equipment to determine consistency with design requirements, FSAR, and flood analysis documents. Risk significant structures, systems, and components in this area included the RHR and reactor building spray pumps. The inspectors reviewed the licensee's CAP database to verify that internal flood protection problems were being identified at the appropriate level, entered into the CAP, and appropriately resolved.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

Annual Review

a. Inspection Scope

The inspectors obtained two samples of heat sink performance. The inspectors observed equipment conditions, temperatures, flow rates, and data acquisition, during the performance testing of "A" component cooling water (CCW) heat exchanger, XHE0002A, and the "B" emergency diesel generator (EDG) inter-cooler heat exchanger, XHE0017B-HE3. The inspectors discussed the heat exchanger monitoring and maintenance program with engineering personnel and reviewed the performance analysis results obtained during the testing.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope

On June 18, 2007, the inspectors observed performance of senior reactor operators and reactor operators on the plant simulator during licensed operator requalification training. The scenario (LOR-ST-048) involved overheating of a unit auxiliary transformer followed by a loss of all alternating current power. The inspectors assessed overall crew performance, communications, oversight of supervision, and the evaluators' critique. The inspectors verified that any significant training issues were appropriately captured in the licensee's CAP.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors evaluated two equipment issues described in the CRs listed below to verify the licensee's effectiveness of the corresponding preventive or corrective maintenance associated with structures, systems or components (SSCs). The inspectors reviewed maintenance rule (MR) implementation to verify that component and equipment failures were identified, entered, and scoped within the MR program. Selected SSCs were reviewed to verify proper categorization and classification in accordance with 10 CFR 50.65. The inspectors examined the licensee's 10 CFR 50.65(a)(1) corrective action plans to determine if the licensee was identifying issues related to the MR at an appropriate threshold and that corrective actions were established and effective. The inspectors' review also evaluated if maintenance preventable functional failures (MPFF) or other MR findings existed that the licensee had not identified. The inspectors reviewed the licensee's controlling procedures, i.e., engineering services procedure (ES)-514, "Maintenance Rule Implementation," and the Virgil C. Summer "Important To Maintenance Rule System Function and Performance Criteria Analysis" to verify consistency with the MR requirements.

- CR-06-4347, "A" chiller will not maintain temperature; and,
- CR-06-4286, Elevated high vibration on degraded number 9 main turbine bearing.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors evaluated, as appropriate, for the five selected work activities listed below: (1) the effectiveness of the risk assessments performed before maintenance activities were conducted; (2) the management of risk; (3) that, upon identification of an unforeseen situation, necessary steps were taken to plan and control the resulting emergent work activities; and, (4) that emergent work problems were adequately identified and resolved. The inspectors evaluated the licensee's work prioritization and risk characterization to determine, as appropriate, whether necessary steps were properly planned, controlled, and executed for the planned and emergent work activities listed below:

- Work Week 2007-14, risk assessment for scheduled maintenance and/or testing on "B" motor driven emergency feedwater (MDEFW) pump, "B" service water pump, "B" SWBP, "B" reactor building spray pump, and emergent maintenance on "B" SWBP discharge check valve;
- Work Week 2007-15, risk assessment for scheduled maintenance and/or testing involving "A" chill water chiller, "A" EDG, "A" MDEFW pump, and "A" RHR pump;
- Work Week 2007-16, risk assessment for emergent maintenance on reactor containment pressure transmitter IPT00953 to replace loop power supply and isolator cards;
- Work Week 2007-17 and 2007-18, risk assessments for scheduled/delayed down power to 95 percent to support outboard seal replacement of "D" feedwater booster pump and scheduled maintenance and/or testing for main turbine valve testing, reactor building entry, MDEFW pump surveillance test, and "C" HHSI maintenance; and,
- Work Week 2007-20, risk assessment for scheduled and corrective maintenance, testing, and/or troubleshooting on cable pulls for containment pressure transmitter, IPT00953.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed five operability evaluations affecting risk significant mitigating systems to assess, as appropriate: (1) the technical adequacy of the evaluations; (2) whether operability was properly justified and the subject component or system remained available, such that no unrecognized increase in risk occurred; (3) whether other existing degraded conditions were considered; (4) that the licensee considered other degraded conditions and their impact on compensatory measures for the condition being evaluated; and, (5) the impact on TS limiting conditions for operations and the risk

significance in accordance with the Significance Determination Process (SDP). Also, the inspectors verified that the operability evaluations were performed in accordance with station administrative procedure (SAP)-999, "Corrective Action Program."

- CR-07-1151, "B" SWBP discharge valve (and containment isolation valve) leaking by its seat;
- CR-07-1229, "A" CCW pump breaker arc shield installed incorrectly;
- CR-07-1266, containment pressure transmitter, IPT00953, spiking low;
- CR-07-1449, "A" RHR containment sump inlet valve (8812A) breaker overload trip for one phase was high; and,
- CR-07-1758, tagout and repair of "A" main steam header steam drain level switch drain pot per maintenance work request (MWR) 0708890.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

For the six maintenance activities listed below, the inspectors reviewed the associated post-maintenance testing (PMT) procedures and either witnessed the testing and/or reviewed test records to assess whether: (1) the effect of testing on the plant had been adequately addressed by control room and/or engineering personnel; (2) testing was adequate for the maintenance performed; (3) test acceptance criteria were clear and adequately demonstrated operational readiness consistent with design and licensing basis documents; (4) test instrumentation had current calibrations, range, and accuracy consistent with the application; (5) tests were performed as written with applicable prerequisites satisfied; (6) jumpers installed or leads lifted were properly controlled; (7) test equipment was removed following testing; and, (8) equipment was returned to the status required to perform its safety function. The inspectors verified that these activities were performed in accordance with general test procedure (GTP)-214, "Post Maintenance Testing Guideline."

- PMT for "B" SWBP discharge check valve following failed surveillance testing requirement (MWR 0708695);
- PMT for "A" RHR pump electrical preventive maintenance (MWR 0606716);
- PMT for reactor containment pressure transmitter IPT00953 following emergent corrective maintenance (MWR 07-0057);
- PMT for "D" feedwater booster pump following scheduled and emergent corrective maintenance (MWRs 0613761, 0701672, 0702334, 0702070, and 0702069);
- PMT for "C" service water pump autostart, load sequencing time delay relay following agastat calibration (MWR 0606832); and,
- PMT for "C" HHSI pump following scheduled preventive maintenance (MWRs 0614508 and 0702454).

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities

a. Inspection Scope

The inspectors reviewed the licensee's licensing commitments and basis documentation governing the design and control of the reactor building polar crane as related to the control of refueling outage heavy load lifting activities. Documents reviewed are listed in the Attachment to this report.

The inspectors specifically:

- Reviewed the licensee's basis documentation to determine whether the polar crane was designated as "single-failure-proof" for lift activities associated with the reactor vessel head or internals.
- Reviewed the polar crane vendor manual recommended maintenance program and licensee's preventive maintenance program and completed maintenance documents for inspecting and maintaining the polar crane.
- Reviewed the licensee's load drop analysis and procedures and controls for physically lifting the reactor vessel head and internals during the refueling outage.

b. Findings

No findings of significance were identified. The inspectors determined that the reactor building polar crane was not designated as a "single-failure-proof" lift handling system. Based on review of the polar crane vendor recommended maintenance and completed licensee preventive maintenance and periodic inspections that were performed at the start of the past two refueling outages, the inspectors confirmed that the licensee had implemented an adequate crane preventive maintenance program. The licensee's heavy load drop analysis of record was documented in a bounding topical report (WCAP-9289, dated March 1978). This analysis was a generic evaluation provided by Westinghouse Corporation for pressurized water reactors and not specific to the Virgil C. Summer facility. In November 2006, the licensee identified that their reactor vessel head lift procedure (maintenance management procedure (MMP)-500.005, "Reactor Vessel Head Removal and Installation, Revision 10), provided no height limitation when moving the reactor vessel head, even though the maximum height analyzed in WCAP-9289 was 28.5 feet above the vessel flange. This discrepancy was documented in CR-06-3955. One corrective action to this CR, was the re-evaluation of the heavy load drop analysis. The licensee determined that the Virgil C. Summer reactor vessel head package weighed 66 percent less than the generic value used in WCAP-9289, and that the analysis could support lifting the head to a maximum height of 36.6 feet above the

vessel flange. The licensee planned to revise MMP-500.005 prior to the next refueling outage to incorporate this new height restriction. The inspectors determined that there were no documented head lifts greater than 36.6 feet above the vessel flange.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed and/or reviewed the six surveillance tests listed below to verify that TS surveillance requirements were followed and that test acceptance criteria were properly specified to ensure that the equipment could perform its intended safety function. The inspectors verified that proper test conditions were established as specified in the procedures, that no equipment preconditioning activities occurred, and that acceptance criteria were met.

In-Service Tests:

- STP-220.001A, "Motor Driven Emergency Feedwater Pump and Valve Test," Revision 8;

Reactor Coolant System (RCS) Leakage:

- STP-114.002, "Operational Leakage Calculation," Revision 11;

Other Surveillance Tests:

- PTP-102.001, "Main Turbine Tests," Revision 15;
- PTP-102.005, "Main Feedwater Pump Turbine Checks," Revision 5;
- STP-303.004, "Reactor Building Pressure Instrument IPT00953 Operational Test," Revision 6; and,
- STP-345.040, "Engineered Safety Feature Actuation Slave Relay Test For Train A XPN-7011," Revision 11.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

On April 18, 2007, the inspectors reviewed and observed operator performance during an emergency planning drill that involved a simulated main feedwater pump oil fire and an inside containment small break loss of reactor coolant system accident (emergency planning drill scenario number EPP-06-01A). From the simulator control room, the inspectors assessed emergency procedure usage and verified the operators were properly classifying the emergency events and making the required notifications and protective action recommendations in accordance with emergency plan procedures

(EPP)-001, "Activation and Implementation of Emergency Plan," EPP-001.1, "Notification of Unusual Event," EPP-001.2, "Alert," EPP-001.3, "Site Area Emergency," and EPP-002, "Communication and Notification." The inspectors evaluated the adequacy of the licensee's conduct of the simulator critique performance and verified that any significant drill performance issues were captured by the licensee in their CAP.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

Cornerstone: Occupational Radiation Safety (OS)

2OS1 Access Control To Radiologically Significant Areas

a. Inspection Scope

Access Controls The inspectors evaluated licensee guidance and its implementation for controlling worker access to radiologically significant areas and monitoring jobs in-progress. The inspectors evaluated the adequacy of procedural guidance; directly observed implementation of administrative and physical radiological controls; evaluated radiation worker (radworker) and health physics technician (HPT) knowledge of and proficiency in implementing radiation protection requirements; and assessed worker exposures to radiation and radioactive material.

During facility tours, the inspectors directly observed postings and physical controls for radiation areas and high radiation areas (HRAs) established within the radiologically controlled area (RCA) of the auxiliary building and radioactive waste (radwaste) processing and storage locations. The inspectors independently measured radiation dose rates and contamination levels or directly observed conduct of licensee radiation surveys for selected RCA areas. Results were compared to current licensee surveys and assessed against established postings and Radiation Work Permit (RWP) controls. Licensee key control and access barrier effectiveness were observed and evaluated for selected Locked High Radiation Area (LHRA) locations. Implementation of procedural guidance for LHRA and Very High Radiation Area (VHRA) controls were discussed in detail with health physics (HP) supervisors and management. Physical controls for storage of irradiated material within the spent fuel pool were observed. In addition, licensee controls for areas where dose rates could change significantly as a result of refueling operations or radwaste activities were reviewed and discussed.

The inspectors observed pre-job RWP briefings and reviewed RWP details, including engineering controls for potential airborne radioactivity and surface contamination, to assess communication of radiological control requirements. Radworkers' adherence to RWP guidelines and HPT proficiency in providing job coverage, including use of contamination controls and airborne surveys, were evaluated through observation of jobs in-progress. Jobs observed included repacking of valve PCV-1103A, diaphragm

replacement on valves XVD-6690-SF, XVD-6717-SF, XVD-6699-SF, and XVD-6675-SF, and maintenance on the spent fuel purification pump motor, XPP-14-M. Electronic dosimeter (ED) alarm set points were evaluated against area radiation survey results and ED alarm response actions were discussed with radworkers and HP supervisors.

The inspectors evaluated the effectiveness of radiation exposure controls, including air sampling, barrier integrity, engineering controls, and postings through a review of both internal and external exposure results. Licensee evaluations of skin dose resulting from discrete radioactive particle or dispersed skin contamination events during the last refueling outage were reviewed and assessed.

For HRA tasks involving significant dose rate gradients, the inspectors evaluated procedural guidance and implementation for the use and placement of whole body and extremity dosimetry to monitor worker exposure, including the use of multiple badging during the last refueling outage. The inspectors also reviewed and discussed selected whole-body count analyses conducted during the last refueling outage.

Radiation protection activities were evaluated against the requirements of FSAR Chapter 11; Technical Specifications Sections 6.8, 6.11, and 6.12; 10 Code of Federal Regulations (CFR) Part 20; and approved licensee procedures. Records reviewed are listed in Section 2OS1 and 4OA1 of the report Attachment.

Problem Identification and Resolution The inspectors reviewed and assessed select condition reports associated with access control to radiologically significant areas. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with procedure SAP-999, Corrective Action Program, Revision 2. In addition, the inspectors reviewed a self-assessment related to the area of access controls. Specific corrective action program documents associated with access control issues, personnel radiation monitoring, and personnel exposure events reviewed and evaluated during inspection of this program area are identified in Section 2OS1 and 4OA5 of the report Attachment.

The inspectors completed 21 of the required line-item samples described in Inspection Procedure (IP) 71121.01.

b. Findings

No findings of significance were identified.

Cornerstone: Public Radiation Safety (PS)

2PS1 Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

a. Inspection Scope

Groundwater Monitoring Current licensee programs for monitoring, tracking, and documenting the results of both routine and abnormal liquid releases to the onsite and

offsite surface and groundwater environs were reviewed. The inspectors discussed current and planned actions for onsite groundwater monitoring with supervisors and managers in the Health Physics department, including number and placement of monitoring wells and identification of plant systems with the greatest potential for contaminated leakage. In addition, the inspectors reviewed procedural guidance for identifying and assessing onsite spills and leaks of contaminated fluids. Radionuclide concentration results for onsite groundwater monitoring wells and were reviewed.

In 2004, site-specific geology, hydrogeology, and geotechnical conditions were determined in a dewatering study. In 2005, ground water modeling and settlement analysis in support of a dewatering system design were performed. These studies did not encompass the entirety of the owner controlled areas. The current applicability of this study was reviewed and verified in 2006. Currently, the licensee maintains nineteen onsite groundwater monitoring wells with samples taken quarterly. Analyses are performed for tritium and primary gamma emitters, as specified in the Offsite Dose Calculation Manual. To date, tritium has been the only radionuclide identified in the well samples; however, tritium levels are comparable to values obtained during pre-operational site characterization.

The inspectors completed two of the required line-item samples described in IP 71122.01.

b. Findings

No findings of significance were identified.

2PS2 Radioactive Material Processing and Transportation

a. Inspection Scope

Waste Processing and Characterization The inspectors reviewed the licensee's solid radioactive waste system as described in the FSAR and Process Control Program (PCP). The most recent radiological effluent release report was reviewed for information on the types and amounts of waste disposed. The scope of the licensee's audit program was reviewed to verify that it met the requirements of 10 CFR 20.1101(c). The inspectors walked down accessible portions of the liquid and solid radioactive waste processing systems to verify that the current system configuration and operation agreed with the FSAR and PCP. The liquid radioactive waste evaporator lay-up status was discussed with radwaste and operations personnel to determine its potential to create an unmonitored release pathway.

The inspectors reviewed administrative changes to the PCP performed by the licensee to determine if any of the changes affected the waste processing. The inspectors reviewed the licensee's process for transferring radioactive resin and sludge discharges into shipping/disposal containers to determine if appropriate waste stream mixing and/or sampling procedures and methodology for waste concentration averaging provided representative samples of the waste product for waste classification purposes. The

inspectors reviewed current 10 CFR 61 analysis results and the procedures for obtaining the samples to support the analysis. The scaling factors used for radioactive waste streams were reviewed, including licensee calculations used to determine the amount of hard to detect nuclides. The program was reviewed to verify compliance with 10 CFR 61.55-56 and Appendix G of 10 CFR 20.

The inspectors reviewed the program for provisions that would ensure that the waste stream composition accounted for changes in operational parameters and would remain valid between required periodic updates. The inspectors observed the licensee's review of a 10 CFR 61 analysis of the nuclear blowdown stream, and the determination of scaling factors.

Transportation The inspectors were unable to observe the receipt or shipping of radioactive materials, as no shipments were scheduled during the inspection. However, the licensee demonstrated the process for the creation of shipping papers including the use of radiation surveys, waste characterization, and waste manifest creation. The inspector held discussions with shipping staff regarding the process for use and performance of radiation surveys, the proper labeling, placarding, vehicle checks, driver's briefing, and the provision of emergency instructions to the driver and control room personnel. The inspectors reviewed shipping documentation for several shipments that had occurred in the previous year. The inspectors reviewed the quality assurance surveillance documentation verifying compliance with the Certificate of Compliance for Type B packages used.

The inspectors reviewed the training records of the radwaste workers who were involved in the shipment and discussed training with these workers.

Transportation program implementation was reviewed against regulations detailed in 10 CFR Part 20, 10 CFR 71, 49 CFR 172-178; as well as the guidance provided in NUREG-1608. Technical Specification 6.13, Process Control Program, was used as a basis for evaluation of the solid radioactive waste program. Training activities were assessed against 49 CFR 172 Subpart H. Documents reviewed during the inspection are listed in Section 2PS2 of the report Attachment.

Problem Identification and Resolution Nine condition reports, one self-assessment, and one audit were reviewed in detail and discussed with licensee personnel. The inspectors assessed the licensee's ability to characterize, prioritize, and resolve the identified issues in accordance with licensee procedure SAP-999, Corrective Action Program, Revision 2. Documents reviewed for problem identification and resolution are listed in Section 2PS2 of the report Attachment.

The inspectors completed six of the required line-item samples described in IP 71122.02.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

.1 Reactor Safety: Barrier Integrity Cornerstone

a. Inspection Scope

To verify the accuracy of the data reported for the PIs listed below, the inspectors used performance indicator definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 4. The inspectors reviewed station logs and databases, corrective action program documents, and PI data sheets to verify the basis for reporting the data element. The inspectors interviewed licensee personnel associated with the PI data collection, evaluation and distribution. The inspectors verified data for the period annotated for the following PIs:

- Reactor Coolant System Leak Rate (July 2006 - March 2007); and,
- Reactor Coolant System Activity (July 2006 - March 2007).

b. Findings

No findings of significance were identified.

.2 Occupational Radiation Safety and Public Radiation Safety Cornerstones

a. Inspection Scope

The inspectors sampled licensee data for the PIs listed below. To verify the accuracy of the PI data reported during the period reviewed, PI definitions and guidance contained in NEI 99-02, "Regulatory Assessment Indicator Guideline," Revision 4, were used to verify the basis for each data element.

Occupational Radiation Safety Cornerstone The inspectors reviewed the Occupational Exposure Control Effectiveness PI results from October 2006 through March 2007. For the assessment period, the inspectors reviewed electronic dosimeter alarm logs and assessed corrective action program documents to determine whether HRA, VHRA, or unintended radiation exposures had occurred. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. In addition, the inspectors reviewed selected personnel contamination event data and internal dose assessment results. Report Section 2OS1 contains additional details regarding the inspection of controls for exposure significant areas. Documents reviewed are listed in Sections 2OS1 and 4OA1 of the report Attachment.

Public Radiation Safety Cornerstone The inspectors reviewed the Radiological Effluent Technical Specification/Offsite Dose Calculation Manual Radiological Effluent Occurrences PI results from October 2006 through March 2007. The inspectors reviewed corrective action program documents, effluent dose data, and licensee procedural guidance for classifying and reporting PI events. The inspectors also discussed collection and analysis of PI data with licensee personnel. Reviewed documents are listed in Section 2PS1 and 4OA1 of the report Attachment.

The inspectors completed two of the required samples described in IP 71151.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Daily Screening of Corrective Action Items

a. Inspection Scope

As required 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 items entered into the licensee's corrective action program. This review was accomplished by either attending daily screening meetings that briefly discussed major CRs, or accessing the licensee's computerized corrective action database and reviewing each CR that was initiated.

b. Findings

No findings of significance were identified.

.2 Annual Sample Review

a. Inspection Scope

The inspectors reviewed one issue in detail to evaluate the effectiveness of the licensee's corrective actions for important safety issues documented in CR-07-0411 and its related Failure Mode Analysis and Root Cause Analysis (RCA 07-0411). This CR was associated with the steam leak and resulting manual reactor trip due to the failure of the "D" main feedwater booster pump recirculation header orifice (XPS0006D) gasket. The inspectors assessed whether the issue was identified; documented accurately and completely; properly classified and prioritized; adequately considered extent of condition, generic implications, common cause, and previous occurrences; adequately identified root causes/apparent causes; and, identified appropriate corrective actions. Also, the inspectors verified the issues were processed in accordance with SAP-999, "Corrective Action Program."

b. Findings and Observations

No findings of significance were identified. However, the inspectors found that the failure mode and root cause analyses did not address the missed opportunity to evaluate the need and implement a secondary leakage reduction program for systems important to safety as detailed in the Electric Power Research Institute's (EPRI) Technical Reports (TR) 111472 (dated August 1999) and 1000992 (dated May 2001) as referenced in both of their analyses. As stated in the licensee's Plant Support Engineering Guide (PSEG-17), "Engineering Programs," Revision 1, expectations are provided for engineering program owners to review "applicable EPRI documents" and specifically "EPRI Technical Reports" for inclusion in their program file. Despite the licensee's possession of these references onsite since publication and participation in related EPRI working groups, the failure mode and root cause analyses did not discuss the PSEG-17 expectation, the lack of a secondary leakage reduction program until 2006, nor TR recommended maintenance procedure modifications as conditions leading to the gasket failure.

.3 Semi-Annual Trend Review

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of the licensee's corrective action program and associated documents to identify trends that could indicate the existence of a more significant safety issue. The review was focused on repetitive equipment issues, but also considered trends in human performance errors, the results of daily inspector corrective action item screening discussed in Section 4OA2.1 above, licensee trending efforts, and licensee human performance results. The review nominally considered the six-month period of January 2007 through June 2007. Documents reviewed included licensee monthly and quarterly corrective action trend reports, engineering system health reports, maintenance rule documents, department self-assessment activities, and quality assurance audit reports.

b. Findings

No findings of significance were identified. The inspectors evaluated the licensee's trending methodology and observed that the licensee had performed a detailed review. The licensee routinely reviewed the cause codes, involved organizations, key words, and system links to identify potential trends in their CAP data. The inspectors compared the licensee's reviews with the results of the inspectors' daily screening and did not identify any discrepancies or potential trends in the data which the licensee had failed to identify.

4OA3 Event Followup

- .1 (Closed) LER 05000395/2005003-01: Plant Trip and Associated Fire In "B" Condensate Pump Motor.

The inspectors reviewed the subject LER to verify accuracy of the information and the appropriateness of the corrective actions. The supplement to this LER provided the results of the licensee's root cause evaluation for the delayed opening of the "A" condensate pump discharge valve. The results of valve inspections during the October 2006 refueling outage (RF-16) following the event identified that the valve shaft and upper and lower bearings were severely worn and galled which led to binding under high differential pressure opening conditions. During RF-16, all three condensate pump discharge valves were replaced or restored to their original design conditions and periodic preventive maintenance inspections were added to ensure the identification of any future degraded valve bearing and shaft conditions. No new findings of significance were identified by the inspectors and no violation of NRC requirements occurred. This LER is closed.

- .2 (Closed) LER 05000395/2007001-00: Manual Reactor Shutdown Due to Steam Leak at Feedwater Booster Pump Recirculation Header.

The inspectors reviewed the subject LER to verify the accuracy of the LER and the appropriateness of the corrective actions. A detailed review of the applicable condition report (CR-07-0411), failure mode analysis, and root cause analysis (RCA 07-0411) was documented under Section 4OA2.2 of this report. No new findings of significance were identified. This event was previously discussed in Section 4OA3.1 of NRC Integrated Inspection Report 05000395/2007002. This LER is closed.

4OA6 Meetings, Including Exit

Integrated Report Exit

The inspectors presented the inspection results to Mr. Jeffrey Archie and other members of the licensee staff on July 12, 2007. The licensee acknowledged the results. The inspectors confirmed that inspection activities discussed in this report did not contain proprietary material.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which meets the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as a Non-Cited Violation.

Technical Specification 6.8.1.a requires, in part, that written procedures be established, implemented and maintained covering activities listed in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978, which includes procedures for radiation

protection, including personnel dosimetry. Contrary to this, on October 26, 2006, the requirements of procedure HPP-517, "Multiple Whole Body and Extremity Badging Exposure Calculations," were not followed resulting in two multiple badging packs being assigned to the wrong individuals. Three individuals subsequently entered the RCA and began performing work on the RVLIS weld on the reactor head which was located in a posted locked high radiation area. Because the individuals were assigned the wrong multiple badge packs, the licensee did not have capability to provide continuous HP coverage of the individuals via remote monitoring for the assigned transmitting EDs, making this more than an administrative error. In addition, in one of the multiple badge packs the transmitting ED was not turned on. The error was identified when HP monitoring of the transmitting EDs determined that one of the individuals ED was not indicating the expected dose rate in the work area (because the individual was not wearing the assigned transmitting ED) and the individual was called out of the work area. The finding is of very low safety significance because several EDs were included in the multiple badge packs, which provided a means to assign dose to the workers, so the ability to assess dose was not compromised. This finding was entered into the licensee's corrective action program as CR-06-3720.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Archie, Vice President, Nuclear Operations
F. Bacon, Manager, Chemistry Services
L. Bennett, Manager, Plant Support Engineering
M. Browne, Manager, Quality Systems
A. Cribb, Supervisor, Nuclear Licensing
G. Douglass, Manager, Nuclear Protection Services
M. Fowlkes, General Manager, Engineering Services
D. Gatlin, General Manager, Nuclear Plant Operations
R. Justice, Manager, Maintenance Services
D. Lavigne, General Manager, Organizational Effectiveness Training
G. Lippard, Manager, Operations
G. Moffatt, Manager, Nuclear Training
P. Mothena, Manager, Health Physics and Safety Services
J. Nesbitt, Manager, Materials and Procurement
W. Stuart, Manager, Design Engineering
B. Thompson, Manager, Nuclear Licensing
A. Torres, Manager, Planning / Scheduling and Project Management
S. Zarandi, General Manager, Nuclear Support Services

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

05000395/2005003-01	LER	Plant Trip and Associated Fire In "B" Condensate Pump Motor (Section 4OA5.1)
05000395/2007001-00	LER	Manual Reactor Shutdown Due to Steam Leak at Feedwater Booster Pump Recirculation Header (Section 4OA5.2)

Discussed

None

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures and Drawings

Draft Enhanced Design Basis Document - Safety Related Chilled Water System;
FSAR, Section 9.2.1, Service Water System;
FSAR, Section 9.4.7.2.4, Safety Class Chilled Water System;
SOP-112, Safety Injection System, Revision 17;
SOP-115, Residual Heat Removal, Revision 19;
SOP-117, Service Water System, Revision 20;
SOP-501, HVAC Chilled Water System, Revision 17;
D-302-222, Service Water Cooling;
D-302-841/842/843, Chilled Water Pump and Chiller Area/Chilled Water to Cooling Coils ("A"
and "B"); and,
1-MS-54-064, VU Mechanical Chillers.

Section 1R19: Post Maintenance Testing

Procedures

SOP-210, Feedwater System, Revision 20; and,
STP-223.002A, Service Water Pump Test, Revision 8.

Section 1R20: Refueling and Other Outage Activities

Procedures

MMP-500.005, Reactor Vessel Head Removal and Installation, Revision 10;
MMP-165.005, Static and Dynamic Load Testing of Miscellaneous Hoist, Cranes, and Lifting
Devices, Revision 8;
MMP-165.006, Periodic and Annual Inspections of Miscellaneous Hoists and Cranes, Revision 14;
MMP-165.007, Reactor Building Polar and Fuel Handling Building Crane Maintenance, Revision 7;
MMP-165.013, Reactor Building Polar Crane Maintenance/Inspection, Revision 3; and, GMP-
100.011, Crane Operations - Reactor Building, Revision 9.

MWR's

0518035, Periodic inspection for reactor building polar crane during RF-16; and,
0403298, Periodic inspection for reactor building polar crane during RF-15.

Other Documents

1MS-94B-0182, vendor manual for Whiting Corporation reactor building polar crane;
WCAP-9289, Integrated Vessel Head Package for One-Lift Operation;
Calculation DC03920-022, Reactor Building Polar Crane Qualification for 150 Ton Normal Lift;
and, Calculation DC0313A-007, Reactor Building Loading Evaluation Reactor Vessel
Head Laydown.

2OS1: Access Control To Radiologically Significant Areas

Procedures, Manuals, and Guidance Documents

HPP-151, Use of the Radiation Work Permit and Standing Radiation Work Permit, Revision 8
HPP-160, Control and Posting of Radiation Control Zones, Revision 11
HPP-403, Radiological Controls for Nuclear Work Activities, Revision 9
HPP-405, Personnel Decontamination and Skin Dose Determination, Revision 16

HPP-411, Monitoring Exposure with Multiple Badging, Revision 10
HPP-419, Electronic Dosimeter Alarm Set Point Determination and Alarm Response Actions, Revision 0
HPP-517, Multiple Whole Body and Extremity Badging Exposure Calculations, Revision 8
SAP-140, Plant Key Control, Revision 6
SAP-500, Health Physics Manual, Revision 11
SAP-999, Corrective Action Program, Revision 2

Radiation Work Permit (RWP) Packages

(Packages include RWP, radiation surveys, air samples, RWP turnover sheet, and RWP termination report, as applicable)

RWP 07-00031/001, RB Entry to Repair and Calibrate IPT 402A RB 412 "C" Loop
RWP 07-00024/001, Install Emergency Lights in AB, IB, and FHB
RWP 06-00188/001, RB Power Entry to inspect XVD 06242A-ND on RB 412 and Repair if Necessary and RB Closeout
RWP 06-00012/001, All Manual/Remote Filter Change Out for 2006
RWP 06-00076/001, Incore Pit Entries for Activities Listed, not to Include Vessel Inspection or Ex-vessel Dosimetry Change Out
RWP 06-00101/001, Repair Reactor Head RVLIS Line
RWP 06-00185/001, All Manual/Remote Filter Change Out for 2006 in LHRAs
RWP 06-00130/001, Routine HP and Maintenance Activities to Include Valve Line Ups in LHRAs During RF-16
RWP 07-00038/001, RB Power Entry to Inspect "C" RCP Flange, RB 436 and 412
RWP 07-00029/001, RB Entry to Inspect "C" RCP Flange, Check Oil Levels in All RCPs, Sample RB Sump and CRDM Cooler

Data and Records

Personnel Contamination Report (PCR) 06-0019, 11/1/06
PCR 06-0020, 10/24/06
PCR 06-0026, 11/6/06
PCR 06-0016, 10/12/06
Survey M-6021, 5/30/07
Survey Q-8014, 4/2/07
Quarterly Gate Inspection, 5/17/07
SAP-134, REP-100.001, Physical Inventory of SNM, 11/13/06
Multibadge Monitoring Data: Pack Numbers 06-0010009, 06-0010010, and 06-0010011, 10/26/06
Dose Assessment: Multiple Badging RCA Entries for RVLIS Weld Repair, 10/27/06

Corrective Action Program Documents

Self-Assessment Report, Radiation Protection Field Operations, March 2007
CR-06-3411, High reading on multi badging pack pocket dosimeter, 10/16/06
CR-06-3720, Two workers entered the RCA wearing the wrong multiple badge dosimetry pack, 10/27/06
CR-06-3969, Individual's TLD was found on the RB 412 by Safety Services personnel, 11/6/06
CR-06-4223, HP contractor lost HP key #73HR3, 11/17/06
CR-07-0188, Individual had ED dose rate alarm, 1/18/07

- CR-07-0456, Merlin Gerlin Access Control report indicates a dose rate alarm on ED, 2/6/07
CR-07-1001, Assessable area not posted as a radiation/radioactive materials storage area inside FHB 463, 3/19/07
CR-07-01489, Technician noticed RCA boundary gate entering equipment hatch area was open and posting for the area (RCA boundary, radiation area, neutron area) was missing, 5/14/07

2PS1: Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems

Procedures, Manuals, and Guidance Documents

- HPP-1024, Groundwater Monitoring Well Sampling, Revision 3
HPP-246, 10CFR50.75(g) Recordkeeping, Revision 0
HPP-710, Sampling and Release of Radioactive Liquid Effluents, Revision 11
NL-122, Regulatory Notification and Reporting, Revision 4
V.C. Summer Station Groundwater Action Plan, 7/24/06

Data and Records

- NPDES Wells Tracking Spreadsheet, May 1995 - February 2007
Hydrogeologic Summary, V.C. Summer Nuclear Station, 3/26/07

Corrective Action Program Documents

- QA-AUD-200610, Station Environmental Monitoring, 3/1/07
CR-06-3059, Documentation of potential groundwater contamination events that occurred prior to the approval of HPP-0246, 10 CFR 50.75g Recordkeeping, 9/16/06
CR-06-3713, Radioactivity identified in NaOH sump in RWST pit, 10/26/06
CR-06-3958, Three (site 17, 21, and 23) environmental composite samples for October 2006 identified tritium below the LLD and reporting limits of the ODCM, 11/06/06
CR-06-4410, Tritium identified in environmental samples sites #72 and #73 composite samples below the LLD and reporting levels of the ODCM, 12/06/06
CR-06-4543, Radioactive contamination found in asphalt within the protected area, 12/12/06
CR-07-0375, Drum for radioactive trash found to contain highly contaminated rages which had dose rates of 200 mR/hr contact, 1/31/07

2PS2: Radioactive Material Processing and Transportation

Procedures, Manuals, and Guides

- CAPG-01, Corrective Action Guidelines, Revision 3
SAP-999, Corrective Action Program, Revision 2
HPP-0703, Shipping Radioactive Material, Revision 16
HPP-716.003, CNS 6-80-2 and CNS 6-80-2A Cask Handling, Revision 0
HPP-716.005, CNS 8-120B Cask Handling, Revision 0
HPP-716.006, CNS 14-170 Cask Handling, Revision 0
HPP-716.009, 14-195H Cask Handling, Revision 0
HPP-716.010, CNS 21-300 Cask Handling, Revision 0
HPP-716.011, Polyethylene High Integrity Container Use, Revision 0
HPP-716.012, Polyethylene High Integrity Container Overpack Handling, Revision 0
HPP-716.014, CNS 14-215H Cask Handling, Revision 0
HPP-716.029, 10-160B Cask Handling, Revision 0
HPP-716.030, Handling of Radiography Model 650L Source Changer, Revision 1

HPP-717, Sample Collection, Preparation and Analysis Techniques for Assuring Compliance with 10 CFR 61, Revision 6
HPP-728, Sluicing out a Chem Nuclear Pressure Vessel - (PV) - (24-51 and 24-72), Revision 1
HPP-729, Sluicing and Loading Portable Demineralizer Pressure Vessel, Revision 0
EPP-06, Transportation Accidents Involving Radioactive Material, Revision 7
SOP-108, Liquid Waste Processing System, Revision 22
SOP-109, Spent Resin Removal and Replacement, Revision 13
SOP-111, Solid Waste Disposal System, Revision 10

System Diagrams

D-303-732, System Flow Diagram-Solid Waste Disposal, Revision 18
D-302-783, System Flow Diagram-Nuclear Blowdown Processing system, Revision 16
E-302-737, System Flow Diagram-Waste Processing, Revision 12
D-302-734, System Flow Diagram-Excess Liquid Waste, Revision 14

Records and Data

Work Order # 0704054, AB 436-36 valve leak, dated 03/29/07
Shipment information (including shipping papers, waste manifest, emergency response information and exclusive use instructions if applicable): 06-075, 06-096, 06-032, 06-044, 06-068, 06-002
Certificate of Compliance (NRC Form 618) for Models CNS 10-160B, CNS 8-120B, and 650L Type B Packages.

CAP Documents

QA-AUD-200701-0, Station Radiation Control and Radioactive Waste, dated 03/08/07
SA-03-HP-04, Health Physics Field Operations (Self-Assessment Report), dated 03/15/04
CR-07-0115, valve leak AB 436-36
CR-05-2577, QA-AUD-200507 Administrative Deficiencies, 06/16/2005
CR-05-2869, Truck left site without operating tail light, 07/19/2005
CR-05-3635, Missing "Empty" labels on shipment, 09/20/2005
CR-06-3622, Shipment received as limited quantity but was "Empty," 10/23/06
CR-06-3042, Improper labeling of shipment received, 09/18/06
CR-05-3637, Shipment tamper-proof seal broken by security, 09/20/05
CR-07-0663, QA-AUD-200701 Administrative Deficiencies, 02/21/2007
CR-07-0664, QA-AUD-200701 Administrative Deficiencies, 02/21/2007
CR-07-0648, QA-AUD-200701 Administrative Deficiencies, 02/21/2007

40A1: Performance Indicator Verification

Procedures

HPP-242, Reporting NRC Performance Indicators, Revision 0
SAP-1167, NRC Performance Indicators, Revision 0

Records and Data

NRC Performance Indicator Data (SAP-1167 Attachment VII), October 2006 - March 2007
RWP 06-00043/001, Reactor Cavity Decon
RWP 06-00069/001, Reactor Vessel "O" Ring Replacement

RWP 06-00131/001, Routine HP and Maintenance Activities to Include Valve Line Ups in HRAs During RF-16

Dose Alarms from 7/1/06 to 4/30/07

ED Dose Rate Alarm Evaluation Log, 6/28/06 to 5/31/07

Continuous Gaseous Effluent Permit 60110.011.088.G, 12/29/06

Continuous Gaseous Effluent Permit 70032.011.032.G, 4/13/07

Batch Liquid Effluent Permit 60277.007.087.L, 12/22/06

Batch Liquid Effluent Permit 70059.006.022.L, 4/20/07

Out of Service Effluent Monitor Data (including compensatory sampling), 7/25/06 to 4/10/07

CAP Documents

CR-06-3401, Electronic dosimeter did not record dose during an entry into an HRA, 10/15/06

CR-06-3516, Found RWP ED setting on Cents conflicting with setting on printed copy, 10/19/06

CR-07-0787, Through determined access, a person may gain access to the AB 263-01 slab (posted LHRA), 3/1/07

Condition Reports for NRC Identified Issues

CR-07-1977, Response to NRC inspector question on operations personnel failure to adequately adhere to Reactivity Management Plan for downpower;

CR-07-1961; Response to NRC inspector identification of valve packing leakage from root valve to level switch 1LS2203;

CR-07-1885, Response to NRC inspector identification of failure to reset BISI following ESFAS testing;

CR-07-1855, Response to NRC inspector identification of open HVAC inspection door in control building cooling system ductwork;

CR-07-1789, Response to NRC inspector identification of personnel failure to follow procedures during service water pump relay testing;

CR-07-1592, Response to NRC inspector identification that Part 21 was not entered into licensee corrective action program for applicability review; and,

CR-07-1160, Response to NRC inspector comments on weaknesses in plant heat trace preventive maintenance procedures.

LIST OF ACRONYMS

AB	Auxiliary Building
CAP	Corrective Action Program
CCW	Component Cooling Water
CR	Condition Report
CFR	Code of Federal Regulations
ED	Electronic Dosimeter
EDG	Emergency Diesel Generator
EPP	Emergency Plan Procedure
EPRI	Electric Power Research Institute
ES	Engineering Service
FHB	Fuel Handling Building
FSAR	Final Safety Analysis Report

GTP	General Test Procedure
HHSI	High Head Safety Injection
HP	Health Physics
HPP	Health Physics Procedure
HPT	Health Physics Technician
HRA	High Radiation Areas
HVAC	Heating, Ventilation, and Air Conditioning
IB	Intermediate Building
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IR	Inspection Report
LER	Licensee Event Report
LHRA	Locked High Radiation Area
MDEFW	Motor Driven Emergency Feedwater
MPFF	Maintenance Preventable Functional Failures
MMP	Maintenance Management Procedure
MR	Maintenance Rule
MWR	Maintenance Work Request
NCV	Non-Cited Violation
NEI	Nuclear Energy Institute
NPDES	National Pollutant Discharge Elimination System
NRC	Nuclear Regulatory Commission
OAP	Operations Administrative Procedure
OOS	Out-of-Service
PCP	Process Control Program
PCR	Personnel Contamination Report
PHC	Plant Health Committee
PI	Performance Indicator
PMT	Post-Maintenance Testing
PS	Public Safety
PSEG	Plant Support Engineering Guide
PTP	Periodic Test Procedure
QA	Quality Assurance
RB	Reactor Building
RCA	Radiological Controlled Area
RCP	Reactor Coolant Pump
RF	Refueling Outage
RG	Regulatory Guide
RHR	Residual Heat Removal
RTP	Rated Thermal Power
RVLIS	Reactor Vessel Level Instrumentation System
RWP	Radiation Work Permit
RWST	Refueling Water Storage Tank
SAP	Station Administrative Procedure
SCE&G	South Carolina Electric and Gas
SDP	Significance Determination Process
SOP	System Operating Procedure

SSC	Structures, Systems, or Components
STP	Surveillance Test Procedure
SWBP	Service Water Booster Pump
SWPH	Service Water Pumphouse
TB	Turbine Building
TDEFW	Turbine Driven Emergency Feedwater
TR	Technical Report
TS	Technical Specification
VHRA	Very High Radiation Area