



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

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

October 30, 2007

Southern Nuclear Operating Company, Inc.  
ATTN: Mr. Tom E. Tynan  
Vice President - Vogtle  
Vogtle Electric Generating Plant  
7821 River Road  
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT- NRC INTEGRATED INSPECTION  
REPORT 05000424/2007004 AND 05000425/2007004

Dear Mr. Tynan:

On September 30, 2007, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Vogtle Electric Generating Plant, Units 1 and 2. The enclosed integrated inspection report documents the inspection findings, which were discussed on October 5, 2007, with you and other members of your staff.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The 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, two licensee-identified violations, which was determined to be of very low safety significance, are listed in the report. NRC is treating these violations as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy because of the very low safety significance and because you have entered it into your corrective action program. If you deny these NCVs, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspectors at Vogtle.

SNC

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In accordance with the Code of Federal Regulations 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, 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/adams.html> (the Public Electronic Reading Room).

Sincerely,

**/RA/**

Scott M. Shaeffer, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

Docket Nos.: 50-424, 50-425  
License Nos.: NPF-68 and NPF-81

Enclosure: Inspection Report 05000424/2007004 and  
05000425/2007004  
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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Letter to Tom E. Tynan from Scott M. Shaffer dated October 30, 2007

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT- NRC INTEGRATED INSPECTION  
REPORT 05000424/2007004 AND 05000425/2007004

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**U. S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket Nos.: 50-424, 50-425

License Nos.: NPF-68, NPF-81

Report Nos.: 05000424/2007004 and 05000425/2007004

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Electric Generating Plant, Units 1 and 2

Location: Waynesboro, GA 30830

Dates: July 1, 2007 through September 30, 2007

Inspectors: G. McCoy, Senior (Sr.) Resident Inspector  
B. Anderson, Resident Inspector  
G. Wilson, Project Engineer  
E. Lea, Sr. Operations Engineer (Section 1R11)  
B. Caballero, Operations Engineer (Section 1R11)  
J. Diaz Velez, Sr. Health Physicist (Section 2PS3)  
H. Gepford, Sr. Health Physicist (Sections 2PS1 and 4OA1)  
W. Loo, Sr. Health Physicist (Sections 2OS3 and 2PS3)  
G. Kuzo, Sr. Health Physicist (Sections 2OS1 and 4OA1)

Accompanying  
Personnel: M. Riches

Approved by: Scott Shaeffer, Chief  
Reactor Projects Branch 2  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000424/2007-004, 05000425/2007-004; 07/01/2007 - 09/30/2007; Vogtle Electric Generating Plant, Units 1 and 2; Routine integrated inspection report.

The report covered a three-month period of inspection by two resident inspectors, two operations engineers, and four health physicists. 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 were identified.

B. Licensee-Identified Violations

Violations of very low safety significance, which were identified by the licensee, have been reviewed by the inspectors. Corrective actions taken or planned by the licensee have been entered into the licensee's CAP. These violations and corrective actions are listed in Section 4OA7 of this report.

Enclosure

## REPORT DETAILS

### Summary of Plant Status

Unit 1 operated at essentially full rated thermal power (RTP) until September 14, when power was reduced to approximately 30% RTP for secondary chemistry control purposes. On September 17 the unit was returned to essentially full RTP for the rest of the inspection period.

Unit 2 operated at essentially full RTP for the entire inspection period.

### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

#### 1R01 Adverse Weather Protection

##### a. Inspection Scope

Seasonal Readiness Review. The inspectors performed a walkdown of the two following systems to verify they would remain functional during high temperature conditions. The inspectors walked down the systems to determine component temperatures and interviewed engineers to ensure that the systems would be operable at the observed temperatures. Additionally, the inspectors reviewed the CR database to verify that adverse weather related items were being identified and appropriately resolved. Documents reviewed are listed in the Attachment.

- Unit 1 turbine driven auxiliary feedwater (TDAFW) system
- Unit 2 TDAFW system

##### b. Findings

No findings of significance were identified.

#### 1R04 Equipment Alignment

##### a. Inspection Scope

Partial Walkdowns. The inspectors performed partial walkdowns of the following three systems to verify correct system alignment. The inspectors checked for correct valve and electrical power alignments by comparing positions of valves, switches, and breakers to the procedures and drawings listed in the Attachment. Additionally, the inspectors reviewed the condition report database to verify that equipment alignment problems were being identified and appropriately resolved.

- Unit 2 train B nuclear service cooling water (NSCW) system while pump number 3 was out of service for maintenance
- Unit 1 train B component cooling water (CCW) system while pump number 2 was out of service for maintenance

Enclosure



- Unit 1 train A emergency diesel generator (EDG) while the Unit 1 B train EDG was out of service for periodic maintenance and a monthly surveillance

Complete System Walkdown. The inspectors performed a complete walkdown of the following system. The inspectors performed a detailed check of valve positions, electrical breaker positions, and operating switch positions to evaluate the operability of the redundant trains or components by comparing the required position in the system operating procedure to the actual position. The inspectors also reviewed control room logs, condition reports, and system health reports to verify that alignment and equipment discrepancies were being identified and appropriately resolved. The documents reviewed are listed in the Attachment.

- Unit 2 NSCW

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

The inspectors walked down the following nine plant areas to verify the licensee was controlling combustible materials and ignition sources as required by procedures 92015-C, Use, Control, and Storage of Flammable/Combustible Materials, and 92020-C, Control of Ignition Sources. The inspectors assessed the observable condition of fire detection, suppression, and protection systems and reviewed the licensee's fire protection Limiting Condition for Operation log and CR database to verify that the corrective actions for degraded equipment were identified and appropriately prioritized. The inspectors also reviewed the licensee's fire protection program to verify the requirements of Updated Final Safety Analysis Report (UFSAR) Section 9.5.1, Fire Protection Program, and Appendix 9A, Fire Hazards Analysis, were met. Documents reviewed are listed in the Attachment.

- Unit 1 trains A and B auxiliary CCW heat exchanger rooms.
- Unit 1 trains A and B CCW heat exchanger rooms
- Unit 2 trains A and B safety injection pump rooms
- Unit 2 trains A and B charging pump rooms
- Unit 1 trains A and B 4160 V safety related switchgear rooms
- Unit 1 trains A and B remote shutdown rooms
- Unit 1 north main steam valve room
- Unit 2 train A cable spreading room
- Unit 2 trains A and B CCW pump rooms

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measuresa. Inspection Scope

Internal Flood Review. The inspectors walked down the following two areas which contained risk-significant structures, systems and components (SSCs) below flood level to verify flood barriers were in place. Motor controllers and terminal boxes that could become potentially submerged were inspected to ensure that the sealing gasket material was intact and undamaged. The inspectors reviewed selected licensee alarm response procedures to verify alarm setpoints and setpoints for sump pump operation were consistent with the UFSAR, the setpoint index, and Technical Specifications (TS).

- Unit 2 train A and B charging pump rooms
- Unit 1 train A and B safety injection pump rooms

b. Findings

No findings of significance were identified.Å

1R11 Licensed Operator Requalificationa. Inspection Scope

The inspectors evaluated operator performance on August 20 during licensed operator simulator training described in simulator exercise guide Dynamic Simulator Scenario DS-20. The simulator scenario covered operator actions resulting from a dropped rod, a steam generator feed regulating valve failed shut, and the failure of the plant to automatically trip. Procedures reviewed are listed in the attachment. The inspectors specifically assessed the following areas:

- Correct use of the abnormal and emergency operating procedures
- Ability to identify and implement appropriate actions in accordance with the requirements of the Technical Specifications
- Clarity and formality of communications in accordance with procedure 10000-C, Conduct of Operations
- Proper control board manipulations including critical operator actions
- Quality of supervisory command and control
- Effectiveness of the post-evaluation critique

Biennial Operator Requalification Review. The inspectors reviewed the facility operating history and associated documents in preparation for this inspection. During the periods of September 17-21, 2007, the inspectors reviewed documentation, interviewed licensee personnel, and observed the administration of simulator operating tests associated with the licensee's operator requalification program. Each of the activities performed by the inspectors was done to assess the effectiveness of the licensee in implementing requalification requirements identified in 10 CFR 55, "Operators' Licenses." The evaluations were also performed to determine if the licensee effectively implemented

operator requalification guidelines as established by their Systems Approach to Training (SAT) based INPO approved program. The inspectors also reviewed and evaluated the licensee's simulation facility for adequacy for use in operator licensing examinations. The inspectors observed three operator crews during the performance of the operating tests. Documentation reviewed included written examinations, JPMs, simulator scenarios, licensee procedures, on-shift records, simulator modification request records and performance test records, the feedback process, licensed operator qualification records, remediation plans, watchstanding, and medical records. The records were inspected against the criteria listed in Inspection Procedure 71111.11B. Documents reviewed are listed in the Attachment.

Following the completion of the annual operating tests, which ended on September 28, 2007, the inspectors reviewed the overall pass/fail results of the individual JPM operating tests and the simulator operating tests administered by the licensee during the operator licensing requalification cycle. These results were compared to the thresholds established in Manual Chapter 609, Appendix I, Operator Requalification Human Performance Significance Determination Process.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed two equipment problems to evaluate the effectiveness of the licensee's handling of equipment performance problems and to verify the licensee's maintenance efforts met the requirements of 10 CFR 50.65 (the Maintenance Rule) and licensee procedure 50028-C, Engineering Maintenance Rule Implementation. The reviews included adequacy of the licensee's failure characterization, establishment of performance criteria or 50.65(a)(1) performance goals, and adequacy of corrective actions. Other documents reviewed during this inspection included control room logs, system health reports, the maintenance rule database, and maintenance work orders (MWOs). Also, the inspectors interviewed system engineers and the maintenance rule coordinator to assess the accuracy of identified performance deficiencies and extent of condition.

- CR 2007107663, Unit 1 main control room emergency lighting failure
- CR 2007108257, Unit 2 train A engineered safety features sequencer failure

b. Findings

No findings of significance were identified.

### 1R13 Maintenance Risk Assessments and Emergent Work Evaluation

#### a. Inspection Scope

The inspectors reviewed following six work activities to verify plant risk was properly assessed by the licensee prior to conducting the activities. The inspectors reviewed risk assessments and risk management controls implemented for these activities to verify they were completed in accordance with procedure 00354-C, Maintenance Scheduling, and 10 CFR 50.65(a)(4). The inspectors also reviewed the CR database to verify that maintenance risk assessment problems were being identified at the appropriate level, entered into the corrective action program, and appropriately resolved.

- Unit 1 NSCW fan motor relay replacements
- Unit 2 train B reserve auxiliary transformer (RAT) out of service during high voltage switchyard coupling capacitor voltage transformer (CCVT) replacement
- Unit 1 NSCW pump number 5 and CCW pump number 1 out of service for maintenance
- Unit 2 train A engineered safety features (ESF) sequencer failure
- Unit 2 auxiliary feedwater system maintenance and testing
- Unit 1 train B RAT out of service during high voltage switchyard CCVT replacement

#### b. Findings

No findings of significance were identified.

### 1R15 Operability Evaluations

#### a. Inspection Scope

The inspectors reviewed the following six evaluations to verify they met the requirements of procedure NMP-GM-002, Corrective Action Program, and NMP-GM-002-001, Corrective Action Program Instructions. The scope of this inspection included a review of the technical adequacy of the evaluations, the adequacy of compensatory measures, and the impact on continued plant operation.

- CR 2007108043, Broken ring tongue terminal on ESF chiller temperature control
- CR 2007107641, Unit 2 train A centrifugal charging pump discharge valve failed quarterly stroke test
- CR 2007107362, Unit 2 TDAFW pump did not achieve required differential pressure during testing
- CR 2007109053, Unit 1 train A motor driven auxiliary feedwater (MDAFW) pump room damper failed in the shut position
- CR 2007109584, Four minor leaks identified on unit 2 train-A diesel generator jacket water cooling system
- CR 2007109161, Unit 1 train B CCW makeup valve failed to operate in automatic control

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testinga. Inspection Scope

The inspectors either observed post-maintenance testing or reviewed the test results for the following five maintenance activities to verify that the testing met the requirements of procedure 29401-C, Work Order Functional Tests, for ensuring equipment operability and functional capability was restored. The inspectors also reviewed the test procedures to verify the acceptance criteria was sufficient to meet the TS operability requirements.

- MWO 2070314401, Replacement of ESF room cooler temperature switch for 2AB15 switchgear room
- MWO 2052897301, Replacement of the Unit 2 TDAFW steam admission valve limit switches
- MWO 2071309201, Replacement of the Unit 2 train A ESF sequencer termination unit
- MWO 2071224601, Repairs following a Unit 2 train A EDG high vibration trip
- MWO 1071464401, Replacement of Unit 1 train A MDAFW pump room outside air inlet damper hydraulic actuator

b. Findings

No findings of significance were identified.

1R22 Surveillance Testinga. Inspection Scope

The inspectors reviewed the following six surveillance test procedures and either observed the testing or reviewed test results to verify that testing was conducted in accordance with the procedures and that the acceptance criteria adequately demonstrated that the equipment was operable. Additionally, the inspectors reviewed the CR database to verify that the licensee had adequately identified and implemented appropriate corrective actions for surveillance test problems.

Surveillance Tests

- 14980A-2, Diesel Generator 2A Operability Test
- 14980A-1, Diesel Generator 1A Operability Test
- 14545-2, Motor Driven Auxiliary Feedwater Pump Operability Test
- 24565-1, RCP 2 Train A Reactor Trip Relays Underfrequency (281A) Undervoltage (227A) Timing (262RA) Trip Actuating Device Operational Test and Channel Calibration

In-Service Tests (IST)

- 14806-2, Containment Spray Pump Inservice and Response Time Tests
- 14808-2, Centrifugal Charging Pump and Check Valve IST and Response Time Test

b. Findings

No findings of significance were identified.

1R23 Temporary Plant Modificationsa. Inspection Scope

The inspectors evaluated the following Temporary Modification (TM) and associated 10 CFR 50.59 screening against the system design basis documentation and UFSAR to verify that the modification did not adversely affect the safety functions of important safety systems. Additionally, the inspectors reviewed licensee procedure 00307-C, Temporary Modifications, to verify if the modification was properly developed and implemented.

- TM 10621540 The addition of a threaded pipe cap on the tailpiece from valve 1HV0943A

Cornerstone: Emergency Preparedness

1EP7 Drill Evaluationa. Inspection Scope

The inspectors observed and evaluated the licensee's simulated control room and emergency planning performance during a drill conducted on September 11. The inspectors observed licensee activities occurring in the Technical Support Center, which was used to simulate the main control room during a site security event. The NRC's assessment focused on the timeliness and accuracy of the event classification, notification to offsite agencies, and the overall response of the personnel involved in the drill from an operations and emergency planning perspective. The performance of the emergency response was evaluated against regulatory requirements and in accordance with licensee procedures 91001-C, Emergency Classifications, and 91305-C, Protective Action Guidelines. The inspectors attended the post-exercise critique for the drill to evaluate the licensee's self-assessment process for identifying potential deficiencies relating to failures in classification and notification. This satisfies one of the required resident emergency drill observations.

b. Findings

No findings of significance were identified.

## 2. RADIATION SAFETY

Cornerstones: Occupational Radiation Safety and Public Radiation Safety

### 2OS1 Access Controls To Radiologically Significant Areas

#### a. Inspection Scope

Access Controls. The inspectors evaluated licensee performance in controlling worker access to radiologically significant areas and monitoring jobs in-progress. The inspectors 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.

The inspectors directly observed postings and physical controls for radiation areas, high radiation areas (HRAs), and potential airborne radioactivity areas established within the radiologically controlled area (RCA) locations of the Unit 1 and Unit 2 Reactor Auxiliary Building (RAB), Radwaste Processing Facility (RPF), and Spent Fuel Pool (SFP) areas. The inspectors independently measured radiation dose rates and noted the location of monitoring equipment for selected RCA locations. 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 evaluated for Locked High Radiation Area (LHRA) and potential Very High Radiation Area (VHRA) locations. Changes to procedural guidance for LHRA and VHRA controls were discussed with health physics supervisors. Controls and their implementation for storage of irradiated material within the SFPs were reviewed and discussed in detail. Established radiological controls were evaluated for selected job tasks including routine maintenance within HRAs and a Unit 2 'at power' reactor building entry. Licensee controls for areas where dose rates could change significantly due to the previous plant shutdowns and refueling operations were reviewed and discussed. In addition, assignment and tracking of dose for individuals with lost dosimetry were reviewed and discussed in detail.

For selected tasks, the inspectors attended pre-job briefings and reviewed RWP details to assess communication of radiological control requirements to workers. Occupational workers' adherence to selected RWPs and HPT proficiency in providing job coverage were evaluated through direct observations and interviews with licensee staff. Electronic dosimeter (ED) alarm set points were evaluated against area radiation survey results.

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. Worker exposure as measured by ED and by licensee evaluations of skin doses resulting from discrete radioactive particle or dispersed skin contamination events during the period October 2006 - May 2007 were reviewed and assessed. The inspectors also reviewed selected Whole Body Count records from the same time period to evaluate licensee assessment of internal dose.

Enclosure

Guidance for the use and placement of whole body and extremity dosimetry to monitor worker exposure in areas with significant dose rate gradients was reviewed and discussed.

Radiation protection activities were evaluated against the applicable requirements of the UFSAR; TS Sections 5.4 and 5.7; 10 CFR Parts 19 and 20; and approved licensee procedures. Access controls for HRAs, LHRAs, and VHRAs were also evaluated against guidance contained in Regulatory Guide (RG) 8.38, Control of Access to High and Very High Radiation Areas in Nuclear Power Plants, Revision (Rev.) 1. Records reviewed are listed in the Attachment. The inspectors completed 21 samples.

Problem Identification and Resolution. Licensee corrective action program (CAP) documents associated with access control to radiologically significant areas were reviewed and assessed. This included review of selected condition reports (CRs) related to radworker and HPT performance. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with NMP-GM-002, Corrective Action Program, Ver. 5. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent audit results. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

a. Inspection Scope

Radiation Monitoring Instrumentation and Post-Accident Sampling. The inspectors observed installed radiation detection equipment that included Area Radiation Monitors (ARMs), Continuous Air Monitors, Personnel Contamination Monitors (PCMs), and components of the Post-Accident Sampling System. The inspectors observed the physical location of the components, noted the material condition, and compared sensitivity ranges with the information contained in the UFSAR.

During equipment walk-downs, the inspectors observed functional checks of various fixed and portable radiation monitoring/detection instruments. The observations included source/response checks of PCMs and portal monitoring (PM) equipment, portable ion chambers, telepoles, friskers, Small Article Monitors (SAMs), and a Whole Body Counter (WBC). The inspectors reviewed calibration records and discussed the functional testing and testing intervals for selected PCM and PM equipment located at the RCA exits. The inspectors also observed an instrument calibration of an SPM-904B PCM. The 10 CFR Part 61 analysis for Dry Active Waste was reviewed to determine if calibration and response check sources are representative of the plant source term.

The inspectors reviewed calibration records for select PCMs, PMs, SAMs, WBCs, Eberline RM-14s, and ARMs. The records were evaluated to determine frequency and



adequacy of the calibrations. Calibration stickers on portable survey instruments were noted during inspection of storage areas located in the instrument calibration room and the HP instrument room near the RCA entrance/exit point for “ready-to-use” equipment.

Operability and reliability of selected radiation detection instruments were reviewed against details documented in the following: 10 CFR Part 20; NUREG-0737, Clarification of TMI Action Plan Requirements; TS Section 3; UFSAR Chapter 12; and applicable licensee procedures. Documents reviewed during the inspection are listed in Section 2OS3 of the report Attachment.

Self-Contained Breathing Apparatus (SCBA) and Protective Equipment. Selected SCBA units staged for emergency use in the Control Room and other locations were inspected for material condition, air pressure, and number of units available. The inspectors also reviewed maintenance records for components of selected SCBA units that were staged for “ready-for-use.”

Qualifications for licensee staff responsible for testing and repairing SCBA equipment were evaluated through a review of manufacturer training certificates. In addition, selected Control Room operators were interviewed to determine their knowledge of available SCBA equipment locations, including spectacles (corrective lens inserts) if needed, and their training on bottle change-out during periods of extended SCBA use. Respirator qualification records were reviewed for several Control Room operators, Maintenance, and Health Physics department personnel assigned emergency response duties.

Licensee activities associated with maintenance and use of respiratory protection equipment were reviewed against 10 CFR Part 20; RG 8.15, Acceptable Programs for Respiratory Protection; American National Standards Institute (ANSI) Z88.2-1992, American National Standard for Respiratory Protection; and applicable licensee procedures. Documents reviewed during the inspection are listed in Section 2OS3 of the report Attachment. The inspectors completed 9 samples.

Problem Identification and Resolution. CRs associated with instrumentation and protective equipment were reviewed and assessed. The inspectors evaluated the licensee’s ability to identify, characterize, prioritize, and resolve the identified issues in accordance with procedure NMP-GM-002. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

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

### a. Inspection Scope

Effluent Monitoring and Radwaste Equipment. Accessible sections of the Unit 1 and Unit 2 liquid and gaseous radioactive waste (radwaste) and effluent systems were assessed for material condition and conformance with system design diagrams. The inspection included hydrogen recombiners, compressors, accessible tanks, demineralizers, liquid radwaste filtration equipment, reverse osmosis skid, liquid waste system piping, Liquid Effluent Radiation Monitor (RE-0018), Plant Vent Effluent Monitors (RE-12442A/B/C), the Plant Vent Monitor (RE-12444A/B/C), and associated airborne effluent sample lines. The inspectors interviewed licensee staff regarding radwaste equipment configuration, changes to the liquid radwaste system, and effluent monitor operation.

The inspectors reviewed performance records and calibration results for selected radiation monitors, flowmeters, and air filtration systems. For effluent monitors 1/2-RE-0018, 1/2-RE-12442A/B/C, ARE-16980, and 1RE-12839A/B/C, the inspectors reviewed the two most recent calibration records. In addition, the inspectors reviewed setpoints, gain factor, background, and 10-minute and daily averages for select effluent monitors against expected values. The inspectors discussed operation and observed material condition of selected non-safety related air cleanup systems including the Fuel Handling Building Normal Exhaust, systems 1 and 2; and the Unit 1 Auxiliary Building Continuous Exhaust, systems 1, 2 and 3. In addition, operating system field configurations were verified against main control room indicators. The last two surveillances on the Auxiliary Building High Efficiency Particulate Air (HEPA)/charcoal air treatment system were also reviewed. The inspectors evaluated out-of-service effluent monitors and compensatory action data for the period September 2005 - May 2007.

Installed configuration, material condition, operability, and reliability of selected effluent sampling and monitoring equipment were reviewed against details documented in the following: 10 CFR Part 20; RG 1.21, Measuring, Evaluating and Reporting Radioactivity in Solid Wastes and Releases of Radioactive Materials In Liquid and Gaseous Effluents from Light-Water Cooled Nuclear Power Plants; ANSI N13.1-1969, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities; TS Section 5; the Offsite Dose Calculation Manual (ODCM), Ver. 23; and UFSAR, Chapter 11. Procedures and records reviewed during the inspection are listed in Section 2PS1 of the report Attachment.

Effluent Release Processing and Quality Control (QC) Activities. The inspectors directly observed the collection of airborne effluent samples from the Plant Vent Effluent and Plant Vent Monitors. Chemistry technician proficiency in collecting, processing, and counting the samples, as well as preparing, opening, and closing the applicable release permits, was evaluated. The inspectors also reviewed selected procedures for effluent sampling, processing, and release.

QC activities regarding gamma spectroscopy were discussed with count room technicians and Chemistry supervision. The inspectors reviewed daily QC data logs from January 2007 - August 2007 for select High Purity Germanium (HPGe) detectors and reviewed licensee procedural guidance for count room QC. The inspectors also reviewed the most recent calibration records for select geometries for each HPGe detector used for evaluating effluent samples. In addition, results of the 2006 radiochemistry cross-check program were reviewed.

Liquid and gaseous release permits were reviewed against ODCM specifications for pre-release sampling and effluent monitor setpoints. The inspectors also reviewed the 2005 and 2006 Annual Effluent Reports to evaluate reported doses to the public, evaluate unplanned/abnormal releases, and to review ODCM changes.

Observed task evolutions, count room activities, and offsite dose results were evaluated against details and guidance documented in the following: 10 CFR Part 20 and Appendix I to 10 CFR Part 50; ODCM; RG 1.21; RG 1.33, Quality Assurance Program Requirements (Operation); and TS Section 5. Procedures and records reviewed during the inspection are listed in Section 2PS1 of the report Attachment.

Groundwater Monitoring. The inspectors discussed current and future programs for onsite groundwater monitoring with Chemistry supervisors, including number and placement of monitoring wells and identification of plant systems with the greatest potential for contaminated leakage. The inspectors also reviewed procedural guidance for identifying and assessing onsite spills and leaks of contaminated fluids. In addition, the inspectors reviewed records of historical and recent contaminated spills retained for decommissioning purposes as required by 10 CFR Part 50.75(g).

The licensee currently has a limited number of wells suitable for monitoring groundwater contamination; however, hydrological studies have been performed to determine the optimum location for groundwater sample points and new wells are scheduled for construction. An extensive groundwater monitoring program has been developed at the corporate level which will incorporate sampling at prescribed existing and new wells. In addition, the licensee currently samples three site runoff ponds and a runoff ditch.

Problem Identification and Resolution. Selected condition reports associated with effluent release activities were reviewed and assessed. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve selected issues in accordance with procedure NMP-GM-002. The inspectors also evaluated the scope of the licensee's internal audit program and reviewed recent audit results. Documents reviewed are listed in the Attachment. The inspectors completed 11 samples.

b. Findings

No findings of significance were identified.

## 2PS3 Radiological Environmental Monitoring Program (REMP) and Radioactive Material Control Program

### a. Inspection Scope

REMP Implementation. The inspectors observed collection of environmental samples and surveillance of sampling instruments during the licensee's weekly environmental run. The inspectors noted the material condition and operability of airborne particulate and iodine sampling stations at monitoring location Nos. 3, 7, 10, 12, 16, and 35. Environmental thermoluminescent dosimeter (TLD) Nos. 7, 9, 15, 16, 82, and 83, were checked for material condition. The inspectors noted the material condition and operability of water composite samplers at location Nos. 82, 83, and 84. The inspectors determined the current location of selected air samplers, water composite samplers, TLDs, and vegetation sampling stations using global positioning system instrumentation and compared the results with ODCM data. Land use census results and sample collection/processing activities were discussed with environmental technicians and corporate environmental affairs personnel.

The inspectors reviewed the previous calibration records for the environmental air samplers. The inspectors also reviewed the 2005 and 2006 REMF reports, results of the 2005 and 2006 interlaboratory cross-check program, and procedures for environmental sample collection and processing. The inspectors discussed missed samples/inoperable samplers reported in the REMF reports, detection capabilities, and cross-check results with cognizant personnel.

Program implementation, sampling locations, and environmental monitoring results were reviewed against: 10 CFR Part 20; Appendix I to 10 CFR Part 50; TS 5.5; ODCM; RG 4.15, Quality Assurance for Radiological Monitoring Programs (Normal Operation) - Effluent Streams and the Environment; and Branch Technical Position, An Acceptable Radiological Environmental Monitoring Program - 1979. Documents reviewed are listed in Section 2PS3 of the report Attachment.

Meteorological Monitoring Program. During a walkdown of the meteorological tower and associated equipment, the inspectors observed the physical condition of the tower and discussed equipment operability and maintenance history with cognizant licensee personnel. The inspectors compared locally generated meteorological data with information available to control room operators. For the primary meteorological measurements of wind speed, wind direction, and temperature, the inspectors reviewed calibration records for applicable tower instrumentation and evaluated measurement data recovery for calendar years 2005 and 2006.

Licensee procedures and activities related to meteorological monitoring were evaluated against: ODCM; UFSAR Section 2.3; ANSI/ANS 2.5-1984, Standard for Determining Meteorological Information at Nuclear Power Sites; and Safety Guide 23, Onsite Meteorological Programs. Documents reviewed are listed in Section 2PS3 of the report Attachment.

Unrestricted Release of Materials from the RCA. The inspectors observed surveys of material and personnel being released from the RCA using SAM, PCM, and PM instruments. The inspectors also observed source checks of these instruments and discussed equipment sensitivity and release program guidance with licensee staff.

To evaluate the appropriateness and accuracy of release survey instrumentation, radionuclides identified within recent waste stream analyses were compared against the radionuclides used in current calibration sources and performance check sources. The inspectors also reviewed the last two calibration records for SAM instruments at the HP Control Point.

Licensee programs for monitoring materials and personnel released from the RCA were evaluated against: 10 CFR Part 20 and IE Circular 81-07, Control of Radioactively Contaminated Material. Documents reviewed are listed in the Attachment. The inspectors completed 10 samples.

Problem Identification and Resolution. The inspectors reviewed audits and CRs involving environmental monitoring, meteorological monitoring, and release of radioactive materials. The inspectors evaluated the licensee's ability to identify, characterize, prioritize, and resolve the identified issues in accordance with procedure NMP-GM-002, Corrective Action Program, Ver. 5.0 and associated guideline documents. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors sampled licensee submittals for the listed PIs during the period from April 1, 2006, through June 30, 2007, for Unit 1 and Unit 2. The inspectors verified the licensee's basis in reporting each data element using the PI definitions and guidance contained in procedures 00163-C, NRC Performance Indicator and Monthly Operating Report Preparation and Submittal, and Nuclear Energy Institute (NEI) 99-02, Regulatory Assessment Indicator Guideline.

Mitigating Systems Cornerstone

- Mitigating Systems Performance Index, Emergency AC Power System
- Mitigating Systems Performance Index, High Pressure Injection System
- Mitigating Systems Performance Index, Residual Heat Removal System

The inspectors reviewed portions of the operator log entries, the Vogtle MSPI basis document, condition reports, work orders, PI summary reports, and raw PI data to verify the licensee had accurately submitted the PI data.

Occupational Radiation Safety Cornerstone

- Occupational Exposure Control Effectiveness

The inspectors reviewed the PI results for the period April 2006 through March 2007. The inspectors reviewed monthly PI reports and selected CRs related to controls for exposure significant areas. The inspectors also reviewed licensee procedural guidance for collecting and documenting PI data. Documents reviewed are listed in the Attachment.

Public Radiation Safety Cornerstone

- Radiological Control Effluent Release Occurrences

The inspectors reviewed the PI results for the period October 2006 through July 2007. The inspectors reviewed cumulative and projected doses to the public, out-of-service effluent radiation monitor data logs, and selected condition reports related to Radiological Effluent Technical Specifications (RETS)/ODCM issues. The inspectors also reviewed unplanned and abnormal releases reported in the 2006 Annual Effluents Report. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

a. Inspection Scope

- .1 Daily Condition Report Review. 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.
- .2 Focused Review. The inspectors examined effectiveness reviews that had been performed between January 1, 2007 and August 31, 2007. Effectiveness reviews are intended to ascertain if implemented corrective actions have been effective by ensuring the causes identified in the original CR have been corrected, there has been no recurrence of the same or similar event, and the corrective actions had been adequately challenged. The licensee's corrective action program procedure, NMP-GM-002, requires that effectiveness reviews be performed on all severity level 1 and 2 CRs and selected severity level 3 CRs. The inspectors performed a detailed review of five CR effectiveness reviews in order to (1) verify that all required effectiveness reviews were completed and (2) assess the scope, depth, and adequacy of those effectiveness

reviews. The inspectors determined that the reviews were appropriately focused and adequately examined for the recurrence of the issue that initiated the original CR. Documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings of significance were identified.

4OA6 Meetings, Including Exit

On October 5, the resident inspectors presented the inspection results to Mr. Tom Tynan and other members of his staff, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

4OA7 Licensee-Identified Violations

The following findings of very low safety significance (Green) were identified by the licensee and were violations of NRC requirements which met the criteria of Section VI of the NRC Enforcement Policy, NUREG-1600, for being dispositioned as an NCV.

- Technical Specification 5.4.1.a requires that written procedures be established, implemented, and maintained for the applicable procedures specified in Regulatory Guide 1.33, Appendix A, including Section 7, Procedures for Control of Radioactivity. Contrary to the above, between March 15, 2005 and March 23, 2005, samples were obtained from the containment atmosphere monitor, 1-RE-2562, for the purpose of generating containment effluent release permits while the monitor was isolated rendering the samples invalid. Although this radiation monitor does not provide local indication when isolated, neither operations nor chemistry procedures required operations personnel to provide verification that the containment isolation valves were open when chemistry personnel notified operations of the intent to obtain samples. This finding is of very low safety significance because the finding involving the effluent release program did not impair the licensee's ability to assess dose and the release limits of 10 CFR 50 Appendix I and 10 CFR 20.1301(d) were not exceeded for any of the abnormal releases. This finding was entered in the licensee's corrective action program as CR 2005102092.
- Technical Specification 5.4.1.a requires that written procedures be established, implemented, and maintained for the applicable procedures specified in Regulatory Guide 1.33, Appendix A, including Section 7, Procedures for Control of Radioactivity. Contrary to the above, on March 25, 2006, an unplanned release of Unit 1 Waste Gas Decay Tank No. 6 occurred when operators failed to follow procedure 13202-2, Gaseous Releases. Also, on September 25, 2006, an unplanned release of Unit 2 WGDT No. 1 occurred when an operator failed to use procedure 13201-2, Gaseous Waste Processing System. This finding is of low safety significance (Green) because the licensee's ability to assess dose was not impaired and the release limits of 10 CFR 50 Appendix I and 10 CFR 20.1301(d) were not exceeded for either of the unplanned releases. This finding was entered in the licensee's corrective action program as CRs 2006103594 and 2006110602 respectively.

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee personnel:

J. Acree, Operations Training Supervisor  
R. Brown, Training and Emergency Preparedness Manager  
C. Buck, Chemistry Manager  
W. Copeland, Performance Analysis Supervisor  
R. Dedrickson, Plant Manager  
K. Dyar, Security Manager  
C. Dykes, Senior Medical Services Supervisor  
I. Kochery, Health Physics Manager  
L. Mansfield, Nuclear Operations Training Supervisor  
S. Phillips, Operations Superintendent  
J. Robinson, Work Control Superintendent  
B. Rooks, Medical Services Supervisor  
S. Swanson, Engineering Support Manager  
T. Tynan, Site Vice-President  
S. Varnum, Chemistry Support Supervisor  
D. Vineyard, Operations Manager  
J. Williams, Site Support Manager

### **LIST OF DOCUMENTS REVIEWED**

#### **Section 1R04: Equipment Alignment**

##### Procedures

11150-2, Nuclear Service Cooling Water System Alignment  
11715-1, Component Cooling Water System Alignment  
13150-2, Nuclear Service Cooling Water System  
11145-1, Diesel Generator Alignment

##### Drawings

2X4DB133-1, Nuclear Service Cooling Water System  
2X4DB133-2, Nuclear Service Cooling Water System  
1X4DB136-1, Component Cooling Water System  
1X4DB170-1, P&I, Diesel Generator, Train A

##### CRs

2007101880, 2005111178

##### System Health Reports

Nuclear Service Water Cooling System 1202, 2<sup>nd</sup> quarter 2007  
Nuclear Service Water Cooling System 1202, 1<sup>st</sup> quarter 2007

#### **Section 1R05: Fire Protection**

##### Procedures

92719-2, Zone 19, Auxiliary Building CVCS Centrifugal Charging Pump Rooms Fire Fighting Preplan



92720-2, Zone 20, Auxiliary Building CVCS Pump Room Train A Fire Fighting Preplan  
 92721-2, Zone 21, Auxiliary Building CVCS NCP Room Fire Fighting Preplan  
 92731-2, Zone 31, Auxiliary Building Level B Fire Fighting Preplan  
 92732-2, Zone 32, Auxiliary Building Level B Fire Fighting Preplan  
 92736-2, Zone 36 Auxiliary Building Level A CCW Pumps Train A Fire Fighting Preplan  
 92737-2, Zone 37 Auxiliary Building Level A CCW Pumps Train B Fire Fighting Preplan  
 92749-1, Zone 49, Auxiliary Building Level 1 Fire Fighting Preplan  
 92752-1, Zone 52, Auxiliary Building Level 1 Fire Fighting Preplan  
 92754-1, Zone 54, Auxiliary Building Level 2 Fire Fighting Preplan  
 92755-1, Zone 55, Auxiliary Building Level 2 Fire Fighting Preplan  
 92782-1, Zone 82 Control Building Level B Fire Fighting Preplan  
 92794-2, Zone 94 Control Building Level A Fire Fighting Preplan  
 92795-2, Zone 95 Control Building Level A Train A Spreading Room Fire Fighting Preplan  
 92797-1, Zone 97 Control Building Level A Fire Fighting Preplan  
 92798-1, Zone 98 Control Building Level A Fire Fighting Preplan  
 92799-1, Zone 99 Control Building Level A Fire Fighting Preplan  
 92803-1, Zone 103 Control Building Level A Fire Fighting Preplan  
 92805-1, Zone 105 Control Building Level 1 Fire Fighting Preplan  
 92873-2, Zone 173 Control Building Level A Fire Fighting Preplan  
 92874-2, Zone 174 Control Building Level A Fire Fighting Preplan

### **Section 1R11: Licensed Operator Requalification**

#### Procedures

00715-C, Licensed Operator Qualification Program  
 10010-C, Operator Qualification Program  
 60001-C, Exam Administration Policy  
 60002-C, Training Administrative and Procedure  
 60005-C, Revision 15.1, Incorporation of Changes in Training Material and Simulator  
 60007-C, Rev 13.3, Licensed Operator Requalification Examination Guidelines  
 60201-C, Rev 17.1, Simulator Training & Documentation  
 60203-C, Rev 6.2, Simulator Certification  
 60200-C, Rev 11.1, Simulator Maintenance Program  
 60500-C, Rev. 6.2, Job Task Analysis  
 NMP-TR-208, SNC Policy on Proctoring of Training Exams

#### Normal Evolutions Simulator Tests

Low Power Physics Testing Cycle 13 & 14  
 06-03, Load Changes Test 11/4/05  
 06-04, Plant Shutdown From Rated Power 10/3/06

#### Transient Simulator Tests

07-01, Manual Reactor Trip from 100% power 09/22/06 and 04/05/07  
 07-04, Simultaneous Trip of all RCPs, 09/22/06  
 07-03, Simultaneous Closure of all MSIVs, 09/22/06 and 04/05/07

#### Simulator Tests

05-04, Large Break LOCA, 09/26/06

05-01, Steam Generator Tube Rupture, 03/01/07  
 05-08, Loss of Offsite Power, 09/28/06  
 05-31, Turbine Trip w/ Failure of Auto Reactor Trip, 02/24/06 and 11/08/05  
 05-48, Steam Leak Malfunctions 09/29/06  
 2006 Simulator Certification Testing Problem List  
 2006 Simulator Test Guide Updates

#### LERs

2006-004, Unit 1, ECCS Accumulator #1 inoperable  
 2005-001, Unit 2, High Flux Alarm Inoperable

#### Lesson Plans

V-RQ-HO-28100-001, Solid State Protection System, Rev. 10  
 V-SR-20067LORQ "2006 SRO5 Exam"

#### Course Critiques

2007400169, Sync Power  
 2007400231, Electrical Distribution  
 2007400235, Natural Circulation EOP, MCD, SAMG and Chernobyl  
 2007400236, Reactor Theory, Shutdown Margin Calculations

### **Section 2OS1: Access Control To Radiologically Significant Areas**

#### Procedures, Guidance Documents, and Manuals

00920-C, Radiation Exposure Limits and Administrative Guidelines, Revision (Rev.) 16.1  
 00930-C, Radiation and Contamination Control, Rev. 24  
 43014-C, Special Radiological Controls, Revision (Rev.) 38.1  
 43005-C, Establishing and Posting Radiation Controlled Areas and High Radiation Area Access Control, Rev. 34  
 44019-C, Dose Assessment from Contamination and Immersion in Noble Gas, Rev. 17.1  
 45016-C, Investigation, Evaluation and Management of Damaged, Lost, Malfunctioning, or Alarming Dosimetry, Rev. 7.1  
 Nuclear Management Procedure (NMP)-GM-002, Corrective Action Program, Ver. 5.0  
 NMP-QA-104, Audit Planning and Controls, Ver. 18  
 RWP 07-0102, Minor Work Tasks, OPs Tours and Surveillances in Unit Two Containment, Rev. 0  
 RWP 07-0106, I and C Repair, Replace, Troubleshoot and Minor Corrective Maintenance on Transmitter Gauges, Etc, Rev. 0  
 RWP 07-0109, Minor Work Task and Surveillances in High Radiation Areas, High Contaminated Areas, and/or Airborne Areas, Rev. 0  
 RWP 07-0134, Remove Ultrasonic Cleaning Equipment from SFP and Package for Shipment and all Associated Work, Rev. 0  
 RWP 07-2611, Top of Pressurizer SWOL Activities to Include Setup/Removal of Equipment, Welding, Grinding, NDE, & All Associated Work, Unit 2, Rev. 0  
 RWP 07-2509, Remove and Replace Rx Core Barrel, Unit 2, Rev. 0

#### Records and Data Reviewed

Personnel Contamination Event(PCE)/Personnel Contamination Record (PCR) Data, Calendar Year, October 2006 through July 2007

Survey Number (No.) 98012, RHR Pump Room Train A (2AXD22), 07/18/07  
 Survey No. 98129, Pipe Penetration Room (1AXA9)m 07/25/07  
 Survey No. 98413, Valve Gallery CVCS Letdown Heat Exchanger (1AXA8), 08/07/07  
 Survey No. 98252, Backflushable Filter Crud Tank Pump B (2AXC29), 07/30/07  
 Survey No. 98615, Backflushable Filter Crud Tank Pump B (1AXC94), 08/18/07  
 Survey No. 98605, Radwaste Processing Facility Overview, 08/17/07  
 Survey No. 98686, Waste Monitor Hallway, 08/21/07  
 Survey No. 79775, Waste Monitor Hallway, 09/14/05  
 Survey No. 36784, SE Section (2AXDSE), 11/20/01  
 Survey No. 94141, PZR Compartment - 242 Foot Elevation, 03/15/07

#### CAP Documents

VQA-2007-023, QA Audit of Health Physics (HP), V-HP-2007, 07/18/2007  
 V-2005-043, Quality Assurance Audit of Health Physics, 11/03/2005  
 Self-assessment Report, June 27-30,2006, Vogtle Nuclear Plant Dosimetry Program, 07/28/06  
 Southern Nuclear Operating Company Fleet Self-Assessment, Vogtle, Control of Radioactive Contamination and Radioactive Material, 03/19-22/2007  
 CRs: 2007109027, 2007108993, 2007105272, 2007104585, 2007103364, 2007102666, 2007102306, 2006114193, 2006111397, 2006111381, 2006110819, 2006110427, 2006110558, 2006109743

#### **Section 2OS3: Radiation Monitoring Instrumentation and Protective Equipment**

##### Procedures, Guidance Documents, and Manuals

00970-C, Respiratory Protection Program, Revision (Rev.) 11.1  
 24134-1, Isotopic Channel Calibration of the Containment Access Hatch Area Monitor 1RE-0004, Rev. 1.1  
 24138-2, Isotopic Channel Calibration of the Fuel Handling Building Area Monitor 2RE-0008, Rev. 2.1  
 24968-1, Isotopic Channel Calibration of the Containment Low Range Area Monitors 1RE-0002 and 2RE-0003, Rev. 5.1  
 24989-2, Isotopic Channel Calibration of the Containment High Range Area Monitors 2RE-0005 and 2RE-0006, Rev. 3  
 43631-C, Calibration of the IPM-7A/8/9 Contamination Monitors, Rev. 24  
 43651-C, Calibration of the SPM Personnel Portal Monitors, Rev. 12  
 43669-C, Operation and Calibration of MGPI Dose Rate Instruments, Rev. 8.2  
 43670-C, Calibration of Dose Rate Meters, Rev. 24.1  
 43673-C, Calibration of the Ludlum 177, Eberline Model RM-14, and Eberline Model RM-25 Count Rate Meters, Rev. 8.1  
 43689-C, Calibration of the (SAM) Small Articles Monitor, Rev. 4  
 44022-C, Operation and Calibration of the Whole Body Counter, Rev. 13.1  
 47001-C, Selection and Use of Respiratory Protection Equipment Used for Radiological Purposes, Rev. 15.1  
 47003-C, Qualitative and Quantitative Fit Testing of Individual's for Respirator Use, Rev. 21  
 47004-C, Breathing Air Analysis, Rev. 10  
 47005-C, Inspection, Repair, and Storage of Respiratory Protection Equipment, Rev. 13  
 47006-C, Control, Issuance and Return of Radiological Respiratory Protection Equipment, Rev. 13

47008-C, Operation and Use of the Self Contained Breathing Apparatus Charging System, Rev. 10.1

47013-C, Inspection, Repair, Storage of Self Contained Breathing Apparatus, Rev. 27  
NMP-GM-002, Corrective Action Program, Ver. 5.0

#### Records and Data Reviewed

10 CFR 61 Analysis, Work Order 181520, Letter from GEL Laboratories, LLC, 03/12/07  
Initial Calibration for Whole Body Counter Nos. 1 (Service Building Location) and 2 (Control Building Location), 11/28/06 and 10/04/06 (respectively)  
Laboratory Report Compressed Air/Gas Quality Testing for: Scott Revolve Air Model 5016 Charging Station, 08/21/06; and Service Air 1-2401-C4-502, 09/07/05  
Learner Qualification Status Sheets for Respiratory Protection Equipment, 07/09/07  
MSA C.A.R.E. Authorized Repair Center and MSA MMR Certified C.A.R.E Technicians Letter, 06/23/06  
Procedure No. 43631-C, Calibration of the IPM-7A/8/9 Contamination Monitors, Data Sheet 1, Installed Personnel Monitor Calibration Form, Serial No. (S/N) VEGP-HP-0634, 04/04/06 and 02/12/07  
Procedure No. 43651-C, Calibration of the SPM Personnel Portal Monitors, Data Sheet 1, SPM-904B Calibration Form, S/N VEGP-HP-0763, 08/23/07  
Procedure No. 43651-C, Calibration of the SPM Personnel Portal Monitors, Data Sheet 2, SPM-904B Calibration Form, S/Ns VEGP-HP-0763, 04/18/06 and 12/11/06; and VEGP-HP-767, 12/13/06 and 06/05/07  
Procedure No. 43669-C, Data Sheet 1, Instrument Information, Operation and Calibration of MGPI Dose Rate Instruments, VEGP-HP No. 1292, 02/23/07 and 07/17/02  
Procedure No. 43670-C, Data Sheet 1, VEGP-HP No. 0029, Calibration of the RO-2/RO2A/RO-20, 10/15/03; and Calibration of Dose Rate Meters, 09/15/06  
Procedure No. 43673-C, Data Sheet 1, Ludlum 177, RM-14, and RM-25N Calibration, S/N 0306, 05/09/06 and 09/19/06  
Procedure No. 43685-C, Data Sheet 1, Calibration and Operation of the ASP-1, S/N VEGP-HP-0558, 05/07/04 and 06/29/07  
Procedure No. 43689-C, Data Sheet 1, Calibration of the SAM Small Articles Monitor, VEGP No. VEGP-HP-1158, 03/31/06 and 06/05/07  
Procedure No. 47013-C, Inspection, Repair, Storage of Self Contained Breathing Apparatus, Data Sheet 2, Inspection and Maintenance of SCBA Units, Monthly Inspection: Health Physics Control Point SCBA Kits, 08/14/07 and 08/22/07; OSC - Emergency Kit SCBA Kits, 08/13/07 and 08/22/07; Operations Control Room SCBA Kits, 08/13/07 and 08/22/07; and TSC - Emergency Kit SCBA Kits, 08/14/07 and 08/22/07  
Source Check, Fastscan-1, 08/22/07  
Surveillance Task No. 24968-101, 04/04/05, and Work Order (WO) No. 1053781301, 10/02/06, Isotopic Channel Calibration of Containment Low Range Area Monitor 1RE-0002  
WO Nos. 1050412901, 06/27/05, and 1060876201, 12/19/06, Isotopic Channel Calibration of Containment Access Hatch Area Monitor 1RE-0004  
WO Nos. 2040123801, 11/29/04, and 2060072301, 11/11/06, Isotopic Channel Calibration of Fuel Handling Building Area Monitor 1RE-0008  
WO Nos. 2050443801, 09/19/05, and 2061019201, 03/05/07, Isotopic Channel Calibration of Containment High Range Area Monitor 2RE-0005

CAP Documents

CRs: 2005107023, 2005107036, 2005107192, 2005107722, 2006104435, 2007100497  
 QA Audit of Health Physicis (HP), V-HP-2005, Log: VQA-2005-043, 11/03/05

**Section 2PS1: Radioactive Gaseous and Liquid Effluent Treatment and Monitoring Systems**Manuals, Reports, and Procedures

Offsite Dose Calculation Manual, Ver. 23  
 Annual Radioactive Effluent Release Report, 2005 and 2006  
 Plant Alvin W. Vogtle Nuclear Generating Plant Groundwater Monitoring Plan for Radionuclides,  
 April 2007  
 Southern Nuclear Groundwater Protection Initiative Action Plan  
 NMP-EN-002, Actions for Potential Groundwater Contamination Events, Ver. 1.0  
 NMP-GM-002, Corrective Action Program, Ver. 5.0  
 NMP-OS-002, Verification Policy, Ver. 1.0  
 13201-2, Gaseous Waste Processing System, Rev. 54  
 13202-2, Gaseous Releases, Rev. 8  
 33015-2, Obtaining Gaseous Samples for Radioactivity Analysis Unit #2, Rev. 5.1  
 31000-C, Chemistry Quality Assurance and Control Program, Rev. 30.1  
 36020-C, Radioactive Gaseous Effluent Release Permit Generation and Data Control Computer  
 Method, Rev. 22.2  
 34310-C, Operation of the DRMS Turbine Building Drain Liquid Effluent Monitor (RE-0848),  
 Rev. 17  
 36015-C, Radioactive Liquid Effluent Release Permit Generation and Data Control Computer  
 Method, Rev. 27  
 34330-C, Surveillance of the DRMS, Rev. 34.3  
 34317-1, Operation of the Unit 1 DRMS Containment Atmosphere Process Monitor 1RE-2562,  
 Rev. 1.3  
 34333-C, Gaseous Effluent Monitor Setup for Releases, Rev. 6.1

Records and Data

10 CFR 50.75(g) Leak/Spill Decommissioning Record, Rainwater from U1 RWST Moat, 7/5/07  
 10 CFR 50.59 Screening/Evaluation Form, C061265901, Reverse Osmosis and Drum Dryer  
 System Installation in the Radwaste Processing Facility (RPF), Rev. 0  
 Gaseous Release Permit 60210.043.001.G, 9/25/06  
 Gaseous Release Permit 50026.032.001.G, 1/28/05  
 Gaseous Release Permit 60209.040.001.G, 10/6/06  
 Gaseous Release Permit 50125.046.001.G, 5/26/05  
 Gaseous Release Permit 60230.042.002.G, 5/20/06  
 Liquid Release Permit, 60118.002.039.L, 9/20/06  
 Drawing 2X4DB213-2, P&I Diagram: Purification and Clean-up System, Ver. 28.0  
 Results of Radiochemistry Cross Check Program, 2<sup>nd</sup> Quarter 2006  
 Efficiency calibrations, high purity germanium detectors 1, 3, 4, 5, and 7, various geometries,  
 March 2006  
 Channel Calibration of Liquid DRMS Monitors, Data Package 3, Date Sheet 2, 2RE-018,  
 5/15/06  
 Effluent Monitor Calibrations for 2RE-0018 (10/21/04, 5/15/06), flow (7/29/05, 11/20/06);  
 1RE-0018 (9/7/05, 12/6/06), flow (2/9/05, 9/11/06); ARE-16980 (4/12/05, 8/16/06);

1RE-12442A/B/C: channel (3/2/05, 9/26/06), isotopic (9/8/04, 4/11/06), flow (12/8/06, 5/27/07); 2RE-12442A/B/C: channel (1/13/05, 2/2/06, 11/14/06, 2/13/07), isotopic (8/24/05); and 1RE-12839A/B/C: channel (2/15/05, 11/16/06), isotopic (5/6/05, 12/6/06), flow (6/1/05, 5/4/07)

Work Order (WO) C071075101, Fuel Handling Building Port Accident Filter Exhaust Unit B (includes carbon test), 8/21/07

WO 2061328701, Auxiliary Building Continuous Exhaust Unit 2 (includes 18 month visual inspection, leak test for the HEPA and charcoal filters, carbon analysis and heater test), 6/19/07

#### CAP Documents

Southern Nuclear Operating Company Fleet Self Assessment - Vogtle - Control of Radioactive Contamination and Radioactive Material, 3/22/07

V-CRW-2006, QA Audit of Chemistry and Radioactive Waste, 12/4/06

CRs: 2006103594, 2006103597, 2006110602, 2005102092, 2006106981, 2006108097, 2006112079, 2006108608, 2006108613, 2006103077, 2007107397, 2005100661, 2006111115, 2006113619, 2006110250, 2007101459, 2007105450, 2007103859

### **Section 2PS3: Radiological Environmental Monitoring Program (REMP) and Radioactive Material Control Program**

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ENV-860, Collection and Handling of Milk Samples for Radiological Analysis, Rev. 12

ENV-859, Collection and Handling of River Water Samples for Radiological Analysis, Rev. 11

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ENV-856, Collection and Handling of Sediment Samples for Radiological Analysis, Rev. 9

ENV-855, Collection and Handling of Fish Samples for Radiological Analysis, Rev. 9

ENV-851, Radiological Monitoring - Air Dust/Gaseous Iodine Air Sampling Flow Calibration, Rev. 6

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