UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

April 29, 2009

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

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT 05000395/2009002

Dear Mr. Archie:

On March 31, 2009, the U.S. 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 on April 7, 2009, 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.

This report documents one NRC-identified finding of very low safety significance (Green) which was determined to be a violation of NRC requirements. However, because of the very low safety significance of the issue 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 this NCV, 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.

Additionally, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at the Virgil C. Summer Nuclear Station. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

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 NRC Public Document Room or from the Publicly Available Records (PARS) component of 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/

Gerald J. McCoy, Chief
Reactor Projects Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 05000395/2009002
w/ Attachment: Supplemental Information

cc w/encl: (See next page)

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Docket No.: 50-395
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Letter to Jeffrey B. Archie from Gerald J. McCoy, dated April 29, 2009

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT 05000395/2009002

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-395

License No.: NPF-12

Report No.: 05000395/2009002

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

Facility: Virgil C. Summer Nuclear Station

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

Dates: January 1, 2009 through March 31, 2009

Inspectors: J. Zeiler, Senior Resident Inspector
J. Polickoski, Resident Inspector

Approved by: Gerald J. McCoy, Chief
Reactor Projects Branch 5
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000395/2009-002; 01/01/2009 - 03/31/2009; Virgil C. Summer Nuclear Station; Routine Integrated Inspection Report; Other Activities

The report covered a 3-month period of inspection by resident inspectors. One Green finding, which was a non-cited violation (NCV), was identified by the NRC. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter 0609, "Significance Determination Process" (SDP). 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

Cornerstone: Barrier Integrity

- Green. The inspectors identified an NCV of 10 CFR 50.65 (Maintenance Rule) with two examples for failing to demonstrate that the performance of the control room normal and emergency air handling (control room ventilation) system was being effectively controlled through the performance of appropriate preventive maintenance. Specifically, the licensee failed to: 1) properly categorize a control room ventilation system pressure boundary breach due to maintenance activities as a maintenance preventable function failure (MPFF) against the 'B' train, and 2) properly consider the unavailability time incurred by the functional failure against the 'A' train. These failures to adequately assess the Maintenance Rule (MR) implications of a control room ventilation system functional failure resulted in the system not being placed under the goal setting monitoring requirements of 10 CFR 50.65(a)(1). The licensee entered these issues into their corrective action program as CR-08-00944, CR-09-00107, and CR-09-01056, and placed the control room ventilation system in MR (a)(1) goal setting status.

  This finding is more than minor because it is similar to the non-minor maintenance rule example 7.b. provided in Manual Chapter 0612, Appendix E, "Examples of Minor Issues," which states that violations of Paragraph 10 CFR 50.65(a)(2), failure to demonstrate effective control of performance or condition and not putting the affected structures, systems, and components (SSCs) in (a)(1), are not minor because they necessarily involve degraded SSC performance or condition. This finding was determined to be of very low safety significance (Green) because the incorrect functional failure and unavailability hour assessments did not, by themselves, result in an actual degradation of the barrier function provided for the control room or additional operability or functionality concerns. The finding directly involved the cross-cutting area of Human Performance, component of Resources, and aspect of Personnel Training and Qualifications, in that, the licensee engineering staff did not fully understand MR evaluation requirements for systems with common components or the counting of unavailability hours for systems that are out of service for reasons other than a formal tag-out program (H.2.b). (Section 4OA5.2)

B. Licensee-Identified Violations

None

REPORT DETAILS

Summary of Plant Status

The unit began the inspection period at full Rated Thermal Power (RTP). The unit operated at or near RTP for the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

Actual Adverse Weather Conditions

a. Inspection Scope

The inspectors performed two impending adverse weather inspections to review the licensee's overall preparations and protection of risk-significant systems in response to extreme cold weather. The inspectors verified the licensee had implemented applicable sections of operations administrative procedure (OAP)-109.1, Revision 2D, "Guidelines for Severe Weather." The inspectors walked down portions of the following systems: the related heat trace operation for the refueling water storage tank, condensate storage tank, service water (SW), circulating water, and reactor makeup water systems. Licensee response actions and weather report updates were monitored until the adverse weather conditions were over.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

Partial System Walkdowns

a. Inspection Scope

The inspectors conducted three partial equipment alignment walkdowns to evaluate the operability of selected redundant trains or backup systems with the other 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), FSAR, and technical specifications (TS). The inspections included review of outstanding maintenance work orders (WOs) 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.

- 1DA engineered safety feature (ESF) switchgear and 'A' emergency diesel generator (EDG), while 1DB ESF switchgear was non-functional during emergent maintenance

- 'B' reactor building cooling unit (RBCU) while 'A' RBCU was OOS for emergent work to replace valve seat in RBCU SW discharge valve XVB03107A
- 'A' and 'B' motor driven emergency feedwater (MDEFW) pumps while the turbine driven emergency feedwater (TDEFW) pump was OOS for scheduled maintenance to calibrate the valve controls for 'C' steam generator TDEFW flow control valve 1FV03556

b. Findings

No findings of significance were identified.

1R05 Fire Protection

Fire Protection - Tours

a. Inspection Scope

The inspectors reviewed recent CRs, WOs, 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 five areas (respective fire zones also noted):

- 1DA switchgear room (fire zone IB-20)
- 'A' and 'B' EDG rooms (fire zones DG-1.1, 1.2, 2.1, and 2.2)
- 'A' and 'B' battery and charger rooms (fire zones IB-2, 3, 4, 5, and 6)
- Intermediate building 412 elevation (fire zones IB-25.1.1, 1.2, 1.3, and 1.5)
- TDEFW pump room (fire zone IB-25.2)

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope

On March 4, 2009, the inspectors observed the performance of a senior reactor operator and reactor operators on the plant simulator during an emergency preparedness drill. The drill scenario (EPD-09-01B) involved an earthquake followed by a loss-of-coolant accident. 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 corrective action program (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 with the corresponding preventive or corrective maintenance associated with SSCs. The inspectors reviewed 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 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, Revision 4, "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-08-02627, digital rod position indication failure during plant startup from refueling outage RF-17
- CR-08-04434, CR-08-03575, CR-09-00124, RBCU SW discharge valves XVB03107A/B failed to stroke open in proper time resulting in MPFF, unavailability hours, and MR (a)(1) goal setting for the SW system

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.

- Work Week 2009-02: risk assessment for emergent maintenance on the steam propagation door DR1B/315 accessing the XSW1DB ESF switchgear room (yellow risk)
- Work Week 2009-04: risk assessment for emergent maintenance on 'A' RBCU SW discharge valve XVB03107A

- Work Week 2009-06: risk assessment for rescheduling of planned work week maintenance due to emergent maintenance on the reactor building (RB) sump discharge, inside containment isolation valve XVD06242A
- Work Week 2009-08: risk assessment for scheduled maintenance and testing on the 'A' SW pump (yellow risk), 'A' service water booster pump, and the 'A' service water pump house ventilation fan
- Work Week 2009-14: risk assessment for scheduled maintenance and testing on 'B' EDG (yellow risk), switchyard substation building room cooler cleaning / inspection, main generator Alterrex brush replacement, steam generator steam flow safety channel testing, and 'B' component cooling water (CCW) pump bearing oil replacement

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed four 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. Also, the inspectors verified that the operability evaluations were performed in accordance with station administrative procedure (SAP)-209, Revision 0D, "Operability Determination Process," and SAP-999, Revision 3A, "Corrective Action Program."

- CR-09-00065, 'B' heating, ventilation, and air conditioning (HVAC) system chill water pump inoperable due to high flow
- CR-09-00124, RBCU service water discharge valve XVB03107A open stroke time less than 15 seconds and is operable, but degraded
- CR-09-00407, RB sump discharge inside containment isolation valve XVD06242A failed closed while attempting to pump RB sump
- CR-09-00513, 'C' chiller XHX0001C tripped during a test start due to low oil pressure

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, Revision 4G, "Post Maintenance Testing Guideline."

- WO 0818622, PMT for Teflon seat replacement and stroke time testing for valve XVB03107B
- WO 0818271, PMT for seat replacement and setup for valve XVB03107A
- WO 0901615, PMT for diaphragm actuator replacement for the RB sump discharge, inside containment isolation valve XVD06242A
- WO 0816505 and WO 0904428, PMT for pump bearing oil change and bearing oil heat exchanger rubber grommet re-installation for 'B' CCW pump XPP0001B
- WO 0810775, PMT for calibrating the valve controls for 'C' steam generator TDEFW flow control valve 1FV03556
- PMT for scheduled quarterly preventive maintenance on 'B' EDG and support systems

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed and/or reviewed the six surveillance test procedures (STPs) 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-125.013B, Revision 0, "Diesel Generator B Semi-annual Operability Test"

Reactor Coolant System (RCS) Leakage:
- STP-114.002, Revision 12, "Operational Leakage Calculation"

Other Surveillance Tests:
- STP-501.003, Revision 11, "Battery Service Test"
- STP-223.002A, Revision 8I, "Service Water Pump Test"

- STP-205.004, Revision 7, “RHR Pump and Valve Operability Test” (‘B’ Train)
- STP-112.003, Revision 9, “Reactor Building Spray System Valve Operability” (‘A’ Train)

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

Cornerstone: Initiating Events

The inspectors verified the accuracy of the licensee’s PI submittals listed below for the period January 1, 2008 through December 31, 2008. The inspectors used the performance indicator definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, Revision 5, “Regulatory Assessment Performance Indicator Guideline,” and the licensee procedure SAP-1360, Revision 1, “NRC and INPO/WANO Performance Indicators” to check the reporting for each data element. The inspectors sampled licensee event reports (LERs), operator logs, plant status reports, CRs, and performance indicator data sheets to verify that the licensee had identified the cumulative safety system unavailability and required hours, as applicable. The inspectors discussed the PI data with licensee personnel associated with performance indicator data collection and evaluation.

- Unplanned Scrams per 7000 Critical Hours
- Unplanned Power Transients per 7000 Critical Hours
- Unplanned Scrams with Complications

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Review of Items Entered into the Corrective Action Program

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 Annual Sample: Review of Operating Experience of Active Leak Due to a Galled Stem

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-08-02535. This review was associated with the licensee's evaluation of an operating experience event involving an active leak due to galled stem on low head safety injection cross-connect valve XVG08887B. 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 issue was processed in accordance with SAP-999, "Corrective Action Program."

b. Findings and Observations

No findings of significance were identified.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

.2 (Closed) Unresolved Item (URI) 05000395/2008005-01, Review Licensee Maintenance Rule Re-Evaluation of Control Room Pressure Boundary Breach

a. Inspection Scope

The inspectors completed a review and characterization of URI 05000395/2008005-01. This review determined whether an MPFF attributed solely to the 'A' train of the Control Room Normal and Emergency Air Handling (control room ventilation) System was also applicable to the 'B' train and whether further MR program actions were required in accordance with 10 CFR 50.65(a)(2). The inspectors reviewed the following: the licensee's apparent cause evaluation (ACE) in CR-09-00107; the subsequent CR-09-01056; licensee review of the MR evaluation in root cause analysis (RCA)-08-00944 in terms of the MPFF and system unavailability time; and SAP-0157, Revision 0,

"Maintenance Rule Program," which follows the guidance set forth in NUMARC 93-01, "Industry Guidelines for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Final Draft to Revision 3 dated January 10, 2000.

b. Findings

Introduction. The inspectors identified an NCV of 10 CFR 50.65 (Maintenance Rule) with two examples of the licensee's failure to adequately assess the MR implications of a maintenance created breach in the control room pressure boundary (CRPB) affecting both trains of the control room ventilation system.

Description. On March 11, 2008, the control room ventilation system failed the TS surveillance performance test. RCA-08-00944 determined the following: a breach existed in the CRPB affecting both trains of control room ventilation starting February 26, 2008 (the breach being a gap opening in the ductwork from the removal of duct tape during preventative maintenance on air handling unit XAH0048) and the breach was repaired March 13, 2008, for a total CRPB breach exposure time of 17 days. The RCA concluded that the CRPB retest procedure was inadequate and there was a lack of CRPB envelope retest guidance in the site post maintenance testing procedure. This issue was documented in LER 05000395/2008002-01, Control Room Normal and Emergency Air Handling Systems Inoperable Due to Pressure Boundary Breach, and in NCV 05000395/2008004-02, Failure to Maintain the Control Room Pressure Boundary Operable and Complete the Required TS Actions.

The MR assessment performed by the licensee stated that the failure of the March 11, 2008, control room ventilation surveillance test was an MPFF of only the 'A' train due to test results that proved that 'A' train was incapable of meeting the TS acceptance criteria limits. The inspectors reviewed the MR assessment and determined that the licensee had not included the common mode nature of this functional failure in their assessment. The licensee then re-evaluated the MR assessment after inspectors questioned their initial assessment, and concluded that the previously mentioned failure of the CRPB was a common mode failure and an MPFF of the 'B' train of control room ventilation as well. This 'B' train MPFF increased the total number of 'B' train MPFFs to three as of September 2008, thereby exceeding the Air Handling (AH) System, Important to Maintenance Rule (ITMR) unreliability performance criteria 3c, which states, "No more than two (2) MPFFs per train in a rolling 18 month period." Exceeding this criteria should have resulted in the system being placed in MR (a)(1) goal setting status in September 2008. The inspectors determined that the licensee failed to categorize the MPFF of control room ventilation as a common mode failure applicable to the 'B' train, and accordingly, failed to monitor the system as required by 10 CFR 50.65(a)(1) per the unreliability performance criteria.

Additionally, during the inspectors' review of the licensee's re-evaluation of the MR assessment and the licensee's MR performance tracking database for unreliability failures and unavailability hours, the inspectors determined that the licensee had not identified the unavailability hours related to these functional failures relative to both trains of control room ventilation dating from February 26, 2008 to March 13, 2008. The licensee's subsequent re-evaluation of the MR assessment following inspector questioning in terms of unavailability hours, concluded that 414.0 unavailability hours should have been charged to the 'A' train of control room ventilation following the initial MR assessment in RCA-08-00944, dated June 16, 2008, when 'A' train was first

considered to be the only train affected. This increase in 'A' train unavailability hours raised the 'A' train rolling 18 month total to 251.9 hours as of February 2008 and 581.1 hours as of March 2008, thereby exceeding the AH System, ITMR unavailability performance criteria 3a, which states, "98.1% Train Availability for Control Room/TSC envelope cooling, pressure boundary, filtration, which translates to ≤ 250 hours per train unavailability over a rolling 18 month period." Exceeding this criteria for either train should have resulted in the system being placed in MR (a)(1) goal setting status as of February 2008. The inspectors determined that the licensee failed to consider the unavailability time incurred by this functional failure for the 'A' train following the initial MR assessment, and as well, failed to monitor the system as required by 10 CFR 50.65(a)(1) per the unavailability performance criteria.

Analysis. The inspectors determined that both examples of the licensee's failure to perform an adequate MR evaluation by not assessing an MPFF to the 'B' train of control room ventilation and by not charging unavailability hours to 'A' train following the initial MR assessment were performance deficiencies. This finding is more than minor because they are similar to the non-minor maintenance rule example 7.b. provided in Manual Chapter 0612, Appendix E, "Examples of Minor Issues," which states that violations of Paragraph 10 CFR 50.65(a)(2), failure to demonstrate effective control of performance or condition and not putting the affected SSCs in (a)(1), are not minor because they necessarily involve degraded SSC performance or condition. This finding was determined to be of very low safety significance (Green) because the incorrect functional failure and unavailability hour assessments did not, by themselves, result in an actual degradation of the barrier function provided for the control room or additional operability or functionality concerns.

During the inspectors' review of CR-09-00107 ACE and interviews with licensee systems engineering personnel, the inspectors found that training on MR assessment and evaluation was determined to be a causal factor for these findings. Specifically, the inspectors determined that there was a lack of awareness that a CRPB breach had to be evaluated against both trains of control room ventilation. Secondly, current licensee MR training for systems engineers did not address MR evaluation requirements for systems sharing common components. Lastly, a MR misinterpretation existed regarding how a system can be counted as unavailable without a formal system out-of-service tag-out in place. The finding directly involved the cross-cutting area of Human Performance, component of Resources, and aspect of Personnel Training and Qualifications, in that, the licensee engineering staff did not fully understand MR evaluation requirements for systems with common components or the counting of unavailability hours for systems that are out of service for reasons other than a formal tag-out program (H.2.b).

Enforcement. 10 CFR 50.65(a)(1), requires, in part, that the holders of an operating license shall monitor the performance or condition of SSCs within the scope of the rule as defined by 10 CFR 50.65(b), against licensee-established goals, in a manner sufficient to provide reasonable assurance that such SSCs are capable of fulfilling their intended functions. 10 CFR 50.65(a)(2) states, in part, that monitoring as specified in 10 CFR 50.65(a)(1) is not required where it has been demonstrated that the performance or condition of an SSC is being effectively controlled through the performance of appropriate preventive maintenance, such that the SSC remains capable of performing its intended function.

Contrary to the above, as of June 16, 2008, the licensee failed to demonstrate that the performance of the Control Room Normal and Emergency Air Handling System had been effectively controlled through the performance of appropriate preventive maintenance, in that: The inspectors determined that inadequate and incomplete procedural guidance was provided for restoration of the CRPB during maintenance; the licensee MR evaluation failed to identify and account for a system MPFF and system unavailability hours; and the system was not placed under the requirements of 10 CFR 50.65(a)(1). Because this finding is of very low safety significance, has been entered into the CAP as CR-08-00944, CR-09-00107, and CR-09-01056, and the control room ventilation system placed in MR (a)(1) goal setting status, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000395/2009002-01, Failure to Effectively Monitor the Performance of the Control Room Normal and Emergency Air Handling System per the Maintenance Rule.

.3 (Closed) Temporary Instruction (TI) 2515/176, EDG TS Surveillance Requirements Regarding Endurance and Margin Testing

Inspection activities for TI 2515/176 were previously completed and documented in inspection report 05000395/2008005, and this TI is considered closed at the Virgil C. Summer Nuclear Station; however, TI 2515/176 will not expire until August 31, 2009. The information gathered while completing this temporary instruction was forwarded to the Office of Nuclear Reactor Regulation for review and evaluation.

4OA6 Meetings, Including Exit

.1 Exit Meeting Summary

The inspectors presented the integrated inspection results to Mr. Jeffrey Archie and other members of the licensee staff on April 7, 2009. The licensee acknowledged the results of these inspections. The inspectors confirmed that inspection activities discussed in this report did not contain proprietary material.

.2 Annual Assessment Meeting Summary

On April 2, 2009, the Senior Resident Inspector met with Mr. Jeffrey Archie and other members of the licensee staff to discuss the NRC's annual assessment of the Virgil C. Summer's safety performance for the period of January 1 through December 31, 2008. The annual assessment results were previously provided to SCE&G via letter dated March 4, 2009.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Archie, Vice President, Nuclear Operations
L. Bennett, Manager, Plant Support Engineering
L. Blue, Manager, Nuclear Training
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 / Development Effectiveness
G. Lippard, Manager, Operations
M. Mosley, Manager, Chemistry Services
P. Mothena, Manager, Health Physics and Safety Services
J. Nesbitt, Manager, Materials and Procurement
D. Shue, Manager, Planning / Outage
W. Stuart, Manager, Design Engineering
B. Thompson, Manager, Nuclear Licensing
R. Williamson, Supervisor, Emergency Services
S. Zarandi, General Manager, Nuclear Support Services

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000395/2009002-01	NCV	Failure to Effectively Monitor the Performance of the Control Room Normal and Emergency Air Handling System per the Maintenance Rule (Section 4OA5.2)

Closed

05000395/2008005-01	URI	Review Licensee Maintenance Rule Re-Evaluation of Control Room Pressure Boundary Breach (Section 4OA5.2)
05000395/2515/176	TI	EDG TS Surveillance Requirements Regarding Endurance and Margin Testing (Section 4OA5.3)

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures and Drawings

FSAR 8.3, Onsite Power Systems
SOP-117, Revision 20k, Service Water System
SOP-125, Revision 11E, Industrial Cooling Water
SOP-211, Revision 13A, Emergency Feedwater System
D-302-085, Revision 41, Emergency Feedwater System Flow Diagram

Condition Reports Initiated for NRC Identified Issues

CR-09-00076, Missed fire extinguisher checks
CR-09-00107, Maintenance Rule evaluation concerns for 3/4/08 control room pressure boundary breach
CR-09-00134, Concern regarding adequacy of dose assessor training on manual dose calculation
CR-09-00142, Failure to utilize scheduling package checklist for non-tagout activities
CR-09-00157, Reviews of past-operability determinations not always timely
CR-09-00201, Heat trace tagged out inadvertently on circulating cooling water pumps
CR-09-00279, RMG8 alarm light and horn not functional in fuel handling building during fuel handling
CR-09-00299, Incore detector inoperability not tracked in TSAIL or R&R in timely manner
CR-09-00335, Ineffective shift supervisor turnover information on unexplained BISI alarms
CR-09-00383, Control of clean rag canister in EDG room not in accordance with station housekeeping
CR-09-00400, Temperature monitoring of Alternate AC underground cable not in accordance with commitments
CR-09-00446, Minor errors in MSPI unavailability hours
CR-09-00458, Minor procedure deficiencies regarding local stroke timing of valve XVB03107A
CR-09-00485, Minor reactor building closeout discrepancies and boron leakage items
CR-09-00636, Minor simulator equipment fidelity issues
CR-09-00985, “A” EDG minor fuel oil leaks identified

LIST OF ACRONYMS

ACE	Apparent Cause Evaluation
ADAMS	Agency Document Access and Management System
AH	Air Handling
CAP	Corrective Action Program
CAPR	Corrective Action to Prevent Recurrence
CCW	Component Cooling Water
CFR	Code of Federal Regulations
CR	Condition Report
CRPB	Control Room Pressure Boundary
DG	Diesel Generator
EDG	Emergency Diesel Generator
EPD	Emergency Preparedness Drill
ES	Engineering Services Procedure
ESF	Engineered Safety Feature
FSAR	Final Safety Analysis Report
GTP	General Test Procedure
HVAC	Heating, Ventilation, and Air Conditioning
IB	Intermediate Building
INPO	Institute of Nuclear Power Operations
ITMR	Important to Maintenance Rule
LER	Licensee Event Report
MDEFW	Motor Driven Emergency Feedwater
MPFF	Maintenance Preventable Functional Failure
MR	Maintenance Rule
NEI	Nuclear Energy Institute
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OAP	Operations Administrative Procedure
OOS	Out of Service
PARS	Publicly Available Records
PI	Performance Indicator
PMT	Post-Maintenance Testing
RB	Reactor Building
RBCU	Reactor Building Cooling Unit
RCA	Root Cause Analysis
RHR	Residual Heat Removal
ROP	Reactor Oversight Process
RTP	Rated Thermal Power
SAP	Station Administrative Procedure
SCE&G	South Carolina Electric and Gas
SDP	Significance Determination Process
SOP	System Operating Procedure
SSC	Structures, Systems, and Components
STP	Surveillance Test Procedure
SW	Service Water
SWBP	Service Water Booster Pump
SWPH	Service Water Pump House
TDEFW	Turbine Driven Emergency Feedwater
TI	Temporary Instruction
TS	Technical Specification
URI	Unresolved Item
WANO	World Association of Nuclear Operators
WO	Work Order