UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

November 23, 2010

Mr. Thomas D. Gatlin
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 PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000395/2010006

Dear Mr. Gatlin:

On October 22, 2010, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your Virgil C. Summer Nuclear Station. The enclosed report documents the inspection findings, which were discussed on October 22, 2010, with you and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and with the conditions of your operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of plant equipment and activities, and interviews with personnel.

On the basis of the samples selected for review, the inspectors concluded that in general, problems were properly identified, evaluated, and corrected. There was one green finding identified during this inspection associated with the failure to identify and correct a condition adverse to quality, specifically, a failure to recognize that safety related cables leading to the service water pump house (SWPH) from electrical manhole #2 (EMH-2) have been subject to submergence, a condition for which they were not designed. This finding was determined to be a violation of NRC requirements. However, because of the very low safety significance and because it was entered into your corrective action program, the NRC is treating the finding as a non-cited violation (NCV) consistent with Section 2.3.2 of the NRC's Enforcement Policy. If you contest the 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. In addition, if you disagree with the crosscutting aspect assigned to the 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, RII, and the NRC Senior Resident Inspector at the Virgil C. Summer Nuclear Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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/

George T. Hopper, Chief
Reactor Projects Branch 7
Division of Reactor Projects

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

Enclosure: Inspection Report 05000395/2010006
w/Attachment: Supplemental Information

cc w/encl. (see page 3)

In addition, several examples of minor problems were identified, including conditions adverse to quality that were not being entered into the corrective action program and narrowly focused condition report evaluations, and corrective actions that were ineffectively tracked or had not occurred.

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/RA/

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Letter to Thomas D. Gatlin from George T. Hopper dated November 23, 2010

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000395/2010006

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	50-395
License No.:	NPF-12
Report No.:	05000395/2010006
Licensee:	South Carolina Electric & Gas (SCE&G) Company
Facility:	Virgil C. Summer Nuclear Station
Location:	P.O. Box 88 Jenkinsville, SC 29065
Dates:	October 4 - 22, 2010
Inspectors:	M. King, Senior Project Inspector (Team Leader) D. Arnett, Project Engineer N. Childs, Project Engineer R. Williams, Reactor Inspector
Approved by:	G. Hopper, Chief, Reactor Projects Branch 7 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000395/2010006; 10/04/2010 - 10/22/2010: Virgil C. Summer Nuclear Station; Biennial inspection of the identification and resolution of problems.

The inspection was conducted by a senior project inspector, project engineers, and a reactor inspector. One Green finding, which was a non-cited violation (NCV), was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspect was determined using IMC 0310, "Components Within the Cross-Cutting Areas." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

Identification and Resolution of Problems

The inspectors concluded that, in general, problems were properly identified, evaluated, prioritized, and corrected. The licensee was effective at identifying problems and entering them into the corrective action program (CAP) for resolution, as evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. However, the inspectors identified two examples where plant issues were not identified in the CAP as a Condition Report (CR) and fifteen examples of CRs which were deleted from the CAP without documented justification. The licensee effectively used risk in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementing corrective actions. Generally, prioritization and evaluation of issues were adequate, formal root cause evaluations for significant problems were adequate, and corrective actions specified for problems were acceptable. However, the inspectors identified seven examples where issues were not prioritized in accordance with site CAP guidance and two examples of evaluations which lacked appropriate rigor. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner.

The inspectors determined that overall, audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. However, the inspector identified weaknesses related to inappropriate prioritization of issues and, inadequate documentation for deleted CRs were not previously identified through the station audit and self-assessment program. Operating experience usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, and plant operations.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors determined that personnel at the site felt free to raise safety concerns to management and use the CAP to resolve those concerns.

NRC Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. The inspectors identified a NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the licensee's failure to identify and correct a condition adverse to quality. The licensee failed to recognize that low voltage safety related cables leading to the service water pump house (SWPH) from electrical manhole #2 (EMH-2) had been subject to submergence, a condition for which they were not designed. The license initiated CR-10-03994 to address this issue.

The failure to recognize that safety related cables were being subjected to an environment for which they were not designed was a performance deficiency. The performance deficiency was more than minor in accordance with IMC 0612, Appendix B (Block 9, Figure 2), "Issue Screening," because if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, subjecting the low voltage electrical cables leading from EMH-2 to SWPH to continuous submersion had the potential to, over time, degrade the cable insulation and result in failure. In accordance with IMC 0609, Attachment 4, Table 4a, "Phase 1 – Initial Screening and Characterization of Findings", the finding was determined to be of very low safety significance (Green) because the submerged cable condition was a design or qualification deficiency confirmed not to have resulted in a loss of operability or functionality.

The cause of the finding was directly related to the problem evaluation cross-cutting aspect in the corrective action program component of the Problem Identification and Resolution area because the licensee did not thoroughly evaluate previous related conditions (CR-06-03220, CR-08-04927) and information contained in GL 2007-001 and, as a result, did not consider the potential for and the degrading effects of continuously submerged low voltage cables. (P.1(c)). (Section 4OA2.a.(3))

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspectors reviewed the licensee's CAP procedures which described the administrative process for initiating and resolving problems primarily through the use of condition reports (CRs). To verify that problems were being properly identified, appropriately characterized, and entered into the CAP, the inspectors reviewed CRs that had been issued between March 2008 and October 2010, including a detailed review of selected CRs associated with the following risk-significant systems: Service Water (SW), Electrical System (ES), and Component Cooling Water (CCW). Where possible, the inspectors independently verified that the corrective actions were implemented as intended. The inspectors also reviewed selected common causes and generic concerns associated with root cause evaluations to determine if they had been appropriately addressed. To help ensure that samples were reviewed across all cornerstones of safety identified in the NRC's Reactor Oversight Process (ROP), the inspectors selected a representative number of CRs that were identified and assigned to the major plant departments, including operations, maintenance, engineering, health physics, chemistry, and security. These CRs were reviewed to assess each department's threshold for identifying and documenting plant problems, thoroughness of evaluations, and adequacy of corrective actions. The inspectors reviewed selected CRs, verified corrective actions were implemented, and attended meetings where CRs were screened for significance to determine whether the licensee was identifying, accurately characterizing, and entering problems into the CAP at an appropriate threshold.

The inspectors conducted plant walkdowns of equipment associated with the selected systems and other plant areas to assess the material condition and to look for any deficiencies that had not been previously entered into the CAP. The inspectors reviewed CRs, maintenance history, completed work orders (WOs) for the systems, and reviewed associated system health reports. These reviews were performed to verify that problems were being properly identified, appropriately characterized, and entered into the CAP. Items reviewed generally covered a two-year period of time; however, in accordance with the inspection procedure, a five-year review was performed for selected systems for age-dependent issues.

Control Room walk-downs were also performed to assess the main control room deficiency list and to ascertain if deficiencies were entered into the CAP and tracked to resolution. Operator Workarounds and Operator Burden screenings were reviewed, and the inspectors verified compensatory measures for deficient equipment which were being implemented in the field.

The inspectors conducted a detailed review of selected CRs to assess the adequacy of the root-cause and apparent-cause evaluations of the problems identified. The inspectors reviewed these evaluations against the descriptions of the problem described in the CRs and the guidance in licensee procedure SAP-1356, "Cause Determination". The inspectors assessed if the licensee had adequately determined the cause(s) of

identified problems, and had adequately addressed operability, reportability, common cause, generic concerns, extent-of-condition, and extent-of-cause. The review also assessed if the licensee had appropriately identified and prioritized corrective actions to prevent recurrence.

The inspectors reviewed selected industry operating experience items, including NRC generic communications, to verify that they had been appropriately evaluated for applicability and that issues identified through these reviews had been entered into the CAP.

The inspectors reviewed site trend reports, to determine if the licensee effectively trended identified issues and initiated appropriate corrective actions when adverse trends were identified.

The inspectors attended various plant meetings to observe management oversight functions of the corrective action process. These included CR Review Team meetings and Management Review Team meetings.

Documents reviewed are listed in the Attachment.

(2) Assessment

Identification of Issues

The inspectors determined that the licensee was generally effective in identifying problems and entering them into the CAP and there was a low threshold for entering issues into the CAP. This conclusion was based on a review of the requirements for initiating CRs as described in licensee procedure SAP-0999, “Corrective Action Program,” management expectation that employees were encouraged to initiate CRs for any reason, and the fact that inspectors found only one deficiency during plant walkdowns not already entered into the CAP. Trending was generally effective in monitoring equipment performance. Site management was actively involved in the CAP and focused appropriate attention on significant plant issues.

Based on reviews and walkdowns of accessible portions of the selected systems, the inspectors determined that system deficiencies were being identified and placed in the CAP.

However, as described in the “Findings” section of this report, the inspectors did identify one finding related to the failure to identify a condition adverse to quality associated with safety related cables being subjected to an environment for which they were not designed.

The inspectors also identified an adverse trend related to the availability of prestaged tools intended for use in beyond design bases accident mitigation strategies which had not been previously identified by the licensee. Specifically, four consecutive quarterly tool inventories, second quarter 2009, through first quarter 2010, identified missing or uncalibrated tools. Inspectors noted that CRs were initiated documenting the individual inventory discrepancies, however, the CR documenting the first quarter 2010 inventory was deleted to a previous inventory’s CR and, contrary to licensee guidance contained in SAP-1353, “Trending of Station Deficiencies”, no adverse trend was identified.

Inspectors determined the issue to be of minor significance and not subject to enforcement action in accordance with the NRC's Enforcement Policy since none of the missing tools would have prevented the performance of a mitigation strategy. The licensee initiated CR 10-04069 to address this issue.

Prioritization and Evaluation of Issues

Based on the review of CRs sampled by the inspectors during the onsite period, the inspectors concluded that problems were generally prioritized and evaluated in accordance with the licensee's CAP procedures as described in the CR categorization guidance in SAP-0999. Each CR was assigned a priority level (category) by the CR Review Team and adequate consideration was given to system or component operability and associated plant risk.

The inspectors determined that station personnel had conducted root cause and apparent cause analyses in compliance with the licensee's CAP procedures and assigned cause determinations were appropriate, considering the significance of the issues being evaluated. A variety of formal causal-analysis techniques were used depending on the type and complexity of the issue consistent with SAP-1356.

However, as described in the "Findings" section of this report, the inspectors identified a finding in which the cause of the performance deficiency was attributed to inadequate evaluation of previously identified issues.

The inspectors also identified a number of examples where the documentation, prioritization, and evaluation of problems did not clearly meet the guidance in the following procedures SAP-0999 and SAP-1356. Because these examples did not adversely affect any ROP cornerstone objectives, the inspectors determined the issues were of minor significance and not subject to enforcement action in accordance with the NRC's Enforcement Policy.

- CR-10-03830 was initiated to identify a flow meter used in a STP-105.006, "Safety Injection/Residual Heat Removal Monthly Flowpath Verification Test," test rig which had never been calibrated. The Licensee's evaluation stated that the meter was not required to be calibrated due to (1) there was no vendor recommended periodic checks for the flow meter and (2) the meter was used for indication only and not for decision making. Subsequent inspection identified (1) previously overlooked vendor recommended calibration frequency guidance (once yearly when used in ideal conditions as described in the vendor manual) and (2) the data gathered from the flow meter was being used for tracking/trending purposes for the Gas Intrusion Management Program, SAP-162 and credited in the licensee's response to NRC Generic Letter 2008-001, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" as being used as a basis for reviewing certain Technical Specification surveillance intervals. The licensee issued CR-10-03830 to address the inadequate evaluation of this issue.

- Inspectors identified a total of 15 CRs which were deleted without documented justification. The licensee subsequently reviewed the CRs and added the appropriate justifications. However, some of the deleted CRs were subsequently determined to be valid conditions requiring additional review. All of the CRs were

determined to be minor in nature. The licensee issued CR-10-03918 to address this issue.

- Inspectors identified seven examples where CRs or Actions were assigned levels not in accordance with guidance contained in SAP-0999. Inspectors noted that some actions may not have received the appropriate management review and associated corrective actions may have been extended beyond timeliness goals appropriate for the level of the issue. The licensee issued CR-10-03575, CR-10-03964, and CR-10-03969 to address this issue. The specific examples identified were:

    - CR-05-03172, Licensee Identified Violation (LIV) CR
    - CR-08-00292, Corrective action to prevent recurrence
    - CR-08-00944, LER CR
    - CR-09-00107, actions to address apparent cause
    - CR-09-03603, Self-Assessment actions closed to another CR
    - CR-09-03980, Licensee Event Report (LER) CR
    - CR-10-02747, actions to restore compliance

Effectiveness of Corrective Actions

Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that overall, corrective actions were timely, commensurate with the safety significance of the issues, and effective, in that conditions adverse to quality were corrected and non-recurring. For significant conditions adverse to quality, the corrective actions directly addressed the cause and effectively prevented recurrence in that a review of performance indicators, CRs, and effectiveness reviews demonstrated that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to prevent recurrence (CAPRs) were sufficient to ensure corrective actions were properly implemented and were effective.

However, the inspectors identified one example where the corrective actions did not fully meet the guidance in procedure SAP-0999 to address the condition described in the CR. Because this example did not adversely affect any ROP cornerstone objectives, the inspectors determined the issue was of minor significance, and not subject to enforcement action in accordance with the NRC's Enforcement Policy.

- CR-08-03848, Action 6 directed that a full gap analysis be performed between EMP 135.004, Reactor Trip Breaker Preventive Maintenance, and the Westinghouse preventative maintenance document MPM-DS dated 1999. This was directed because discrepancies between the two documents were previously identified by an NRC inspector. However, at the time of this inspection, inspectors noted that a full gap analysis was not performed and the procedure feedback form only contained the specific discrepancies previously identified by the NRC inspector. The licensee initiated CR-10-04170 to address this issue.

(3) Findings

Introduction: An NRC-identified Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified for the licensee's failure to identify and correct a condition adverse to quality. The licensee failed to recognize that low voltage safety related cables leading to the service water pump house (SWPH) from electrical manhole #2 (EMH-2) had been subject to submergence, a condition for which they were not designed.

Description: Safety related cables run underground from EMH2 to the SWPH through conduits and exit the conduits at both ends. The conduits at EMH2 are at an elevation approximately 19 inches above the point at which they exit at the SWPH. The electrical cables running through the conduits were not qualified for continuous operation in submerged conditions. In the original plant design, the conduits were not sealed and allowed any water entering the conduits from EMH2 to drain through the conduits to the sump in the SWPH. However, according to documentation provided by the licensee, in 1982 the conduits were sealed at the SWPH side. The licensee subsequently removed the seals from the lowest elevation conduits.

During a walk down of the SWPH, inspectors questioned why some of the conduits at the SWPH side were sealed and what assurance the licensee had that the cables were not submerged within the conduits. The licensee removed portions of the sealing material from a sampling of conduits at each elevation of the SWPH to determine if water was being trapped by the seals. A significant amount of water was found in some of the conduits confirming that some of the cables had been subjected to submerged conditions within the conduits.

The inspectors found two CRs (CR-06-03220 and CR-08-04927) which had previously been entered into the licenses CAP related to submerged cables in EMH2. The scope of the licensee's evaluations for the CRs was focused on the potential for submergence of medium voltage cables only. The medium voltage cables were running through the lowest elevation of conduits where the seals had been removed, so the licensee concluded that the conduits were free to drain water and would not create a condition allowing the cables to be submerged. However, the licensee did not adequately consider the potential for, and the degrading effects of, continuously submerged low voltage cables. As a result, the licensee failed to recognize that the low voltage cables running through the sealed conduits were potentially submerged. Inspectors also reviewed the licensee's response to NRC Generic Letter (GL) 2007-01, "Inaccessible or Underground Power Cable Failures that Disable Accident Mitigation Systems or Cause Plant Transients". The inspectors noted a similar evaluation which did not adequately consider the potential vulnerability to cables other than medium voltage.

Additionally, inspectors found two recent instances where the licensee had missed opportunities to identify the submerged low voltage cables. In response to NRC Generic Letter 2002-012, "Submerged Safety-Related Electrical Cables", the licensee implemented a program of monthly manhole inspections. On October 3, 2006, the licensee initiated CR 06-03220 after an NRC resident inspector noted that the procedure used (CMP 700.013, "Inspection of Electrical Manholes") did not contain guidance to maintenance personnel performing the inspections regarding what level of water should prompt action to initiate a CR or to engage engineering for further evaluation. At the time of this team inspection, the corrective action to revise the procedure had not been

completed nor had interim guidance been provided to personnel conducting the inspections. Manhole inspections conducted on December 13, 2009 and December 17, 2009 documented four feet of standing water in EMH2, but no CR was written and engineering personnel were not notified even though the water was found above the level of the conduits creating a fully submerged condition for some cables.

Analysis: The inspectors determined that the licensee's failure to recognize that safety related cables were being subjected to an environment for which they were not designed was a performance deficiency. The performance deficiency was more than minor in accordance with IMC 0612, Appendix B (Block 9, Figure 2), "Issue Screening," because if left uncorrected, the performance deficiency had the potential to lead to a more significant safety concern. Specifically, subjecting the low voltage electrical cables leading from EMH-2 to SWPH to continuous submersion had the potential to, over time, degrade the cable insulation and result in failure. In accordance with IMC 0609, Attachment 4, Table 4a, "Phase 1 – Initial Screening and Characterization of Findings", the finding was determined to be of very low safety significance (Green) because the submerged cable condition was a design or qualification deficiency confirmed not to have resulted in a loss of operability or functionality.

The cause of the finding was directly related to the problem evaluation cross-cutting aspect in the corrective action program component of the Problem Identification and Resolution area because the licensee did not thoroughly evaluate previous related conditions (CR-06-03220 and CR-08-04927) and information contained in NRC GL 2007-001 and as a result, did not consider the potential for and the degrading effects of continuously submerged low voltage cables. (P.1(c)).

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," required in part, that conditions adverse to quality be promptly identified and corrected. Contrary to the above, since 1982, the licensee failed to recognize that low voltage safety related cables leading to the SWPH from EMH-2 had been subject to submergence, a condition for which they were not designed. Specifically, safety-related cables subjected to submergence have the potential to experience increased failure rates, negatively impacting long-term reliability and their ability to perform their intended safety functions. To address this issue, the licensee has enhanced CMP 700.013 and initiated an extent of condition analysis for the cables in question. Because this finding is of very low safety significance and has been entered into the licensee's corrective action program as CR-10-03994, this violation is being treated as a NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. NCV 05000395/2010006-01 "Failure to maintain safety related cables in a nonsubmerged environment."

b. Assessment of the Use of Operating Experience (OE)

(1) Inspection Scope

The inspectors examined licensee programs for reviewing industry operating experience, reviewed licensee procedure SAP-1351, "Operating Experience Program," reviewed and selected CRs to assess the effectiveness of how external and internal operating experience data was handled at the plant. In addition, the inspectors selected a sample of operating experience documents (e.g., NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and plant internal operating experience items, etc.), which had been issued since March 2008, to verify whether the

licensee had appropriately evaluated each notification for applicability, and whether issues identified through these reviews were entered into the CAP. Documents reviewed are listed in the Attachment.

(2) Assessment

Based on a review of documentation related to review of OE issues, the inspectors determined that the licensee was generally effective in screening OE for applicability to the plant. Industry OE was evaluated and relevant information was then forwarded to the applicable department for further action or informational purposes. OE issues requiring action were entered into the CAP for tracking and closure. In addition, OE was included in all apparent cause and root cause evaluations in accordance with licensee procedure SAP-1356.

(3) Findings

No findings were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The inspectors reviewed audit reports and self-assessment reports, including those which focused on problem identification and resolution, to assess the thoroughness and self-criticism of the licensee's audits and self assessments, and to verify that problems identified through those activities were appropriately prioritized and entered into the CAP for resolution in accordance with licensee procedure SAP-0999. Documents reviewed are listed in the Attachment.

(2) Assessment

The inspectors determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical, as evidenced by findings consistent with the inspectors' independent review. The inspectors verified that CRs were created to document all areas for improvement and findings resulting from the self-assessments, and verified that actions had been completed consistent with those recommendations. Generally, the licensee performed evaluations that were technically accurate. Site trend reports were thorough and a low threshold was established for evaluation of potential trends, as evidenced by the CRs reviewed that were initiated as a result of adverse trends.

The inspectors did note weaknesses related to inappropriate prioritization of issues (seven examples discussed in Section 4OA2.a.(2)) and inadequate justification for deleted CRs (seventeen examples discussed in Section 4OA2.a.(2)) that were not previously identified through the station audit and self-assessment program.

(3) Findings

No findings were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors randomly interviewed 17 on-site workers regarding their knowledge of the corrective action program at Virgil C. Summer Nuclear Station and their willingness to write CRs or raise safety concerns. During technical discussions with members of the plant staff, the inspectors conducted interviews to develop a general perspective of the safety-conscious work environment at the site. The interviews were also conducted to determine if any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors reviewed the licensee's Employee Concerns Program (ECP) and interviewed the ECP coordinator. Additionally, the inspectors reviewed a sample of CRs generated as a result of issues identified through the ECP to verify that concerns were being properly reviewed.

(2) Assessment

Based on the interviews conducted and the CRs reviewed, the inspectors determined that licensee management emphasized the need for all employees to identify and report problems using the appropriate methods established within the administrative programs, including the CAP and ECP. These methods were readily accessible to all employees. Based on discussions conducted with a sample of plant employees from various departments, the inspectors determined that employees felt free to raise issues, and that management encouraged employees to place issues into the CAP for resolution. The inspectors did not identify any reluctance on the part of the licensee staff to report safety concerns.

(3) Findings

No findings were identified.

4OA6 Exit

Exit Meeting Summary

On October 22, 2010, the inspectors presented the inspection results to Mr. Thomas Gatlin and other members of the licensee staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel:
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D. Gatlin, Vice President, Nuclear Operations
K. Gore, Manager, Organizational / Development Effectiveness
E. Lynch, Organizational / Development Effectiveness
C. McKinney, Nuclear Licensing
J. Nolting, Employee Concerns Program Coordinator
J. Weathersby, Supervisor, Nuclear Licensing

NRC personnel:
G. McCoy, Chief, Branch 5, Division of Reactor Projects
J. Zeiler, Senior Resident Inspector
E. Coffman, Resident Inspector

LIST OF ITEMS OPENED, CLOSED

Opened and Closed

05000395/2010006-01	NCV	Failure to maintain safety related cables in a nonsubmerged environment

Closed

None

Attachment

LIST OF DOCUMENTS REVIEWED

Procedures

BDMG-5.0, Manually Depressurize SGS and Low Pressure Water Sources (Turbine Driven Emergency Feedwater Pump Not Available)
CDG-01, "Cause Determination Guidelines", Revision 10
CMP-700.013, "Inspection of Electrical Manholes", Revision 0
ES-514, "Maintenance Rule Program Implementation", Revision 4
OAP-100.3, "Human Performance Tools", Revision 2
OERSG, "OE Report Screening Guidelines", Revision 0
SAP-0123, "Procedure Use and Adherence", Revision 4
SAP-1101, "Plant Health Program", Revision 1
SAP-1160, "Medical Requirements for Special Duties," Revision 8
SAP-1306, "Employee Concerns Program", Revision 3
SAP-1350, "VCS Station Assessment Program", Revision 5
SAP-1351, "Operating Experience Program", Revision 7
SAP-1353, "Trending of Station Deficiencies", Revision 1
SAP-1356, "Cause Determination", Revision 2
SAP-143, "Preventive Maintenance Program", Revision 14
SAP-157, "Maintenance Rule Program", Revision 0
SAP-162, "Gas Intrusion Management Program," Revision 0
SAP-209, "Operability Determination Process", Revision 0
SAP-601, "Application, Scheduling, and Handling of Maintenance Activities", Revision 14
SAP-999, "Corrective Action Program", Revision 10
SAP-999A, "Performance Improvement", Revision 0
SAP-999B, "CR Review Team", Revision 0
SAP-999C, "Management Review Team", Revision 0
SAP-999D, "QA Finding Resolution & Escalation", Revision 0
STP-105.006, "Safety Injection/Residual Heat Removal Monthly Flowpath Verification Test," Revision 11
STP-125.008, "Diesel Generator A 24 Hour Load Test", Revision 6G
STP-125.009, "Diesel Generator B 24 Hour Load Test", Revision 8G
STP-170.021, "Fire Switch Functional Test for XEG-0001B, Diesel Generator B", Revision 4D
STP-728.031, "Service Water Pump House Building Fire Barrier Inspection", Revision 4D

Condition Reports (CRs) Reviewed

00-00001	08-00292	08-01167	08-03443
02-00735	08-00301	08-01401	08-03456
02-02334	08-00713	08-01460	08-03575
02-02336	08-00923	08-01821	08-03660
03-01241	08-00944	08-01840	08-03848
04-03926	08-00944	08-02068	08-04041
05-03172	08-00972	08-02329	08-04291
05-03621	08-00972	08-02452	08-04359
06-01247	08-01013	08-02535	08-04390
06-03220	08-01038	08-02707	08-04927
06-03846	08-01067	08-02863	08-05079
07-02525	08-01111	08-03306	08-05121
08-00162	08-01130	08-03338	08-05128

08-05128	09-03980	10-01427	10-02921
08-05130	09-03997	10-01691	10-02939
09-00052	09-04025	10-01698	10-02940
09-00053	09-04237	10-01699	10-02983
09-00055	09-04252	10-01700	10-03060
09-00056	09-04272	10-01701	10-03086
09-00069	09-04411	10-01702	10-03129
09-00107	09-04513	10-01710	10-03159
09-00145	09-04702	10-01719	10-03198
09-00150	09-04968	10-01783	10-03221
09-00152	09-05093	10-01784	10-03575
09-00153	09-05126	10-01813	10-03697
09-00155	09-05150	10-01814	10-03830
09-00156	09-05321	10-01827	10-03892
09-00194	09-05523	10-01848	10-03911
09-00346	09-05566	10-01862	10-03947
09-00630	09-05567	10-01874	10-03953
09-00723	09-05571	10-01901	10-04119
09-01056	09-05589	10-01963	10-04272
09-01474	09-05692	10-02103	10-03918
09-02248	10-00006	10-02237	10-03951
09-02365	10-00045	10-02434	10-03964
09-02459	10-00212	10-02480	10-03969
09-02503	10-00220	10-02481	10-03990
09-02549	10-00308	10-02482	10-03991
09-02563	10-00343	10-02483	10-03993
09-02710	10-00358	10-02511	10-03994
09-02929	10-00380	10-02527	10-04069
09-03045	10-00440	10-02536	10-04093
09-03096	10-00512	10-02575	10-04098
09-03120	10-00513	10-02659	10-04099
09-03234	10-00515	10-02695	10-04148
09-03366	10-00540	10-02696	10-04154
09-03409	10-00606	10-02697	10-04170
09-03580	10-00740	10-02747	10-04173
09-03603	10-00741	10-02756	10-04174
09-03615	10-01196	10-02766	
09-03818	10-01350	10-02847	
09-03928	10-01401	10-02874	

Deleted CRs Reviewed

08-00889	08-01596	08-01729	08-02232
08-01221	08-01597	08-01904	08-02246
08-01255	08-01600	08-01984	08-02308
08-01354	08-01614	08-01999	08-02360
08-01413	08-01623	08-02055	08-02383
08-01486	08-01632	08-02086	08-02391
08-01568	08-01643	08-02162	08-02426

08-02443	08-04841	09-02302	09-05309
08-02485	08-04932	09-02445	09-05360
08-02494	08-04992	09-02492	09-05427
08-02670	08-05035	09-02555	09-05448
08-02675	08-05097	09-02801	09-05482
08-02847	08-05186	09-02824	09-05499
08-02875	08-05323	09-02924	09-05515
08-02928	09-00393	09-03109	09-05607
08-02929	09-00438	09-03384	09-05732
08-02988	09-00453	09-03399	10-00071
08-03093	09-00492	09-03695	10-00085
08-03164	09-00493	09-03714	10-00094
08-03205	09-00494	09-03831	10-00212
08-03282	09-00495	09-03835	10-00235
08-03581	09-00652	09-03853	10-00237
08-03606	09-00655	09-04003	10-00275
08-03682	09-00712	09-04011	10-00404
08-03761	09-00788	09-04068	10-00405
08-03794	09-00800	09-04109	10-00406
08-03835	09-00843	09-04144	10-00532
08-03855	09-00850	09-04259	10-00550
08-03897	09-00852	09-04299	10-00558
08-03907	09-00853	09-04300	10-00569
08-03907	09-00917	09-04385	10-00606
08-03973	09-00935	09-04395	10-00628
08-03974	09-00937	09-04515	10-00730
08-03975	09-00947	09-04531	10-00731
08-04003	09-01104	09-04535	10-00734
08-04004	09-01121	09-04537	10-00826
08-04019	09-01417	09-04573	10-00959
08-04060	09-01421	09-04615	10-01042
08-04140	09-01481	09-04621	10-01054
08-04146	09-01502	09-04666	10-01078
08-04155	09-01639	09-04735	10-01149
08-04221	09-01647	09-04769	10-01223
08-04262	09-01763	09-04822	10-01338
08-04335	09-01779	09-04823	10-01551
08-04366	09-01825	09-04827	10-01953
08-04377	09-01838	09-04828	10-01963
08-04427	09-01872	09-04837	10-01973
08-04491	09-01875	09-04861	10-02019
08-04510	09-01876	09-04864	10-02064
08-04526	09-02030	09-04873	10-02068
08-04587	09-02065	09-05104	10-02249
08-04647	09-02082	09-05128	10-02271
08-04718	09-02236	09-05235	10-02340
08-04735	09-02281	09-05270	10-02376
08-04759	09-02289	09-05308	10-02393

Attachment

10-02514	10-03000	10-03224	10-03524
10-02543	10-03030	10-03255	10-03702
10-02609	10-03031	10-03256	10-03868
10-02741	10-03142	10-03295	
10-02927	10-03223	10-03413	

Work Orders

802885	908070	1000413	1003746
804996	914189	1000885	1003746
805163	915036	1002413	1005150
805233	915422	1002414	1005198

Self-Assessments

QA-AUD-200813, “Corrective Action Program Audit
QA-AUD-200907, “Security/FFD/UAA/PADS”
QA-AUD-201001, "Radiation Control QA Audit"
SA08-HP-03, "ALARA Program Self Assessment"
SA08-NP-01, "Access Authorization, Personnel Access Data System (PADS) and Fitness for Duty Program", Revision 0
SA08-PS-01, "Transformer, Switchyard, and Grid Reliability Self-Assessment", Revision 1
SA09-DE-05S "Review of Cable Purchases with respect to IEEE 383"
SA09-HP-01, "Radioactive Material Control Self Assessment"
SA09-OD-01, "Self-Assessment of Root Cause Analysis Program"
SA09-OD-04S, "Common Cause Analysis Process", Revision 1
SA09-OE-01, "Nuclear Safety Culture Self Assessment"
SA09-TN-02S, "Effectiveness of CAPR's from RCA-07-01019, Qualification Maintenance and Tracking"
SA10-NP-01, "Safeguards Information Program Self Assessment," Revision 1
SA10-PS-05, "Inservice Testing Program Self Assessment"
SA10-TN-03S "Electrical Maintenance Training Content", Revision 1

Other Documents

210-108, Sheet 1, Rev 15 Electrical Interconnection Diagram XCX5202-DG Diesel Generator Control Cabinet
211-126, Sheet 106, Rev 11, Electrical Block Diagram, System XX, Conduit Only
CC ITMR, "CC Component Cooling Important to Maintenance Rule System Function Worksheet", dated January 14, 2004
Course Handout IB2, "Component Cooling Water System Course Handout," Revision 14
Intermediate Building System IB-1 Service Water System Course Handout, Revision 19
NTS Report No: 558-1088 Dated 9 October 1981
SCE&G Bill of Material for Control Cable (Summer Nuclear Station-Unit 1) dated Oct 11, 1976
SCE&G Bill of Material for Instrumentation Cable (Summer Nuclear Station-Unit 1) dated Jun 13, 1978
SCE&G Bill of Material for Power Cables (Summer Nuclear Station- Unit 1) dated August 25, 1975
SCE&G Management Directive 01A, "Nuclear Safety Culture", Revision 0
Service Water System Design Basis Document, Revision 11

Service Water System Health Reports: 2008-2nd Quarter, 2008-3rd Quarter, 2008-4th Quarter, 2009-1st Trimester, 2009-2nd Trimester, 2009-3rd Trimester, and 2010-1st Trimester
Service Water System Important to Maintenance Rule (ITMR) System Function Worksheet
VC Summer Nuclear Station, Unit 1 Qualification Documentation for Kerite 600v FR2/FR Power and Control Cable dated April 19, 1985
Virgil C. Summer Nuclear Station, Nine-Month Response to NRC Generic Letter 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Systems", dated October 13, 2008
Wyle Laboratories Test Report No 45371-1