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

June 10, 2004

South Carolina Electric & Gas Company
ATTN: Mr. Stephen A. Byrne
Senior Vice President, Nuclear Operations
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 05000395/2004006

Dear Mr. Byrne:

On May 14, 2004, the United States 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 May 14, 2004, 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 selected examination of procedures and representative records, observations of activities, and interviews with personnel.

On the basis of the samples selected for review, the team concluded that generally problems were properly identified, evaluated, and corrected. There was one finding of very low safety significance (Green) identified during this inspection associated with improper incorporation of operating experience into the corrective action program. The finding was determined to not involve a violation of NRC requirements and has been entered into your corrective action program. Additionally, a licensee-identified violation, which was determined to be of very low safety significance, is listed in Section 4OA7 of this report. If you contest the non-cited violation, 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.

Improvements were noted in the corrective action process since the previous problem identification and resolution inspection. For example, management involvement had increased in certain activities as demonstrated by their increased presence and involvement at Management Review Team meetings. However, a few minor problems were identified such as site personnel were not always generating condition evaluation reports (CERs) at the threshold

expected by plant management and/or they were slow to enter conditions into the CER process; corrective actions were not always effective, such as ensuring closure of doors associated with steam propagation or fire protection; and, there was a narrowly focused corrective action involving safety-conscious work environment.

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/

Kerry D. Landis, Chief
Reactor Projects Branch 5
Division of Reactor Projects

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

Enclosure: Inspection Report 05000395/2004006
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	50-395
License No.:	NPF-12
Report No.:	05000395/2004006
Licensee:	South Carolina Electric & Gas (SCE&G) Company
Facility:	Virgil C. Summer Nuclear Station
Location:	P. O. Box 88 Jenkinsville, SC 29065
Dates:	April 26-30 and May 10-14, 2004
Inspectors:	M. Shannon, Senior Resident Inspector (Team Leader) J. Starefos, Senior Project Manager, RES M. King, Resident Inspector, RII R. Cortes, Reactor Inspector, RII
Approved by:	K. Landis, Chief, Reactor Projects Branch 5 Division of Reactor Projects
Attachment:	Supplemental Information

Enclosure

SUMMARY OF ISSUES

IR 05000395/2004-006; 04/26-30/2004, 05/10-14/2004; Virgil C. Summer Nuclear Station; Biennial baseline inspection of the problem identification and resolution program.

The inspection was conducted by a Senior Resident Inspector, a Senior Project Manager, a Resident Inspector, and a Region II Reactor Inspector. One Green finding was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

Identification and Resolution of Problems

Overall, the licensee maintained an effective program for the identification and correction of conditions adverse to quality. However, during the inspection, several minor problems were identified. The licensee was generally effective at identifying problems at a low threshold and entering them into the Corrective Action Program (CAP). However, a few instances of failing to enter or delaying entry of issues into the CAP were identified. The licensee consistently prioritized issues in accordance with their CAP and routinely performed adequate evaluations that were technically accurate and of sufficient depth. Improvements were noted in the corrective action process since the previous problem identification and resolution inspection including increased management involvement and improved management review through the use of Management Review Team meetings. Root cause analyses were performed when appropriate and problem evaluations considered extent of condition and generic implications appropriately. Corrective actions were effective in correcting problems. However, in a few cases the licensee continued to experience problems with corrective actions for issues such as ensuring closure of the steam propagation and fire doors. Management fostered a safety-conscious work environment by emphasizing safe operations and encouraging problem reporting. However, during the inspection, the NRC identified that the licensee had narrowly focused corrective actions associated with a safety-conscious work environment issue.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Initiating Events

Green. A self-revealing finding was identified for ineffective incorporation of operating experience (OE) into the corrective action program. A November 2003 operating experience report had identified an issue regarding the feedwater regulating valve positioners. However, because the licensee reviewer inappropriately assumed that the positioners were being replaced every outage and that this action was sufficient, no additional actions were taken or planned. As a result of a reactor trip on March 30, 2004, the licensee performed a root cause evaluation. The licensee identified that the positioners were the root cause and that the OE information, if incorporated properly into the CAP, could have precluded this reactor trip.

The team determined this finding was more than minor because failing to properly screen this OE and implement corrective actions would eventually have resulted in a feedwater transient and a potential for causing a reactor trip. The finding was of very low safety significance because, although it would cause a feedwater transient/reactor trip, it did not increase the likelihood of a primary or secondary system loss of coolant accident initiator, did not contribute to a combination of a reactor trip and loss of mitigation equipment functions, and did not increase the likelihood of a fire or internal/external flood. The finding was not a violation of regulatory requirements because it involved non-safety related secondary plant equipment and procedures. (Section 4OA2 a.(2).2)

B. Licensee-Identified Violation

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

Report Details

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

a. Effectiveness of Problem Identification

(1) Inspection Scope

The team reviewed items selected across the three strategic performance areas (reactor safety, radiation safety, and physical protection) to verify that problems were being properly identified, appropriately characterized, and entered into the Corrective Action Program (CAP) for evaluation and resolution. The team reviewed program documents including the current version (Revision 5) and Revision 4 of Station Administrative Procedure (SAP)-1131 "Corrective Action Program," which described the administrative process for documenting and resolving problems. The team also reviewed other program documents including SAP-1356, Revision 0, "Cause Determination;" SAP-1141, Revision 8, "Non-Conformance Control Program;" and SAP-1351, Revision 2, "Operating Experience Program."

The team attended the licensee's Maintenance Meetings, Plant Information Meetings, Condition Evaluation Report (CER) screening committee meetings and Management Review Team (MRT) meetings to determine the level of management attention that problems received and to gauge the effectiveness of the screening process in ensuring that problems were properly captured in the licensee's CER database. CERs, which utilize the Primary Identification Program (PIP) software as a computerized processing and tracking tool, remain the primary means for documenting problems. The team also observed a Corrective Action Review Board (CARB) meeting and had discussions with plant personnel and the NRC resident inspectors to determine if problems were properly identified.

The team reviewed a sampling of CERs that had been generated since January 1, 2003, and those closed since January 1, 2003. The team reviewed CERs associated with systems that ranked high on the licensee's risk significance list. The team had the licensee conduct several computer database searches/sorts to identify the specific attributes associated with the issues identified and documented in the CAP. Those sorts included: CERs closed by nonconformance notices (NCNs); CERs closed by still open work orders (WOs) and open engineering change requests (ECRs); CERs related to procedure changes; canceled, deleted or voided CERs; open and closed Category 2 CERs; open and closed Category 3 CERs; CERs related to human performance issues; revised CERs; and still open CERs with open maintenance work requests (MWRs) or WOs. The licensee also provided CERs related to specific non-cited violations (NCVs) and NRC findings and CERs related to specific NRC generic communications (operating experience). The team also performed a search and review of deleted, canceled or deferred modifications, and recently revised emergency operating procedures. These reviews were performed to verify that the licensee's threshold for identification and

documentation of issues was consistent with procedural guidance and licensee management expectations and to verify that issues were being properly addressed in the CAP.

The team reviewed a comprehensive list of corrective MWRs and associated CERs to verify equipment problems were being entered into the CER database in accordance with procedure requirements. The team reviewed plant equipment issues associated with maintenance rule (a)(1) items, functional failures, maintenance preventable functional failures (MPFFs), and repetitive MPFFs, to verify that maintenance rule equipment deficiencies were being appropriately entered into the CAP.

The team toured the plant, including portions of the intermediate building, the auxiliary building, the service water pumphouse, the control room, and the diesel generator building to determine whether equipment and material condition problems were being identified. While in the control room, the team reviewed the equipment removal and restoration logbook (all open items), and the logbook of open control room discrepancies to determine if problems potentially affecting safe plant operations were properly entered into the CAP process.

In addition, the team reviewed the Root Cause Analysis (RCA) Report, RCA 03-1847, "Common Cause Analysis of the Corrective Action Program," dated October 2, 2003, and the Quality Assurance (QA) assessment titled Corrective Action Self-Assessment, dated November 18-21, 2002, and the associated CERs generated as a result of these audits, which included 0-C-03-1847, 02-3637 and 02-3638. The team evaluated the assessment's effectiveness in identifying problems in the CAP process and compared the results of the licensee's efforts with the teams findings and observations.

The team reviewed the industry OE program through review of SAP-1351, Revision 2, "Operating Experience Program," and interviews with key personnel in the Organization Development & Performance (OD&P) and Nuclear Licensing (NL) departments. Several NRC generic communications were selected to determine if the licensee had screened these items into the CAP by documenting them with a CER. In addition, general review of the CER documentation was performed for selected CERs.

(2) Assessment

.1 General Observations

The team noted that several program procedure changes had been implemented as recently as March 1, 2004. Some of the more significant program changes in SAP-1131, Revision 5, were the addition of the MRT; limitations for due date extensions which specifically required MRT approval for any second extension; the condition evaluation guidance (i.e. root cause, apparent cause, common cause) was moved to SAP-1356, Revision 0, "Cause Determination," which was implemented on February 17, 2004; and, corrective action completion timeliness expectations are now included in Enclosure 7.2 of SAP-1131. Because SAP-1131, Revision 5, had been recently issued, the sample of CERs impacted by the program changes was limited, thus making it more

subjective in assessing the future impact of the improvements. However, the team concluded that the changes should be effective and the addition of the MRT appeared to be a significant improvement in the licensee's corrective action process. The addition of the MRT addressed a problem involving the need for increased management involvement which had been documented in the previous problem identification and resolution inspection report 05000395/2002006. The team noted that site management was active in the corrective action process and focused appropriate attention on plant issues.

The team concluded that site personnel were appropriately generating CERs as required by the licensee's program. However, during this inspection, the team identified a few examples that demonstrated that site personnel were not always generating CERs at the threshold expected by plant management. The team identified four issues where opportunities to identify the issue had occurred but were not documented in a CER. In some cases, CERs eventually documented the issue even though timeliness was not consistent with site guidance. In one case, a CER was not written; however, a work order was initiated. These examples included the following:

- Two opportunities to document an emergency diesel generator lube oil strainer clogging issue when MWRs were written in September and October 2002, with a CER eventually written on November 26, 2002;

- A work order noted that the alternate diesel fire pump failed to start on May 3, 2003, and a CER was not initiated although CERs had been initiated for previous failures;

- Quality control inspectors documented (video) foreign material in the reactor vessel during the 10-year inservice inspection of the reactor vessel and reactor coolant system nozzles on November 2, 2003. A CER was not initiated until the fuel barrel had been reinstalled and water clarity became an issue during fuel reload on November 4, 2003. Subsequently, the five installed fuel bundles were removed from the core barrel and the reactor coolant system was cleaned and filtered prior to further fuel movement. This issue was captured in CER 0-C-03-3822 and a root cause analysis was performed and documented in RCA 03-3822. Additional CERs were initiated for operation's procedure problems related to this event and also for problems encountered with excessive RCS filter plugging experienced during the cleanup effort;

- On February 1, 2004, CER 0-C-04-0273 identified a start-up trip of the "A" air conditioning chiller. The team reviewed the chiller work history and noted that the same chiller had failed to start on January 21, 2004, due to low refrigerant pressure and no CER had been written following this failure. The team noted that the unreported problem could have prevented the February start failure if a CER had been written and appropriate corrective actions taken.

From the review of CERs associated with maintenance rule items and previously issued NCVs, the team determined that site personnel were appropriately documenting

maintenance rule problems in the licensee's CAP process. Maintenance rule evaluations performed using attachments in procedure ES-514, "Maintenance Rule Implementation," were appropriately attached to the associated CER in the PIP database.

During plant tours with operators the team noted MWRs were hanging appropriately where problems had been identified. During these rounds operators discussed issues with the team and an inboard seal leak was noted on the "B" component cooling water pump without an MWR. CER 0-C-04-1284 and a MWR were later generated to address this condition.

Based on the variety of corrective action process samples reviewed during this inspection and a subsequent comparison of the licensee's self assessments and audits, the team concluded that there were no significant differences related to the effectiveness of the licensee's corrective action process. Therefore, the team concluded that the self assessments and audits performed by the licensee were effective in identifying issues and that deficiencies were appropriately entered into the corrective action process.

The team noted that SAP-1351, Revision 2, "Operating Experience Program," sufficiently detailed a process to screen industry OE. Industry OE items were routinely reviewed by the licensee's OD&P department and the disposition of the items were recorded in an OE log. One finding, documented in the following section, was identified related to the OE program, in that, a specific OE item was not appropriately screened. This finding was considered an isolated instance and not reflective of the overall quality of the OE program. It was also noted that an opportunity to benchmark existed within the licensee's own organization in that the NL department handled NRC generic communication OE process differently than the OD&P department.

.2 Ineffective Incorporation of Operating Experience

Introduction: A Green self-revealing finding was identified for ineffective incorporation of OE, related to feedwater control valve positioners, into the CAP.

Description: As a result of the reactor trip on March 30, 2004, the licensee performed a root cause evaluation. The licensee determined that the root cause of the reactor trip was the failure of a pilot valve contained in the positioner associated with the 'C' Steam Generator feedwater control valve. The root cause evaluation also identified that the licensee had previously evaluated operating experience identifying this type of positioner failure and were to replace the positioners every refueling outage as preventative maintenance. However, the preventive maintenance to replace the valve positioners had not been performed during the last refueling outage as the reviewer expected. Another OE experience was posted on this type of failure potential on the Institute of Nuclear Power Operation (INPO) website on November 14, 2003, and reviewed in December 2003. The responsible engineer incorrectly characterized the OE as not applicable due to an incorrect assumption that the preventive maintenance was still being performed and that this action was sufficient. SAP-1351 requires the effective

use of OE information. The team determined that this improper OE screening represented an implementation problem with SAP-1351, a non-safety related procedure. The improper screening resulted in the ineffective incorporation of OE into the CAP and precluded correcting the positioner problem prior to its failure causing a reactor trip. This is a self revealing finding because the reactor trip initiated the discovery of the ineffective OE review. Absent the actions initiated as a result of the reactor trip, the ineffective OE review would have remained undiscovered.

Risk Analysis: The team determined this finding was more than minor because failing to properly screen this OE and implement corrective actions would result in a feedwater transient and a potential for causing a reactor trip. On March 30, 2004, a feedwater transient induced by this positioner issue did result in a reactor trip. The improper OE screening in December 2003, resulted in the licensee not discovering that the expected preventive maintenance had not been performed and resulted in a lost opportunity to establish contingency actions, briefings or other planning actions for a potential feedwater transient or other corrective actions such as positioner replacement at the next available opportunity. The finding affects the initiating events cornerstone. The team determined that the finding, however, did not contribute to the likelihood of a primary or secondary system loss of coolant accident initiator, did not contribute to a loss of mitigation equipment functions (emergency feedwater was unaffected), and did not increase the likelihood of a fire or internal/external flood. Therefore, the finding was screened as very low safety significance (Green). This issue is in the licensee's CAP under CER 0-C-04-0884.

Enforcement: No violation of regulatory requirements occurred as the failure was associated with non-safety related secondary plant equipment and with implementation of SAP-1351, a non-safety procedure. The issue is documented as a Green finding 05000395/2004006-01, Ineffective Incorporation of Operating Experience Into the Corrective Action Program.

.3 Observation of Missed Opportunity to Update Vendor Manual Guidance

A licensee-identified violation for an inadequate maintenance procedure was identified during review of issues associated with CERs 0-C-03-4177, 0-C-03-4348 and 0-C-04-0015 related to Turbine Driven Emergency Pump speed control issues and is documented in Section 4OA7 of this report. To correct the conditions, the licensee obtained additional guidance from the vendor for setup up and adjustment of the governor valve and linkage. The team identified that while the licensee had changed the maintenance procedure guidance, they had failed to update the vendor manual to reflect the improved guidance and also had failed to cross-reference the subject CERs in the procedure. The licensee was responsive to these concerns and added corrective actions to CER 0-C-04-0015 to correct these minor oversights.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The team reviewed a sample of corrective action documents to determine if the licensee appropriately prioritized and evaluated various issues being entered into the CAP. A sample of corrective action documents were selected from the various cornerstones with a focus on issues related to higher risk significant plant systems. Specific documents reviewed are referenced in the Attachment.

The team reviewed selected CERs, including those associated with industry operating experience issues and NCNs, to determine whether site personnel conducted reviews for generic implications, repetitive conditions, and common cause failure mode determinations when the condition warranted.

The team reviewed deficiencies identified during the last PI&R inspection (IR 05000395/2002006) to ensure that the issues had been addressed. Specifically, the team focused attention on areas where the previous report noted that increased management involvement was necessary, such as increased presence and involvement at the corrective action screening committee meetings.

The team attended Plant Information Meetings, CER screening committee meetings, a Plant Safety Review Committee meeting, and a CARB meeting to assess the licensee's prioritization and evaluation of various issues. In addition, the team observed multiple sessions of the recently implemented MRT along with performing a review of meeting minutes from five additional MRT meetings dated April 19-22 and 26, 2004.

(2) Assessment

The team determined that the licensee was effective in prioritizing and evaluating issues commensurate with their safety significance. Improvements in procedural guidance contained in SAP-1131, "Corrective Action Program," adequately addressed procedure deficiencies identified in the last NRC problem identification and resolution inspection report. In one case however, the team noted that the licensee still had not incorporated the NCN process into the computerized PIP program. An action item was in the CAP to ensure this action is accomplished.

The team concluded that the licensee's problem evaluations appropriately considered extent of condition and generic implications, and operability and reportability of issues were appropriately evaluated and resolved. At the various management meetings, the team observed that the specific issues identified in CERs received a level of discussion commensurate with their safety significance. The team also concluded that root cause analyses were being performed when appropriate.

The team noted that implementation of the MRT meeting process and the actual conduct of the MRT meetings was a significant improvement in the licensee's corrective action process. The team noted that the MRT meetings were focused on the specific

CERs identified as meeting topics. Meeting notes clearly documented the MRT members' expectations for processing each CER (e.g. action category, interim corrective actions, responsible organization, etc.). Even though the team's observations were conducted relatively soon after implementation of the MRT, it was apparent that the MRT members were active participants in this process.

During the review, the team did identify one example of a CER that was not categorized consistently with the licensee guidelines. The particular example described an action taken by an operator during rounds that unintentionally tripped the turbine driven emergency feedwater pump trip linkage, causing a short period of inoperability (CER 0-C-04-0225). This issue was originally categorized as a level 5 trending CER. Following discussions with the team, the CER was reassessed by the MRT and was recategorized as a Level 3 CER which would typically require the determination of an apparent cause and corrective actions.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The team reviewed the CERs listed in the Attachment to verify that the licensee had identified and implemented corrective actions commensurate with the safety significance of the documented issues, and where possible, evaluated the effectiveness of the actions taken. Part of this effectiveness review was conducted by attending the licensee's CARB meetings. The team also verified that common causes and generic concerns were addressed where appropriate. The team reviewed a QA surveillance report QA-SUR-200314-0 and the related CER 0-C-03-1847 which was generated at a previous CARB request. This CER evaluated a concern that the "corrective actions program does not have an effective process for identifying repetitive events." In addition, the teams reviewed CERs associated with previous NCVs to assess the adequacy of corrective actions.

(2) Assessment

From the review of CERs, the team determined that the licensee's corrective actions were effective in correcting problems. Management involvement in the CARB process was also considered to be very effective. The team observed that during the root cause analysis presentations, the general managers thoroughly questioned each analysis and openly assessed the adequacy and effectiveness of related corrective actions. The team also concluded that corrective actions for previous NCVs were adequate.

The team made an observation, with two examples, in which corrective actions were not always fully effective in resolving issues. In the first example, the team noted that the licensee continued to have problems related to proper stream propagation door closure. A previous violation identified in CER 0-C-03-1364, "Steam Propagation Door Violation" dated April 23, 2003, was included in this review. While the licensee had taken extensive corrective actions (including major re-labeling / highlighting signs and increased training of personnel related to steam propagation barrier (SPB) doors), the

team observed that the licensee was continuing to experience problems with effective corrective actions for SPBs and fire doors. For example, during the inspection, the licensee found open and unattended, for a postulated maximum time of approximately thirty minutes, an SPB door. This issue constituted a violation of minor significance and was not subject to enforcement action in accordance with Section IV of the NRC's Enforcement Policy. The licensee documented this minor violation in CER 0-C-04-1239. In addition, CER 0-C-04-1390 described a condition where Instrumentation and Control personnel demonstrated a lack of knowledge of SPB door closure requirements when they requested a permit to route a hose through an SPB door. This was not allowed in the plant's operational mode. During the work planning process, a shift test specialist caught this error and prevented a potential violation.

In the second example, the team noted that WO 0209077, dated June 28, 2002, documented that the alternate diesel fire pump had failed to start. Although the licensee suspected a faulty starter, this was not confirmed until a subsequent start failure on July 5, 2003. This issue did not constitute a violation, i.e., not subject to 10 CFR 50 Appendix B, and was considered to be of minor significance due to the pump being redundant to the primary fire pump. The start failure was documented in CER 0-C-03-2141.

In addition, the team made an observation that in one case corrective actions were not timely because the licensee closed an older CER to a newer CER. While reviewing a corrective action which included a reference to CER 0-C-02-0089, the team noted a previous corrective action identified in CER 0-C-00-0074 had been transferred to CER 0-C-02-0089, allowing closure of the earlier CER. The earlier CER (0-C-00-0074) had been identified in January 2000, and with the transfer to CER 0-C-02-0089, the corrective action to address the issue had still not been accomplished and now had a completion date in July 2004. This closure to another CER has allowed the corrective action to remain incomplete for nearly 4½ years. This issue constituted a violation of minor significance and was not subject to enforcement in accordance with Section IV of the NRC's Enforcement Policy.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The team informally interviewed licensee personnel to develop a general view of the safety-conscious work environment and to determine if any conditions existed that would cause workers to be reluctant to raise safety concerns. The team also discussed issues with the Resident Inspector (assigned since 1998), the former Senior Resident Inspector and the current Acting Senior Resident Inspector (assigned since March 8, 2004) to gain their perspective on the site safety-conscious work environment. The team also reviewed the licensee's employee concerns program (ECP), which provides an alternate method to the CER process for employees to raise safety concerns with the option of remaining anonymous.

(2) Assessment

The team concluded that licensee management generally fostered a safety-conscious work environment by emphasizing safe operations and encouraging problem reporting. Methods available to encourage problem reporting included CERs, MWRs, and the ECP. Interviews with licensee staff did not identify any reluctance to report safety concerns. However, the team noted one case where an employee was reprimanded by a manager for requesting information from an NRC inspector. This reprimand became commonly known by the employee's peers. The NRC observed that the corrective action for this case was too narrowly focused, in that the licensee counseled the manager and addressed the employee's issues. However, the licensee had not addressed the extended staff knowledge of the reprimand. This observation was considered to be an isolated case.

4OA6 Meetings

Exit Meeting Summary

The team presented the inspection results to Mr. S. Byrne and other members of licensee management at the conclusion of the inspection on May 14, 2004.

The team asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

4OA7 Licensee-Identified Violation

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

Technical Specification (TS) .8.1, "Procedures and Programs," requires, in part, that procedures be established, implemented and maintained covering safety-related maintenance as recommended in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Contrary to this, the licensee failed to have an adequate mechanical maintenance procedure (MMP-300.015, Turbine Maintenance, Emergency Feedwater Pump) for setup and adjustment of the governor valve and linkage. This finding is of very low safety significance, because both motor driven emergency feedwater pumps were available and based on a phase one screening that this finding did not represent an actual loss of safety function of a single train for greater than the TS allowed outage time. This issue has been entered into the CAP under CER 0-C-04-0015.

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

J. Archie, General Manager, Nuclear Plant Operations
F. Bacon, Manager, Chemistry Services
L. Blue, Manager, Health Physics Services
R. Clary, Manager, Nuclear Licensing and Operating Experience
M. Findlay, Manager, Nuclear Protection Services
M. Fowkles, General Manager, Engineering Services
S. Furstenberg, Manager, Nuclear Operations Training
D. Gatlin, Manager, Operations
D. Goldston, Operations Superintendent
D. Lavigne, General Manager, Organization Effectiveness
K. Nettles, General Manager, Nuclear Support Services
W. Stuart, Manager, Plant Support Engineering
A. Torres, Manager, Planning / Scheduling and Project Management
R. White, Nuclear Coordinator, South Carolina Public Service Authority
S. Zarandi, Manager, Maintenance Services

Other licensee employees included engineers, operations personnel, and administrative personnel.

NRC

M. Widmann, former Senior Resident Inspector for V.C. Summer
J. Reece, Acting Senior Resident Inspector, V.C. Summer

ITEMS OPENED, CLOSED AND DISCUSSED

Open/Closed		
05000395/2004006-01	FIN	Ineffective Incorporation of Operating Experience into the Corrective Action Program (Section 4OA2 a.(2).2)

Discussed
None

Attachment

LIST OF DOCUMENTS REVIEWED

Condition Evaluation Reports (all numbers begin with 0-C-)

98-0667
99-0954
99-1342

00-0061
00-0074
00-0093
00-0158
00-0297
00-0407
00-0461
00-0570
00-0629

01-0131
01-0403
01-0427
01-0582
01-1909
01-2161

02-0003
02-0089
02-0221
02-0380
02-1005
02-1329
02-1529
02-1554
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02-2156
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03-2876
03-2883
03-2931
03-3011
03-3073
03-3196
03-3201
03-3208
03-3327
03-3404
03-3421
03-3461
03-3073
03-3196
03-3201
03-3208
03-3252
03-3327
03-3404
03-3421
03-3461
03-3500
03-3564
03-3605
03-3613
03-3654
03-3663
03-3768
03-3820
03-3822
03-3863
03-3910
03-3961
03-3987
03-3988
03-3989
03-4026
03-4029
03-4034
03-4089
03-4141
03-4144
04-4152
03-4172
03-4177
03-4256
03-4348
03-4366

04-0015
04-0104
04-0225
04-0355
04-0561
04-0741
04-0747
04-0766
04-0844
04-0879
04-0884
04-1284
04-1378
04-1390

Condition Evaluation Reports related to Specific Searches

Human Performance CERs

CER 03-0867
CER 03-1460
CER 03-1473
CER 03-1831
CER 03-2402
CER 03-2588
CER 03-4025
CER 04-0046
CER 04-0066

CERs closed with still open MWRs

CER 99-1414
CER 02-1406
CER 02-1989
CER 03-2028
CER 03-2908
CER 03-3772
CER 03-4245
CER 03-4256
CER 03-4266
CER 04-0300
CER 04-1245

CERs referencing Procedure Changes

CER 03-1847
CER 03-1465
CER 03-1210
CER 03-0884
CER 03-0807
CER 02-3053
CER 02-2985
CER 02-2631
CER 02-2426
CER 02-2152
CER 02-1071

Deleted CERs

CER 02-3876
CER 03-0565
CER 03-0895

CER 03-1367
CER 03-2819
CER 03-3072
CER 03-3467
CER 03-3473
CER 03-3735
CER 03-3861
CER 04-0049
CER 04-0310
CER 04-0641

Other CERs

CER 04-0273
CER 03-1271
CER 03-1312
CER 03-0050
CER 03-0048
CER 03-0398
CER 03-3374
CER 03-4025
CER 03-1831
CER 03-1621
CER 03-4335
CER 03-2402
CER 03-4519
CER 00-0417
CER 01-0907
CER 02-3421
CER 02-3389
CER 02-3455
CER 02-0996
CER 03-2588

CERs Related to NRC Information Notices/ NRC Bulletins

BU 2002-01	CER 02-0703	
BU 2002-02	CER 02-2640	
BU 2003-01	CER 03-1897	
BU 2003-02	CER 03-2647	
BU 2003-03	NA	
BU 2003-04	CER 03-4140	
GL 2003-01	CER 03-1931	
IN 2002-09	CER 02-0339	CER 01-0629
IN 2002-24	CER 02-2493	
IN 2002-25	CER 02-2977	
IN 2002-26	CER 02-2986	

IN 2002-32	CER 02-3501	
IN 2003-03	CER 03-0342	CER 02-3748
IN 2004-01	CER 04-0460	
RIS 2002-12A	CER 02-2809	
RIS 2002-14	CER 02-2938	
RIS 2003-08	CER 03-1647	
RIS 2003-13	CER 03-2471	
RIS 2004-05	CER 04-1218	

CERS Related to Previously Identified NCVs and Findings

02-2061 (IR 05000395/2002002)
00-0607 (IR 05000395/2002002)
02-2376 (IR 05000395/2002003)
02-2312 (IR 05000395/2000003)
02-3562 (IR 05000395/2002004)
02-3687 (IR 05000395/2002004)
02-3688 (IR 05000395/2002004)

CERs Related to Previous PI&R Inspection at V.C. Summer (February/March 2002)

02-0467	02-0479	02-0496	02-0711	02-0714
02-0469	02-0480	02-0507	02-0712	02-0715
02-0477	02-0482	02-0710	02-0713	

PIP Searches

Computer Database Search for CERs with Action Category 3, and Discovered Dates
Computer Database Search for CERs with Action Categories 1 and 2, and Identified Dates
Computer Database Search of all CER's with all actions completed but still awaiting final closeout (370 CERs identified),
Computer search of steam propagation barrier (SPB) issues (25 CERs identified)
PIP database search of all system, structure, and component (SSC) related CERs that also had an action category level of 5

Procedures

ES-508, "Evaluation of Abnormal Conditions or Events"
ES-509, "Disposition of Site Nonconformances"
ES-514, "Maintenance Rule Implementation"
MD-83, "Self-Assessment Guiding Principles,"
MD-86, "Management Expectations for VCSNS Corrective Action Program"
NL-102, "Distribution, Review, and Processing of Various Regulatory and Industry Documents"
RCG-01, "Root Cause Analysis Guidelines"
SAP-107, "10CFR50.59 Review Process"
SAP-900, "Root Cause Analysis"

SAP-1103, “Assessment Program”
SAP-1131, “Corrective Action Program,” Revisions 4 and 5
SAP-1141, Nonconformance Control Program”
SAP-1142, “Trending Station Deficiencies”
SAP-1252, “Maintenance Rule Program”
SAP-1286, “Material System User Procedure”
SAP-1351, “Operating Experience Program”
SAP-1356, “Cause Determination”

Canceled, Deleted or Deferred Modifications

ECR 70340, DG Starting Air Compressor Replacement
ECR 70460, Limitorque Valve Operator SMB-000 5 ft-lb, 1700 rpm Replacement Motor Equivalency

Maintenance Work Order Search

A cross-reference report of more than 700 corrective work orders to CER numbers

Work Orders

0111223, Decrease load rate circuit turned “off”. Perform troubleshooting plan CER 01-907

Audits and Assessments, and Trend Reports

QA-SUR-200314-0/CER 0-C-03-1847 (Corrective action program does not have an effective process for identifying repetitive events - CARB requested review)
QA Root Cause Analysis Report RCA 03-1847, Common Cause Analysis of the Corrective Action Program, dated October 2, 2003
QA Assessment titled Corrective Action Self-Assessment, dated November18-21, 2002
VCSNS Trend Reports

Operating Experience Issue Documents

OE 8188, Manual Trip Due to Main Feed Regulating Valve Sticking, 01/13/1997
OE 9907, Unit Trip Due to a Degraded Condition in the SG Main Feedwater Regulating Valve Actuator, 05/06/1999
OE 17013, Degradation of a Bailey Type AV1 Valve Positioner on a Main Feedwater Regulating Valve, 10/06/2003
OE 1727, Feedwater Regulating Valve Failure Analysis Results, 11/14/2003

Miscellaneous Documents

NCN 03-4519, Water hammer condition in the SW piping downstream of RBCUs, 12/30/2003
NCN 03-1232, Reduced Control Power Testing, breaker would not close until 110VDC was applied, 04/17/2003

NCN 03-4034, Containment Coatings
MH 191111, EHC Load decrease circuit failure analysis, 10/29/2003
GA-SUR-200314-0, Surveillance on the corrective actions program to verify adequate process for identifying repetitive events, 06/05/2003
STP-401.003, ASME Code Class II and III Relief Valve Testing, Revision 12
DJ-15302, Information for Report per TS 6.8.4.h, 12/05/2002
KL-40152, RB Recirculation Sump Fastener Inspection, 12/01/2003
Project Plan for Remediation of Leaking Vertical Tendon End Caps, 06/30/2003
Removal and Restoration Index (SAP-205, Attachment II) Logs
Control Room Discrepancy Log Book
Control Room Log
Shift Supervisors Log
Shift Engineer Log Book

Meetings Attended

Plant Information Meeting (PIM)
CER Screening Committee
Corrective Action Review Board (CARB)
Management Review Team (MRT)

LIST OF ACRONYMS

ADAMS	-	Agency Wide Documents Access and Management System
CAP	-	Corrective Action Program
CARB	-	Corrective Action Review Board
CER	-	Condition Evaluation Report
ECP	-	Employee Concerns Program
ECR	-	Engineering Change Request
INPO	-	Institute of Nuclear Power Operations
IR	-	Inspection Report
MPFF		Maintenance Preventable Functional Failure
MRT	-	Management Review Team
MWR	-	Maintenance Work Request
NCN	-	Nonconformance Notice
NCV	-	Non-Cited Violation
NL	-	Nuclear Licensing
NRC	-	Nuclear Regulatory Commission
OD&P	-	Organization Development & Performance
OE	-	Operating Experience
PIP	-	Primary Identification Program
QA	-	Quality Assurance
RCA	-	Root Cause Analysis
SAP	-	Station Administrative Procedure
SCE&G	-	South Carolina Electric & Gas Company

SPB	-	Steam Propagation Barrier
WO	-	Work Order