



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

November 22, 2016

Mr. George Lippard  
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 05000395/2016007 AND NOTICE OF  
VIOLATION**

Dear Mr. Lippard:

On October 13, 2016, the Nuclear Regulatory Commission (NRC) completed a problem identification and resolution inspection at your Virgil C. Summer Nuclear Station. On September 15, 2016, the NRC inspection team discussed the preliminary results of this inspection with you and other members of your staff. Following completion of additional inspection of the findings, a re-exit was held by telephone with Mr. R. Justice of your staff on October 13, 2016, to discuss the final results of the inspection. The results of this inspection are documented in the enclosed inspection report.

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems, and to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. The team identified two findings in problem identification, implementation of the process for prioritizing and evaluating these problems, and the effectiveness of corrective actions taken to resolve these problems.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

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Finally the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews the team found no evidence of challenges to your organization's safety-conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

The team documented one NRC-identified finding of very low safety significance (Green) and one cited Severity Level (SL) IV violation in this report. Both of these findings involved violations of NRC requirements. The NRC evaluated these violations in accordance Section 2.3.2.a of the NRC Enforcement Policy, which appears on the NRC's Web site at <http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html>. We determined that one violation did not meet the criteria to be treated as an NCV because compliance has not been restored. Specifically, the licensee failed to ensure that conditions adverse to fire protection was promptly corrected as noted in a previous NRC-identified Severity Level IV (SLIV) NCV, 05000395/2016001-01, "Failure to Implement Adequate Administrative Controls Following a Departure from NFPA 80-1973 and Provide NRC Staff Complete and Accurate Information." As of the end of this inspection, compliance had not been restored.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice of Violation (Notice) when preparing your response. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC's review of your response to the Notice will also determine whether further enforcement action is necessary to ensure your compliance with regulatory requirements.

If you contest the violations or the significance of the violations, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the V.C. Summer station.

If you disagree with a cross-cutting aspect assignment or a finding not associated with a regulatory requirement 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 V.C. Summer station.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

**/RA/**

Bradley J. Davis, Acting Chief  
Reactor Projects Branch 7  
Division of Reactor Projects

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

Enclosures:

1. Notice of Violation
2. Inspection Report 05000395/2016007  
w/Attachment: Supplemental Information

cc Distribution via ListServ

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 ADAMS:  Yes    ACCESSION NUMBER: ML16327A378     SUNSI REVIEW COMPLETE     FORM 665 ATTACHED

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DATE	11/1/2016	11/22/2016	11/1/2016	11/ /2016	11/22/2016	11/22/2016	<b>11/22/2016</b>
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Letter to George Lippard from Bradley J. Davis dated November 22, 2016

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NRC PROBLEM IDENTIFICATION  
AND RESOLUTION INSPECTION REPORT 05000395/2016007 AND NOTICE OF  
VIOLATION

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## NOTICE OF VIOLATION

South Carolina Electric and Gas Company (SCE&G)  
Virgil C. Summer Nuclear Station, Unit 1

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

During an NRC inspection conducted between August 29, 2016 and October 13, 2016, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

Operating Licensee Condition 2.C.(18) states, in part, that the South Carolina Electric & Gas Company (SCE&G) shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee amendment request (LAR) dated 11/15/11 (and supplements dated 1/26/12, 10/10/12, 2/1/13, 4/1/13, 10/14/13, 11/26/13, 1/9/14, 2/25/14, 5/2/14, 5/11/14, 8/14/14, 10/9/14, and 12/11/14) and as approved in the safety evaluation report dated 02/11/15.

Section 4.7.3 of the LAR states, in part, that Virgil C. Summer Nuclear Station (VCSNS) will implement a revised quality assurance program to ensure compliance with section 2.7.3 of NFPA 805 and the revised fire protection quality assurance program is based on Regulatory Position 1.7, "Quality Assurance," in Regulatory Guide (RG) 1.189, Rev. 2, "Fire Protection for Operating Nuclear Power Plants."

Section 1.7.8 of RG 1.189 states, in part, that conditions adverse to fire protection, such as failures, malfunctions, deficiencies, deviations, defective components, uncontrolled combustibles materials, and non-conformances are promptly identified, reported, and corrected.

Contrary to the above, as of October 13, 2016, the licensee failed to ensure that conditions adverse to fire protection as noted in a previous NRC-identified SL IV NCV, 05000395/2016001-01, "Failure to Implement Adequate Administrative Controls Following a Departure from NFPA 80-1973 and Provide NRC Staff Complete and Accurate Information," were promptly corrected. Specifically, the licensee failed to implement corrective actions and restore compliance in a timely manner for (1) the noncompliance with 10 CFR 50.9 to provide staff complete and accurate information and (2) fire doors DRIB/105A&B currently do not meet self-closing requirements in accordance with the current NFPA 805 licensing basis and no actions were specified in licensee's corrective action program to restore compliance.

This is a Severity Level IV violation (Section 2.2.2.d)

Pursuant to the provisions of 10 CFR 2.201, SCE&G is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001 with a copy to the Regional Administrator, Region II, and a copy to the NRC Resident Inspector at the facility that is the subject of this Notice, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken, and (4) the date when full compliance will be achieved.

Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response.

If an adequate reply is not received within the time specified in this Notice, an order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's Agencywide Documents Access and Management System (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>, to the extent possible, it should not include any personal privacy, proprietary, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies the information that should be protected and a redacted copy of your response that deletes such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (e.g., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days of receipt.

Dated this 22<sup>nd</sup> day of November 2016

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket No.: 50-395

License No.: NPF-12

Report No: 05000395/2016007

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

Facility: Virgil C. Summer Nuclear Station

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

Dates: August 29 – October 13, 2016  
September 12 – 15, 2016

Inspectors: N. Staples, Senior Project Inspector, Team Leader  
C. Dykes, Reactor Inspector, Region II  
R. Rodriguez, Sr. Reactor Inspector, Region II  
S. Seaton, Project Inspector, Region II  
S. Ninh, Senior Project Engineer, Region II

Approved by: Bradley J. Davis, Acting Branch Chief  
Reactor Projects Branch 7  
Division of Reactor Projects

Enclosure

## SUMMARY OF FINDINGS

IR 05000335/2016007, 08/29/2016 – 10/13/2016; Virgil C. Summer Nuclear Station; Biennial Inspection of the Problem Identification and Resolution Program.

The inspection activities described in this report were performed between August 29 and October 13, 2016, by a senior project engineer, a senior project inspector, a project inspector, and a reactor inspector. One Green non-cited violation and one cited Severity Level (SL) IV violation are documented in this report. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," (SDP) dated April 29, 2015. The cross-cutting aspects were determined using IMC 0310, "Aspects Within the Cross-Cutting Areas," dated December 4, 2014. All violations of NRC requirements were dispositioned in accordance with the NRC's Enforcement Policy dated February 4, 2015. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 6.

### Identification and Resolution of Problems

The NRC inspection team reviewed the station's corrective action program and the station's implementation of the program to evaluate its effectiveness in identifying, prioritizing, evaluating, and correcting problems to confirm that the station was complying with NRC regulations and licensee standards for corrective action programs. The team identified two findings in problem identification, implementation of the process for prioritizing and evaluating these problems, and the effectiveness of corrective actions taken to resolve these problems.

The team also evaluated the station's processes for use of industry and NRC operating experience information and the effectiveness of the station's audits and self-assessments. Based on the samples reviewed, the team determined that your staff's performance in each of these areas adequately supported nuclear safety.

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Finally the team reviewed the station's programs to establish and maintain a safety-conscious work environment, and interviewed station personnel to evaluate the effectiveness of these programs. Based on the team's observations and the results of these interviews the team found no evidence of challenges to your organization's safety-conscious work environment. Your employees appeared willing to raise nuclear safety concerns through at least one of the several means available.

### Cornerstone: Mitigating Systems

- Green. The inspectors identified a non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," for the failure to correct a condition adverse to quality associated with a previously issued NCV, 05000395/2012004-02, Inadequate Installation of Unit 1 Service Water Piping and Related Pipe Support. The licensee entered the issue in the correction action program as condition report (CR)-16-04621.



The PD is more than minor because if left uncorrected, the reduction in design margin of the pipe support could affect the Unit 1 SW system's ability to mitigate a seismic event. Specifically, Unit 1 service water (SW) piping and support had been impacted by the reduction in design margin and without formally updating the associated drawings and calculations or restoring to the original design, future modifications to the system could impact the system's ability to mitigate a seismic event. Using Manual Chapter 0609 Attachment 04, "Initial Characterization of Findings," Table 2, dated October 07, 2016, the finding was determined to adversely affect the External Event Mitigating Systems. The inspectors screened the finding using Inspection Manual Chapter (IMC) 0609, Appendix A, "Significance Determination Process (SDP) for Findings at-Power," dated June 19, 2012, and determined that it screened as Green (very low safety significance) because the service water system maintained its functionality to mitigate a seismic event. The inspectors determined that the finding had a cross-cutting aspect in the area of PI&R because the licensee did not take effective corrective actions to address this issue in a timely manner [P.3]. (Section 4OA2)

SLIV. The inspectors identified a cited Severity Level (SL) IV violation of Operating Licensee Condition 2.C.(18) for failure to ensure that conditions adverse to fire protection as noted in a previous NRC-identified SLIV NCV, 05000395/2016001-01, "Failure to Implement Adequate Administrative Controls Following a Departure from National Fire Protection Association (NFPA) 80-1973 and Provide NRC Staff Complete and Accurate Information," were promptly corrected. Specifically, the licensee failed to implement corrective actions and restore compliance in a timely manner for (1) the noncompliance with 10 CFR 50.9 to provide staff complete and accurate information and (2) fire doors DRIB/105A&B currently do not meet self-closing requirements in accordance with the current NFPA 805 licensing basis and no actions were specified in licensee's corrective action program to restore compliance. The licensee entered the issue in their corrective action program as condition report (CR)-16-04701.

The inspectors determined that the performance deficiency was more than minor because it impacted the ability of the NRC to perform its regulatory oversight function and was dispositioned using traditional enforcement. Because the licensee failed to implement corrective actions and restore compliance in a timely manner, this violation is being treated as a cited violation, consistent with Section 2.3.2.a of the NRC Enforcement Policy. This violation involved traditional enforcement and a cross-cutting aspect was not assigned to this violation.

## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA2 Problem Identification and Resolution

##### .1 Corrective Action Program Effectiveness

###### a. Inspection Scope

The team reviewed the licensee's corrective action program (CAP) procedures which described the administrative process for initiating and resolving problems primarily through the use of condition reports. To verify that problems were being properly identified, appropriately characterized, and entered into the CAP, the team reviewed a sample of Condition Reports (CRs) that had been issued between August 2014 and August 2016, including a detailed review of selected CRs associated with the following risk-significant systems and components: Electrical (7.2Kv and 480VAC), Safety Injection (SI), Residual Heat Removal (RHR), and Service Water (SW). To help ensure that samples were reviewed across all cornerstones of safety identified in the NRC's Reactor Oversight Process (ROP), the team selected a representative number of CRs that were identified and assigned to the major plant departments, including organizational effectiveness, health physics, chemistry, emergency preparedness 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 team 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 team 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 team 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, a five-year review was performed for selected systems for age-dependent issues.

Control room walkdowns were also performed to assess the main control room (MCR) deficiency list and to ascertain if deficiencies were entered into the CAP. A sample of operator workarounds and operator burden screenings were reviewed and the team verified compensatory measures were implemented for deficient equipment.

The team conducted a detailed review of selected CRs to assess the adequacy of the root-cause, apparent-cause, and condition evaluations of the problems identified. The team reviewed these evaluations against the descriptions of the problem described in the CRs and the guidance in procedures SAP-1356, "Cause Determination," and SAP-0999, "Corrective Action Program." The team 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 as required.

The review also assessed if the licensee had appropriately identified and prioritized corrective actions to prevent recurrence for significant conditions adverse to quality. The team 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 the CR Review Team (CRT) virtual 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 team attended various plant meetings to observe management oversight functions of the corrective action process. These included Management Review Team (MRT) and Corrective Action Review Board (CARB) meetings. Documents reviewed are listed in the Attachment.

b. Assessment

Problem Identification

The team 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's expectation that employees were encouraged to initiate CRs for any reason, and the relatively few number of deficiencies identified by the team 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 team determined that system deficiencies were being identified and placed in the CAP.

Problem Prioritization and Evaluation

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

The team determined that station personnel had conducted root cause and apparent cause analyses in compliance with the licensee's CAP procedures and the 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.

### Effectiveness of Corrective Actions

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

#### c. Findings

##### 1. Failure to implement corrective actions and restore compliance for previous NRC-identified Severity Level (SL) IV non-cited violation (NCV), 05000395/2016001-01.

Introduction: The inspectors identified a cited SL IV violation of Operating Licensee Condition 2.C.(18) for failure to ensure that conditions adverse to fire protection as noted in a previous NRC-identified SLIV NCV, 05000395/2016001-01, "Failure to Implement Adequate Administrative Controls Following a Departure from NFPA 80-1973 and Provide NRC Staff Complete and Accurate Information," were promptly corrected.

Description: On May 11, 2016, the NRC issued a SL IV NCV of 10 CFR 50.9(a) as 05000395/2016001-01, "Failure to Implement Adequate Administrative Controls Following a Departure from NFPA 80-1973 and Provide NRC Staff Complete and Accurate Information." In NRC inspection report 05000395/2016001, the inspectors determined that the fire doors were installed in a back to back configuration to provide a pressure barrier function in addition to the fire barrier function, but were not self-closing as required by NFPA 80-1973. The associated engineering evaluation relied on inadequate administrative controls to ensure the associated replacement doors were kept closed as a basis for not following NFPA 80-1973 which required the fire doors be self-closing. The inspectors determined that the licensee failed to provide complete and accurate information regarding a deviation from NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants," 2001 edition, which requires that fire doors conform to NFPA 80. Specifically, DRIB/105A&B lack self-closing mechanisms as required by NFPA 80. This information and the associated engineering evaluation were not provided as part of amendment request (LAR)-06-00055, which was material because licensing decisions were made in the development of the operating license.

The inspectors reviewed CRs 15-04027, 16-00242, 16-02705 and the apparent cause evaluation (ACE) associated with this SL IV NCV and discussed with licensee staff. Based on review of these CRs and apparent cause evaluations (ACE), the inspectors determined that the licensee failed to implement corrective actions and restore compliance in a timely manner for (1) the noncompliance with 10 CFR 50.9 to provide staff complete and accurate information and (2) fire doors DRIB/105A&B currently do not meet self-closing requirements in accordance with the current NFPA 805 licensing basis and no actions were specified in licensee's corrective action program to restore compliance. The inspectors reviewed the licensee's operating license and quality

assurance program and determined conditions adverse to fire protection are required to be identified and corrected per Section 1.7.8 of RG 1.89.

Analysis: Failure to ensure that conditions adverse to fire protection as noted in previous NRC-identified non-cited violation (NCV), SLIV NCV, 05000395/2016001-01, were promptly corrected was a violation. This violation was more than minor because it impacted the ability of the NRC to perform its regulatory oversight function and was dispositioned using traditional enforcement. Because the licensee failed to implement corrective actions and restore compliance in a timely manner, this violation is being treated as a cited violation, consistent with Section 2.3.2a of the NRC Enforcement policy. This violation involved traditional enforcement and a cross-cutting aspect was not assigned to this violation.

Enforcement: Operating Licensee Condition 2.C.(18) states, in part, that SCE&G shall implement and maintain in effect all provisions of the approved fire protection program that comply with 10 CFR 50.48(a) and 10 CFR 50.48(c), as specified in the licensee amendment request dated 11/15/11 (and supplements dated 1/26/12, 10/10/12, 2/1/13, 4/1/13, 10/14/13, 11/26/13, 1/9/14, 2/25/14, 5/2/14, 5/11/14, 8/14/14, 10/9/14, and 12/11/14) and as approved in the safety evaluation report dated 02/11/15.

Section 4.7.3 of LAR states, in part, that VCSNS will implement a revised quality assurance program to ensure compliance with section 2.7.3 of NFPA 805 and the revised fire protection quality assurance program is based on Regulatory Position 1.7, "Quality Assurance," in RG1.189, Rev. 2, Fire Protection for Operating Nuclear Power Plants."

Section 1.7.8 of RG 1.189 states, in part, that conditions adverse to fire protection, such as failures, malfunctions, deficiencies, deviations, defective components, uncontrolled combustibles materials, and non-conformances are promptly identified, reported, and corrected.

Contrary to the above, as of October 13, 2016, the licensee failed to ensure that conditions adverse to fire protection as noted in a previous NRC-identified SL IV NCV, 05000395/2016001-01, "Failure to Implement Adequate Administrative Controls Following a Departure from NFPA 80-1973 and Provide NRC Staff Complete and Accurate Information," were promptly corrected. Specifically, the licensee failed to implement corrective actions and restore compliance in a timely manner for (1) the noncompliance with 10 CFR 50.9 to provide staff complete and accurate information and (2) fire doors DRIB/105A&B currently do not meet self-closing requirements in accordance with the current NFPA 805 licensing basis and no actions were specified in licensee's corrective action program to restore compliance.

Because the licensee failed to implement corrective actions and restore compliance in a timely manner, this violation is being treated as a cited violation, consistent with Section 2.3.2.a of the NRC Enforcement policy. A Notice of Violation is included with this report: VIO 05000395/2016007-01, "Failure to implement corrective actions and restore compliance for previous NRC-identified SLIV NCV 05000395/2016001-01."

2. Failure to correct a condition adverse to quality associated with a previously issued NCV

Introduction: A Green NCV of 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," was identified by the NRC for the failure to correct a condition adverse to quality associated with a previously issued NCV, 05000395/2012004-02, Inadequate Installation of Unit 1 Service Water Piping and Related Pipe Support.

Description: On November 7, 2012, the NRC issued NCV, 05000395/2012004-02, against 10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings," for failure to accomplish the installation of Unit 1 service water (SW) piping and supports in accordance with prescribed drawings. The finding was of very low safety significance and was entered into the licensee's CAP as CR-12-00771. An engineering information request (EIR) was completed, which concluded that the pipe support was acceptable as is. However, no additional action was taken to complete an engineering evaluation, per ES-120, to formally disposition the pipe support "accept as is," or update related drawings and calculations and CR-12-00771 was closed. As a result of NRC questioning during the biennial problem identification and resolution (PI&R) inspection, the licensee opened CR-16-04621, which determined that the degraded condition was neither corrected nor formally dispositioned as "accept as is." A work order, WO 1613458, was in the process of being developed to fix the pipe support.

Analysis: The licensee's failure to correct a non-conforming condition of Unit 1 Service Water Piping and Related Pipe Support, was a performance deficiency (PD). The inspectors reviewed inspection manual chapter (IMC) 0612, Appendix B, "Issue Screening," dated September 7, 2012, and determined that the PD is more than minor because if left uncorrected, the reduction in design margin of the pipe support could affect the Unit 1 SW system's ability to mitigate a seismic event. Specifically, Unit 1 service water (SW) piping and support had been impacted by the reduction in design margin and without formally updating the associated drawings and calculations or restoring to the original design, future modifications to the system could impact the system's ability to mitigate a seismic event. Using Manual Chapter 0609.04, "Initial Characterization of Findings," Table 2, dated June 19, 2012, the finding was determined to adversely affect the External Event Mitigating Systems. The inspectors screened the finding using Inspection Manual Chapter (IMC) 0609, Appendix A, "Significance Determination Process (SDP) for Findings at-Power," dated June 19, 2012, and determined that it screened as Green (very low safety significance) because the service water system maintained its functionality to mitigate a seismic event.

Using IMC 0310, "Aspects within the Cross-Cutting Areas," dated December 4, 2014, the inspectors determined that the finding had a cross-cutting aspect in the area of PI&R because the licensee did not take effective corrective actions to address this issue in a timely manner (P.3, Resolution).

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, "Corrective Action," states in part that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. Contrary to the above, as of October 13, 2016, the licensee failed to correct a nonconforming condition of Unit 1 service water piping and related pipe support from a previous issued NRC Green NCV, 05000395/2012004-02. Because the finding is of very low safety significance and it was entered into the licensee's CAP as CR-16-04621, this violation is being treated as a Green NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy: NCV

05000395/2016007-01, Failure to correct a condition adverse to quality associated with a previously issued NCV.

.2 Use of Operating Experience

a. Inspection Scope

The team examined licensee's use of industry operating experience (OE) to assess the effectiveness of how external and internal operating experience information was used to prevent similar or recurring problems at the plant. In addition, the team selected 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.), issued since February 2014 to verify whether the licensee had appropriately evaluated each notification for applicability to the VC Summer site, and whether issues identified through these reviews were entered into the CAP. Documents reviewed are listed in the Attachment.

b. Assessment

Based on a review of documentation related to the review of operating experience issues, the team determined that the licensee was generally effective in screening operating experience for applicability to the plant. Industry OE was screened by the corporate OE coordinator and relevant information was then forwarded to the site's OE coordinator. OE issues requiring action were entered into the CAP for tracking and closure. In addition, operating experience was included in all root cause evaluations in accordance with licensee procedure SAP-1356.

c. Findings

No findings were identified.

.3 Self-Assessments and Audits

a. Inspection Scope

The team 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-1350, VC Summer Nuclear Station Assessment Program. Documents reviewed are listed in the Attachment.

b. Assessment

The team determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical, as evidenced by findings consistent with the inspector's independent review. The team 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.

c. Findings

No findings were identified.

.4 Safety-Conscious Work Environment

a. Inspection Scope

During the course of the inspection, the team assessed the station's safety-conscious work environment (SCWE) through review of the stations Employee Concerns Program (ECP) and interviews with various departmental personnel. The team reviewed a sample of ECP issues to verify that concerns were being properly reviewed and identified deficiencies were being resolved and entered into the CAP when appropriate.

b. Assessment

Based on the interviews conducted and the CRs reviewed, the team 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 team determined that employees felt free to raise issues, and that management encouraged employees to place issues into the CAP for resolution. The team did not identify any reluctance on the part of the licensee staff to report safety concerns.

c. Findings

No findings were identified.

4OA6 Meetings, Including Exit

On September 15, 2016, the inspectors presented the preliminary inspection results to Mr. G. Lippard and other members of the site staff. The inspectors confirmed that all proprietary information examined during the inspection had been returned to the licensee. Following completion of additional inspection of the findings, a re-exit was held by telephone with Mr. R. Justice of your staff on October 13, 2016, to discuss the final results of the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION



## SUPPLEMENTAL INFORMATION

### KEY POINTS OF CONTACT

#### Licensee personnel:

G. Lippard, Vice President Unit 1  
B. Thompson, Licensing Manager  
R. Perry, Licensing  
W. Martin, Licensing  
M. Moore, Licensing Supervisor  
G. Kelley, ECP  
V. Pearson, OD&P  
J. Wasieczko, Manager OD&P  
R. Justice, Plant General Manager

#### NRC personnel:

James Reece, Senior Resident Inspector  
Anthony Masters, Chief, Branch 7, Division of Reactor Projects

### LIST OF REPORT ITEMS

#### Opened

05000395/2016007-01	VIO	Failure to Implement Corrective Actions and Restore Compliance for Previous NRC-Identified SLIV NCV (Section 4OA1.C.1)
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#### Opened and Closed

05000395/2016007-02	NCV	Failure to Correct a Condition Adverse to Quality Associated with a Previously Issued NCV (Section 4OA1.C.2)
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## LIST OF DOCUMENTS REVIEWED

### Procedures:

0-PME-50.12, Periodic Battery Charger Component Replacement, Rev. 2  
0-PME-50.15, Non-Appendix R Lighting Inspection and Maintenance, Rev. 4  
0-NOP-67.05 Refueling Operations, Rev. 18  
1-OSP-99.08A, A Train Quarterly Non Check Valve Cycle Test, Rev.11  
ADM-17.08, Implementation of 10 CFR 50.65, The Maintenance Rule, Rev. 27  
ADM-17.32\_MRULE Structure Monitoring, Rev 3  
EN-AA-202-1001, Engineering Change and Scope, Rev.7  
CDG-01, Cause Determination Guidelines, Revision 17  
EOP 2.2, ES-1.3, Transfer to Cold Leg Recirculation, Revision 17  
ER-AA-100-2002, Maintenance Rule Program Administration, Rev. 2  
ES-120, Operability or Functionality Recommendation Development, Revision 1  
ES-0514A, Maintenance Rule – Scoping, Revision 0  
ES-0514B, Maintenance Rule – SSC Risk Determination. Revision 0  
ES-0514C, Maintenance Rule – Performance Criteria Selection, Revision 0  
ES-0514D, Maintenance Rule – Performance Monitoring, Revision 0  
ES-0514E, Maintenance Rule - (a)(1) and (a)(2) Transitioning, Revision 0  
ES-0514F, Maintenance Rule – MRULE Expert Panel Roles and Responsibilities, Revision 0  
ES-0514G, Maintenance Rule – Periodic (a)(3) Assessment, Revision 0  
FPP-015, Shift Inspection, Revision 7  
MSP-100.01, Protective Coating Surveillance Program, Revision 10  
OAP-102.1, Conduct of Operations Scheduling Unit, Revision 8  
OAP 103.2, Emergency Operating Procedure Setpoint Document, Rev. 1  
OAP-113.1, Operator Workaround and Dark Board Program, Revision 4  
PSEG-19, Boric Acid Corrosion Evaluation, Revision 2  
PSEG-12, System and Program Health Reports  
Plant Health System Report –Safety Injection – 2015 and 2016  
PSEG-System and Program Health Reports for SI  
PTP101.002, 7.2 KV ESF Bus Breaker Alignment Verification, Revision 2  
PI-AA-207-1003-10000, Performance Improvement Trend Codes and Keywords, Rev. 5  
PSL-ENG-SENS-06-050 Evaluation of Plant Barriers, Rev. 5  
PI-AA-102-1001, Operating Experience Program Screening and Responding to Incoming Operating Experience, Rev.16  
SAP-0143, Preventive Maintenance Program, Revision 1  
SAP-0157, Maintenance Rule Program  
SAP-209, Operability Determination Process, Revision 1  
SAP-297A, Development of Emergency Operating Procedures, Revision 5  
SAP-0999, Corrective Action Program, Revision 13, Change C  
SAP-0999E, Corrective Action Review Board (CARB)  
SAP-1356, Cause Determination, Revision 7  
SAP-1350C, Nuclear Safety Culture Monitoring, Revision 5  
SAP-1100, Boric Acid Corrosion Control Program, Revision 3  
STP 125.001, Electric Power System Weekly Test, Revision 15

Condition Reports Reviewed:

11-04585	14-06168	15-03194	15-05900
11-06298	14-06191	15-03654	15-05959
12-00583	14-06336	15-03658	15-06007
12-00771	14-06346	15-03885	15-06171
12-02013	14-06404	15-04027	15-06174
12-02534	14-06422	15-04275	15-06189
12-04908	14-06439	15-04395	15-06199
12-05225	14-06626	15-04480	15-06261
13-00497	14-06646	15-04681	15-06353
13-00566	15-00021	15-04703	15-06446
13-02694	15-00071	15-04704	15-06608
13-03952	15-00242	15-04706	16-00210
14-00233	15-00263	15-04711	16-00550
14-00760	15-00359	15-04712	16-00812
14-01926	15-00435	15-04725	16-00853
14-01930	15-00487	15-04749	16-00972
14-02282	15-00541	15-04804	16-01210
14-03079	15-00591	15-04829	16-01310
14-03806	15-00636	15-04871	16-01351
14-04017	15-00662	15-04872	16-01762
14-04771	15-01015	15-04950	16-01853
14-04946	15-01056	15-05024	16-02005
14-04956	15-01083	15-05043	16-02089
14-05100	15-01324	15-05043	16-02305
14-05412	15-01347	15-05050	16-02504
14-05414	15-01355	15-05055	16-02788
14-05446	15-01494	15-05075	16-02803
14-05542	15-01546	15-05167	16-03099
14-05608	15-01615	15-05186	16-03384
14-05649	15-01648	15-05253	16-03925
14-05676	15-01661	15-05260	16-04396
14-05700	15-01672	15-05276	16-04414
14-05711	15-02031	15-05318	16-04431
14-05737	15-02057	15-05328	16-04440
14-05792	15-02087	15-05497	16-04445
14-05821	15-02674	15-05607	16-04546
14-05864	15-02793	15-05673	16-04579
14-05869	15-02875	15-05722	16-04587
14-05888	15-02875	15-05756	16-04621
14-05897	15-03053	15-05814	16-04695
14-06134	15-03057	15-05897	

Corrective Maintenance Work Orders

1415007-001  
 1500007-001  
 1501650-001  
 1501880-001  
 1505697-001  
 1607787-001  
 1513705-001  
 1607042-001  
 1610285-001  
 1610285-002  
 1510413-001  
 1600730-001

Self-Assessments:

1966524, Pre-NRC Problem Identification & Resolution (PI&R) Inspection Self Assessment

Work Orders:

38026485-02	40311432-05	40347394	40398236
39021349	40316415	40353053	40454409
40051270	40317485	40353054	40454416
40291617	40321728	40359242	40458771
40297503	40322723	40359243	94011628
40299899	40327300	40360192	381026626
40301755	40331897	40365018	4006440001
40303405	40333771	40365437	4006440201
40306989	40340194	40365438	

Condition Reports Generated:

16-04124  
 16-04444  
 16-04695  
 16-04701

Other Documents:

ES-513, MOV PROGRAM IMPLEMENTATION, REV. 2, 3/2/16  
 SAP-160, MOTOR OPERATED VALVE PROGRAM, REV. 1, 4/20/16  
 SYSTEM HEALTH REPORTS  
 SERVICE WATER SYSTEM, 1-2015-3  
 SERVICE WATER SYSTEM, 1-2016-1  
 RESIDUAL HEAT REMOVAL SYSTEM, 1-2015-3  
 RESIDUAL HEAT REMOVAL SYSTEM, 1-2016-1

Drawings:

1MS-22-333, REV. 11  
 ECR, 50585Y  
 E-206-005, Simplified Plant Electrical Distribution, Rev.29  
 E-206-022, Electrical One Line & Relay Diagram 7200V SWGR Busses 1DA, 1DB, 1EA & 1EB, Rev.16

E-206-034, Electrical One Line & Relay Diagram 480/277V SWGR Busses 1DA1, 1DA2, 1DB1, 1DB2, 1EA1 & 1EA2, Rev. 21