



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

October 12, 2007

EA-07-079

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

SUBJECT: NOTICE OF VIOLATION AND EXERCISE OF ENFORCEMENT DISCRETION
(VIRGIL C. SUMMER NUCLEAR STATION)

Dear Mr. Archie:

On March 28, 2007, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at South Carolina Electric & Gas Company's (SCE&G) Virgil C. Summer Nuclear Station. The purpose of the inspection was to examine activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspection included a review of the Emergency Plan changes that occurred between October 1980 and July 28, 2006. The results of the inspection, including the identification of an apparent violation involving changes to your Emergency Plan, were discussed with V. C. Summer representatives via teleconference on May 14, 2007, and were transmitted to you in NRC Inspection Report 05000395/2007502 dated June 4, 2007.

On July 16, 2007, a predecisional enforcement conference was conducted in the NRC's Region II office with you and members of your staff to discuss the apparent violation, its significance, root causes, and your corrective actions. At the conference, V. C. Summer disagreed that the Emergency Action Level (EAL) changes represented violations (with one exception). Subsequent to the conference, by letters dated August 15 and 30, 2007, V. C. Summer revised its position and agreed that the EAL changes were violations, and provided details of its review of the EAL changes and corrective actions to restore compliance.

Based on the information developed during the inspection and the information that you provided during the conference, and in V. C. Summer's letters of August 15 and 30, 2007, the NRC has determined that a violation of NRC requirements occurred. The violation is cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding it are described in detail in Inspection Report 05000395/2007502.

The violation involved changes made by V. C. Summer to its Emergency Plan between approximately October 1980 and July 28, 2006, that either decreased the effectiveness of its emergency plan or failed to maintain a standard emergency classification scheme. The changes were made without Commission approval, and affected Site Area Emergency (SAE) and

General Emergency (GE) EALs. The failure to receive NRC approval before changing EALs, which decreased the effectiveness of the Emergency Plan or resulted in a non-standard emergency classification scheme for SAEs and GEs, is a significant safety and regulatory issue. In this case, the failure to submit the changes and receive NRC approval prevented the NRC from performing its regulatory function of reviewing licensee EALs to assure that appropriate notifications and recommendations are made in the event of a plant emergency. Therefore, this violation has been categorized in accordance with the Enforcement Policy at Severity Level III.

In accordance with the NRC Enforcement Policy, a base civil penalty in the amount of \$65,000 is considered for a Severity Level III violation (problem). Because your facility has been the subject of escalated enforcement action within the last 2 years¹, the NRC considered whether credit was warranted for *Identification* and *Corrective Action* in accordance with the civil penalty assessment process in Section VI.C.2 of the Enforcement Policy. Because the violation was identified as a result of an NRC inspection, credit is not warranted for the factor of *Identification*.

Regarding corrective actions, at the time of the predecisional enforcement conference, V. C. Summer had not initiated prompt or comprehensive corrective actions to restore compliance, identify root and contributing causes for the violation, or taken actions to preclude recurrence of the violation. Based on the above, the NRC concluded that credit was not warranted for the factor of *Corrective Action*.

Because credit was not warranted for the factors of *Identification* and *Corrective Action*, the NRC would normally propose that a civil penalty of \$130,000 be assessed in this case. However, the NRC also considered whether the exercise of enforcement discretion would be appropriate and consistent with Agency guidance contained in Enforcement Guidance Memorandum (EGM) 07-003, "DISPOSITION OF VIOLATIONS OF 10 CFR 50.47(B)(4) FOR FAILURE TO MAINTAIN A STANDARD EMERGENCY ACTION LEVEL SCHEME."

As discussed in the EGM, the NRC will consider exercising enforcement discretion for cases involving an SAE or GE on a case-by-case basis. The salient criteria involve the restoration of compliance and actions taken to preclude recurrence, within 90 days of the date of the inspection report that identified the Decrease In Effectiveness (DIE) (90 days from issuance of the report is September 2, 2007). Although V. C. Summer's actions, as documented in its letters of August 15 and 30, had restored compliance to the most recently approved Emergency Plan, it did not initiate or complete corrective actions to prevent recurrence of the violation by September 2, 2007. In particular, V. C. Summer had not conducted an adequate evaluation to determine the root and contributing causes of the violation, had not identified the specific deficiencies and/or weaknesses in the process by which it evaluates and implements changes to its Emergency Plan, and had not conducted an adequate extent of condition review. In consideration of the above, full discretion as discussed in EGM 07-003 is not warranted. However, the NRC concluded that partial discretion is warranted in this case, because of actions undertaken to restore compliance to the most recently approved Emergency Plan, and because in most scenarios involving an SAE or a GE the significance of the unapproved changes would not have a deleterious effect upon implementation of the Emergency Plan. Therefore, after consultation with the Director, Office of Enforcement, I have been authorized to propose that a

1 A White finding with Notice of Violation was issued on May 5, 2006 (EA-06-046).

civil penalty not be assessed in this case, and to cite the enclosed Notice.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS), accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/pdr.html> www.nrc.gov/reading-rm/adams.html. To the extent possible, your response 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, 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 information, 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) The NRC also includes significant enforcement actions on its Web site at www.nrc.gov/about-nrc/regulatory/enforcement/current.html.

Sincerely,

/RA/

William D. Travers
Regional Administrator

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

Enclosure: Notice of Violation

(cc w/encl cont'd - See page 4)

cc w/encl:

R. J. White

Nuclear Coordinator Mail Code 802

S.C. Public Service Authority

Virgil C. Summer Nuclear Station

Electronic Mail Distribution

Kathryn M. Sutton, Esq.

Morgan, Lewis & Bockius LLP

Electronic Mail Distribution

Henry J. Porter, Director

Div. of Radioactive Waste Mgmt.

Dept. of Health and Environmental

Control

Electronic Mail Distribution

R. Mike Gandy

Division of Radioactive Waste Mgmt.

S. C. Department of Health and

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Robert G. Sweet, Manager

Nuclear Licensing (Mail Code 830)

South Carolina Electric & Gas Company

Virgil C. Summer Nuclear Station

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Robert M. Fowlkes, General Manager

Engineering Services

South Carolina Electric & Gas Company

Virgil C. Summer Nuclear Station

Electronic Mail Distribution

Thomas D. Gatlin, General Manager

Nuclear Plant Operations (Mail Code 303)

South Carolina Electric & Gas Company

Virgil C. Summer Nuclear Station

Electronic Mail Distribution

David A. Lavigne, General Manager

Organization Development

South Carolina Electric & Gas Company

Virgil C. Summer Nuclear Station

Electronic Mail Distribution

Distribution w/encl:

L. Reyes, EDO
 J. Dyer, NRR
 W. Borchardt, NRR
 L. Chandler, OGC
 J. Moore, OGC
 E. Julian, SECY
 D. Decker, OCA
 Enforcement Coordinators
 RI, RII, RIV
 E. Hayden, OPA
 G. Caputo, OI
 H. Bell, OIG
 M. Ashley, NRR
 R. Kahler, NRR
 C. Carpenter, OE
 J. Wray, OE
 V. McCree, RII
 H. Christensen, RII
 C. Casto, RII
 J. Shea, RII
 K. Kennedy, RII
 B. Bonser, RII
 J. Zeiler, RII
 S. Sparks, RII
 C. Evans, RII
 R. Hannah, RII
 K. Clark, RII
 PUBLIC
 OEMAIL
 OEWEB

X PUBLICLY AVAILABLE

X NON-SENSITIVE

ADAMS: X Yes ACCESSION NUMBER:

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| OFFICE | | RII:EICS | RII:DRS | RII:ORA | OE | NSIR | |
| SIGNATURE | | CFE | JWS1 | /RA/ | /RA/ | /RA/ | |
| NAME | | CEVANS | JSHEA | VMCCREE | NHILTON | RKAHLER | |
| DATE | | 9/27/07 | 9/28/07 | 10/9/07 | 10/5/07 | 10/2/07 | |
| E-MAIL COPY? | YES NO | YES NO | YES NO | YES NO | YES NO | YES NO | YES NO |

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DOCUMENT NAME: SUMMER EAL OE REVISED DRAFT EA-07-079.DOC

NOTICE OF VIOLATION

South Carolina Electric and Gas Company
V. C. Summer Nuclear Plant
Unit 1

Docket No.: 50-395
License No.: NPF-12
EA-07-079

During an NRC inspection completed on March 28, 2007, a violation of NRC requirements was identified. In accordance with the NRC Enforcement Policy, the violation is listed below:

10 CFR 50.54(q) states, in part, that a licensee shall follow and maintain in effect emergency plans which meet the standards in 10 CFR 50.47(b) and the requirements of Appendix E of Part 50. 10 CFR 50.54(q) also provides that the licensee may make changes to the emergency plans without Commission approval only if the changes do not decrease the effectiveness of the plans and the plans, as changed, continue to meet the standards of 10 CFR 50.47(b) and the requirements of Appendix E of Part 50. Proposed changes that decrease the effectiveness of the approved emergency plans may not be implemented without application to and approval by the Commission.

10 CFR 50.47(b) requires that onsite emergency response plans for nuclear power reactors must meet the 16 specified planning standards. Planning standard 4 requires, in part, that a standard emergency classification and action level scheme is in use by the licensee.

10 CFR 50, Appendix E, Section IV.B, states, in part, that the emergency action levels shall be based on in-plant conditions and instrumentation in addition to onsite and offsite monitoring. These initial emergency action levels shall be discussed and agreed on by the licensee and state and local governmental authorities, and approved by the NRC. A revision to an emergency action level must be approved by the NRC before implementation if:

- (1) The licensee is changing from one emergency action level scheme to another emergency action level scheme (e.g., a change from an emergency action level scheme based on NUREG-0654 to a scheme based upon NUMARC/NESP-007 or NEI-99-01);
- (2) The licensee is proposing an alternate method for complying with the regulations; or
- (3) The emergency action level revision decreases the effectiveness of the emergency plan.

Contrary to the above, between October 1980 and July 28, 2006, the licensee made changes, without Commission approval, to the NRC approved revision of their Emergency Action Levels (EALs) that: 1) decreased the effectiveness of the plan; and, 2) resulted in a non-standard (hybrid) EAL scheme. The EALs that were changed were originally approved by the NRC in NUREG-0717 Appendix C, V. C. Summer Supplemental Safety Evaluation Report #3, in 1981 (Revision 5). The specific EALs include the following:

1. EAL-411, General Emergency. As approved by the NRC in 1981 (Revision 5), the initiating conditions required, in part, the declaration of a GE for a transient initiated by a loss of feedwater and condensate systems followed by failure of emergency feedwater for an extended period with core melting possible in several hours. In the current revision of EAL-411, Revision 53, the detection methods include determining an inability to establish core cooling by bleed and feed cooling per EOP-15.0, Response To Loss Of Secondary Heat Sink, and determining if core exit thermocouples exceed 700°F. The addition of the core exit temperature requirement could result in a delay in the GE declaration under certain scenarios. As such, the change to EAL-411 decreased the effectiveness of the Emergency Plan.
2. EAL-401, General Emergency. As approved by the NRC in 1981 (Revision 5), the initiating conditions require, in part, the declaration of a GE for a transient initiated by a small or large Loss of Coolant Accident (LOCA) with failure of the Emergency Core Cooling Systems (ECCS) to perform leading to severe core degradation or melt and possible ultimate failure of the reactor building for meltdown sequences. In the current revision of EAL-401, Revision 53, the detection methods include Reactor Coolant System (RCS) depressurization to less than 140 psig per EOP-14.0, Response To Inadequate Core Cooling. The addition of EOP-14.0 could result in a delay in the GE declaration, as RCS depressurization per EOP-14.0 would occur some period of time after a reactor trip with a safety injection signal. As such, the change to EAL-401 decreased the effectiveness of the Emergency Plan.
3. EAL-301, Site Area Emergency (SAE). As approved by the NRC in 1981 (Revision 5), the initiating conditions required, in part, the declaration of an SAE for a known LOCA greater than charging pump capacity. In the current revision of EAL-301, Rev. 53, two new detection methods were added as additional thresholds of identifying the initiating conditions. These changes were not approved by the NRC as an alternate method of identifying the initiating conditions, and thus resulted in a non-standard scheme.
4. EAL-397, Site Area Emergency, Revision 53, has no revision 5 equivalent. EAL-397 is not consistent with the NUREG-0654 EAL classification scheme, and as such required prior NRC approval.

This is a Severity Level III violation (Supplement VIII).

Pursuant to the provisions of 10 CFR 2.201, South Carolina Electric and Gas Company is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555 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; EA-07-079" 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 to avoid further violations, and (4) the date when full compliance will be achieved. Your response may reference or include previously 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 document 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.

Dated this 12th day of October 2007