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

November 28, 2006

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: VIRGIL C. SUMMER NUCLEAR STATION - NRC EXAMINATION REPORT 05000395/2006301

Dear Mr. Archie:

On October 6, 2006, members of your staff administered an NRC Senior Reactor Operator (SRO) and Reactor Operator (RO) written retake examinations to three employees of your company who had reapplied for licenses to operate the Virgil C. Summer Nuclear Station. The NRC waived the operating examinations since these individuals passed that portion of the test during the initial examination.

One SRO applicant and one RO applicant passed the written examinations. One RO failed the written examination. There were three post examination comments on the written exam. The NRC's resolution to these comments are summarized in Enclosure 2.

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

Should you have any questions concerning this letter, please contact me at (404) 562-4607.

Sincerely,

/RA/

Robert C. Haag, Chief
Operations Branch
Division of Reactor Safety

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

Enclosures: (See next page)
South Carolina Electric & Gas Company

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Enclosures: (See next page)

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Enclosures: 1. Report Details
2. NRC Post Examination Comment Resolution

cc w/encls:
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NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.:	50-395
License No.:	NPF-12
Report No.:	05000395/2006301
Licensee:	South Carolina Electric & Gas (SCE&G) Company
Facility:	Virgil C. Summer Nuclear Station
Location:	P. O. Box 88 Jenkinsville, SC 29065
Date:	Written Examination - October 6, 2006
Examiner:	G. Laska, Chief, Senior Operations Examiner
Approved by:	Robert C. Haag, Chief Operations Branch Division of Reactor Safety

Enclosure 1

SUMMARY OF FINDINGS

ER 05000395/2006301; 10/06/2006; Virgil C. Summer Nuclear Station; Licensed Operator Examinations.

The NRC examiner conducted operator licensing initial examinations in accordance with the guidance in NUREG-1021, Revision 9, "Operator Licensing Examination Standards for Power Reactors." This examination implemented the operator licensing requirements of 10 CFR §55.41, §55.43, and §55.45.

Members of the Virgil C. Summer Nuclear Station training staff administered the senior reactor operator (SRO) and reactor operator (RO) written retake examinations on October 6, 2006. The written examinations were developed by the Virgil C. Summer Nuclear Station training staff.

One SRO applicant and one RO applicant passed the written examination and were issued licenses. One RO applicant failed the written examination. There were three post examination comments on the written exam.

No findings of significance were identified.

Report Details

4. OTHER ACTIVITIES

4OA5 Operator Licensing Initial Examinations

a. Inspection Scope

The NRC developed written test outlines and the licensee developed the written examinations in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9. Examination changes agreed upon between the NRC and the licensee were made according to NUREG-1021 and incorporated into the final version of the examination material.

The examiner reviewed the licensee's examination security measures while preparing and administering the examinations to ensure examination security and integrity complied with 10 CFR 55.49, "Integrity of examinations and tests."

The examiner evaluated two RO and one SRO applicants who were being assessed under the guidelines specified in NUREG-1021. Members of the Virgil C. Summer Nuclear Station training staff administered the written examination on October 6, 2006. The evaluations of the applicants and review of documentation were performed to determine if the applicants, who applied for licenses to operate the Virgil C. Summer Nuclear Station, met requirements specified in 10 CFR 55, "Operators' Licenses."

b. Findings

No findings of significance were identified.

The NRC determined that the licensee's submittial was withing the range of acceptability expected for a proposed examination. One SRO applicant and one RO applicant passed written examinations. One RO applicant failed the written examination.

The combined RO and SRO written examinations with knowledge and abilities (K/As) question references/answers, examination references, and licensee's post examination comments may be accessed in the ADAMS system (ADAMS Accession Numbers, ML063310228, ML063310227 and ML063310225).

4OA6 Meetings

Exit Meeting Summary

On October 31, 2006, the examiner discussed the examination and preliminary findings with Mr. Al Koon, Operations Training Supervisor, and members of his staff. The examiner asked the licensee whether any material reviewed during the examination should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee personnel

A. Koon, Operations Training Supervisor
G. Lippard, Manager Operations
G. Moffatt, Manager Nuclear Training
W. Quick, Supervisor Initial Training Programs

NRC personnel

J. Zeiler, Senior Resident Inspector

Virgil C. Summer Nuclear Station 2006-301

NRC Resolution to the Virgil C. Summer Nuclear Station Post Examination Comments

NRC resolution for the written examination comments can be found in ADAMS under Accession Number ML063310225.

K/A Number	028AK3.05
RO Question Number	29 (Question 24 on the Examination Outline)
SRO Question Number	29
Licensee Comment	Since conditions in the stem did not provide information such as 1) how much *actual* level deviated from *program* level , or 2) how long that it took to select the OPERABLE channels, the applicants could not rule out choice "B". Lacking this information, the candidates could not quantitatively or qualitatively make a judgement of the condition of the Master Controller therefore, manual control of charging flow (IAW Step 5 of AOP-410.6) may be appropriate to both ensure that PZR level stabilizes and letdown does not isolate. Additionally, the long time constant of the controller for FCV-122 may necessitate manual control if there was a significant deviation or delay in selecting the OPERABLE channels. The conditions in the stem would not preclude the operator taking action to restore PZR level. Step 3 of AOP-401.6 requires the crew to control PZR heaters to maintain PZR pressure. To accomplish this, the operator should ensure that the GRP 1 heaters de-energize, as this group is normally de-energized and would energize with a positive level deviation (which occurred when the selected, controlling channel failed high). Therefore, "C" is still also correct. Since the question does not ask for the first "required" action, either action could be viewed as "required" and should be acceptable.
Reference	AOP-401.6
Recommendation	Accept "B" and "C" as correct answers
NRC Response:	The NRC does not agree with accepting both "B" and "C". In order for the applicant to select B as the correct answer the applicant must first make an assumption that the Pressurizer Master Controller is not responding properly. This assumption is not supported by the stem of the question. The stem clearly

states, “A PZR level channel failure results in the following indications:

- CHG Flo, FCV-122, is closing.
- BU GRP1 and BU GRP2 are energized.”

Further more AOP- 401.6, “Pressurizer Level Control and Protection Channel Failure”, does not direct the operator to manually control charging flow to prevent letdown from isolating. Step 4 directs the operator to: Verify that Letdown is in service. If letdown in not is service the operator is directed to Re-establish Letdown. If letdown cannot be re-established then the operator refers to AOP-102.1, “Loss of Letdown.” Step 5 directs the operator to Check if PZR LVL master controller is responding appropriately. The Alternative Action column for Step 5 directs the operator to Control charging and letdown to restore PZR level to program level.

The question stem did not state that, or include indications that the master controller had malfunctioned. Therefore, the applicant should not make an assumption that the master controller had malfunctioned. The pre-examination briefing provides instructions to the applicants concerning making assumptions when answering questions. NUREG-1021, Revision 9, “Operator Licensing Examination Standards for Power Reactors,” Appendix E states in part: “When answering a question, do not make assumptions regarding conditions that are not specified in the question unless they occur as a consequence of other conditions that are stated in the question. For example, you should not assume that any alarm has activated unless the questions so states or the alarm is expected to activate as a result of the conditions that are stated in the question. Similarly you should assume that no operator actions have been taken, unless the stem of the question or the answer choices specifically state otherwise”.

Answer “C” remains the only correct answer.

K/A Number	064K3.02
RO Question Number	46 (Question 44 on the Examination Outline)
SRO Question Number	46
Licensee Comment	Correct answer is “B”. The distractor analysis supports “B” as the correct answer. The wrong answer “A” was checked. 120 VAC power is available through APN-5901. Therefore, the sequencer will perform its outputs, which include tripping motor feeders on NSR bus (output 1). See plant drawing D-203-203. Since the DG output breaker did not close, Steps 1A through 8 will not be sequenced.
Reference	D-203-203
Recommendation	Change answer key from “A” to “B”.
NRC Response:	NRC agrees with the licensee is comment that the answer key was incorrect. The key will be changed to show that “B” is the correct answer.

K/A Number 2.1.7

RO Question Number 65 (Question 68 on the Examination Outline)

SRO Question Number 65

Licensee Comment The given conditions of IR SUR = -0.2 DPM and PR = 0% indicate the reactor is tripped/subcritical. Based on an evaluation that the reactor is subcritical, proceeding directly to Step 2 is actually the only REQUIRED response, regardless of the status of the RTB or Rods. In practice, the crew may decide to sequester the RTB that failed to open for troubleshooting.

The open RTB has no impact on subsequent actions and the stuck rods will eventually be compensated for in EOP-1.1. Since there was nothing in the stem to indicate the presence on an SI, there would not be an urgent need to open the RTB. In the event of an SI, the RTB would have to be open in order to reset the SI.

Choice "B" may be acceptable, but not REQUIRED. The crew could elect to implement the Alternative Action to Step 1 (as is implied by IF/THEN). Even if the second switch did not open the RTB, the Reactor should be evaluated as tripped/subcritical and the crew should proceed to step 2.

Reference EOP-1.0

Recommendation Change answer from "B" to "A" since the stem asks for the REQUIRED action and not an acceptable action.

NRC Response: The NRC does not agree in changing the correct answer from "B" to "A" since the stem asks for the REQUIRED action and not an acceptable action.

Operations Administrative Procedure OAP-103.4 EOP/AOP User's Guide section 6.3 describes Format Rules. Section b. FLOWPATH states: "If the expected response is not obtained or the action cannot be performed, the operator shall move to the right hand column to implement the alternative action. Once the alternative action is accomplished the operator continues with the next left hand entry. If the alternative action cannot be accomplished (or if one is not provided) then the operator proceeds to the next step or substep in the left hand column." Section c. Step Sequencing states: "The flowpath of the

numbered steps in the AER (Action/Expected Response) column of the procedure should be followed. Unless directed by a note or caution or explicitly directed by a procedure step, the operator should proceed to the next step if the previous step cannot be performed. At his or her discretion, the CRS may continue with subsequent steps while waiting for a step in progress to be completed. However, steps which could be performed should not be skipped except as directed by transitions."

Step 1 of EOP-1.0 "Reactor Trip/Safety Injection Actuation" states to **Verify Reactor Trip**: this statement is followed by four bullets

- Trip the Reactor using either Reactor Trip Switch
- Verify all Reactor Trip and Bypass Breakers are open.
- Verify all Rod Bottom Lights are lit.
- Verify Reactor Power level is decreasing.

Operations Administrative Procedure OAP-103.4 EOP/AOP User's Guide section 6.3 describes Format Rules. Section e. states: "Bullets (•) utilized in the body of the procedure mean no priority exists in the order of execution of the steps involved. The bulleted steps are listed, however, in the preferred order of accomplishment."

Section 6.4 of OAP-103.4 a. 1) Verify states: "Determine if an expected action has occurred. No action should be taken on a verification. If the action has not occurred, there will usually be an alternative action providing further direction."

Instructor Lesson plan for EOP-1.0 on page 13 of 37 discusses the basis for operator actions. Part b of this discussion states that all three parameters should be met and to use operator judgement if one is not met. In this case two of the three parameters are not met. The discussion also states that the expected stable negative SUR should be -.33 DPM. The SUR in the stem of the question is -0.2 DPM. In following the rules of usage in OAP103.4 the Alternative Action should be performed. This alternative action of Step 1 of EOP-1.0 states: "IF the reactor will NOT trip using both Reactor Trip Switches, OR is NOT subcritical, THEN..." In order to satisfy the alternative action the operator must use the second reactor trip handswitch before proceeding to the next step.

Therefore, answer B is the only correct answer as the procedure is written.