OFFICIAL

February 21, 1992

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

Gentlemen:

SUBJECT: REACTOR OPERATOR AND SENIOR REACTOR OPERATOR LICENSING EXAMINATIONS
EXAMINATION REPORT NO. 50-395/92-300

In a telephone conversation between Mr. Terry Matlosz, Associate Manager of Nuclear Operations and Training and Mr. Jonathan Bartley, License Examiner, NRC Region II Operator Licensing Section, arrangements were made for the administration of licensing examinations at the V. C. Summer Nuclear Station.

The examination preparation visit is scheduled for May 4-8, 1992. The written examinations are scheduled for May 18, 1992, and the operating examinations are scheduled for May 19-22, 1992.

To meet the above schedule, it will be necessary for you to furnish the reference material listed in Enclosure 1, "Reference Material Requirements for Reactor/Senior Reactor Operator Licensing Examinations," by March 18, 1992. Any delay in receiving approved, properly bound and indexed reference material, or the submittal of inadequate or incomplete reference material may result in the examination being rescheduled. Mr. Matlosz has been advised of our reference material requirements and the address where each set is to be mailed.

You are responsible for providing adequate space and accommodations for administration of the written examinations. Enclosure 2, "Requirements for Administration of Written Examinations," describes our requirements for conducting these examinations. Mr. Matlosz has also been informed of these requirements.

Enclosure 3 contains the Rules and Guidelines that will be in effect during the administration of the written examination. The facility management is responsible for ensuring that all applicants are aware of these rules.

The facility staff review of the written examination will be conducted in accordance with requirements specified in Enclosure 4, "Requirements for Facility Review of Written Examinations." Mr. Matlosz has been informed of these requirements.

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To better document simulator examinations, the Chief Examiner will have the simulator operator reset predetermined plant conditions (i. e., plant pressure, temperature, pressurizer level, etc.), for each simulator scenario. The applicants will be responsible for providing this information, with any appeal of a simulator operating examination. Therefore, your training staff should retain the original simulator examination scenario information until all applicants who took examinations have either passed the operating examination, accepted the denial of their license, or filed an appeal.

Preliminary reactor operator and senior reactor operator license applications should be submitted at least 30 days before the first examination dates so that we will be able to review the training and experience of the candidates, process the medical certifications, and prepare final examiner assignments after applicant eligibility has been determined. If the applications are not received at least 30 days before the examination dates, it is likely that a postponement will be necessary. Final signed applications certifying that all training has been completed shall be submitted at least 14 days before the first examination date.

This request is covered by Office of Management and Budget Clearance Number 3150-0101 which expires May 31, 1992. The estimated average burden is 7.7 hours per response, including gathering, xeroxing, and mailing the required material. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch, Division of Information Support Services, Office of Information Resources Management, U. S. Nuclear Regulatory Commission, Washington, D. C. 20555; and to the Paperwork Reduction Project (3150-0101), Office of Information and Regulatory Affairs, NE OB-3019, Office of Management and Budget, Washington, D. C. 20503.

Thank you for your consideration in this matter. If you have any questions regarding the examination procedures and requirements, please contact Mr. Lawrence L. Lawyer, Chief, Operator Licensing Section 1, at (404) 331-4700, or myself at (404) 331-5541.

Sincerely,

(ORIGINAL SIGNED BY L. L. LAWYER FOR)

Thomas A. Peebles, Chief
Operations Branch
Division of Reactor Safety

Enclosures: (See Page 3)

Enclosures:
1. Reference Material Requirements for Reactor/Senior Reactor Operator Licensing Examinations
2. Requirements for Administration of Written Examinations
3. NRC Rules and Guidelines for Written Examinations
4. Requirements for Facility Review of Written Examinations

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ENCLOSURE 1

REFERENCE MATERIAL REQUIREMENTS FOR REACTOR/SENIOR REACTOR OPERATOR LICENSING EXAMINATIONS

1. Existing learning objectives, Job Performance Measures, student handouts and lesson plans (including training manuals, plant orientation manual, system descriptions, reactor theory, thermodynamics, etc.).

   A copy of the facility Job and Task Analysis (JTA), specifying the knowledges and abilities required of an operator at the facility. Each particular knowledge and/or ability will include an importance rating correlating it to ensuring the health and the safety of the public. If a JTA is not furnished, the Knowledges and Abilities Catalog for Nuclear Power Plant Operators, NUREG-1122 (1123) will be used to establish content validity for the examination.

   All Job Performance Measures (JPMs) used to ascertain the competence of the operators in performing tasks within the control room complex and, as identified in the facility JTAs, outside of the control room, i. e., local operations.

   Training materials shall include all substantive written material used for preparing applicants for initial RO and SRO licensing. The written material shall include learning objectives and the details presented during lectures, rather than outlines. Training materials shall be identified by plant and unit, bound, and indexed. FAILURE TO PROVIDE COMPLETE, PROPERLY BOUND AND INDEXED PLANT REFERENCE MATERIAL MAY RESULT IN THE RETURN OF THE MATERIAL TO THE PERSON WHO IS THE HIGHEST LEVEL OF CORPORATE MANAGEMENT WHO IS RESPONSIBLE FOR PLANT OPERATIONS (E. G., VICE PRESIDENT OF NUCLEAR OPERATIONS). ACCOMPANYING THE MATERIAL WILL BE A COVER LETTER EXPLAINING THE DEFICIENCIES IN THE REFERENCE MATERIAL AND THE FACT THAT THIS WAS THE REASON THE EXAMINATIONS WERE CANCELLED OR POSTPONED. Training materials which include the following shall be provided:

   - System descriptions including descriptions of all operationally relevant flow paths, components, controls, and instrumentation. System training material should draw parallels to the actual procedures used for operating the applicable system.

   - Complete and operationally useful descriptions of all safety-system interactions and, where available, BOP system interactions under emergency and abnormal conditions, including consequences of anticipated operator error, maintenance error, and equipment failure.

   - Training material used to clarify and strengthen understanding of emergency operating procedures.

2. Complete Procedure Index (including surveillance procedures, etc.).

3. All administrative procedures (as applicable to reactor operation or safety).

4. All integrated plant procedures (normal or general operating procedures).

5. All emergency procedures (emergency instructions, abnormal or special procedures).

6. Standing orders (important orders that are safety-related and may supersede the regular procedures).

7. Surveillance procedures (procedures that are run frequently, i. e., weekly or that can be run on the simulator).

8. Fuel-handling and core-loading procedures, (initial core-loading procedures, when appropriate).

9. All annunciator/alarm procedures.

10. Radiation protection manual (radiation control manual or procedures).

11. Emergency plan implementing procedures.

12. Technical Specifications (and interpretations, if available) for all units for which licenses are sought.

13. System operating procedures.

14. Piping and instrumentation diagrams, electrical single-line diagrams, or flow diagrams.

15. Technical Data Book and/or plant curve information as used by operators and facility precautions, limitations, and set points (PLS) for the facility.

16. Questions and answers specific to the facility training program which may be used in the written or operating examinations (voluntary by facility licensee).

17. The following on the plant reference simulation facility.

    a. List of all preprogrammed initial conditions.

    b. List of all preset malfunctions with a clear identification number. The list shall include cause and effect information. Specifically, for each malfunction a concise description of the expected result, or range of results, that will occur upon implementation shall be provided. Additionally, an indication of which annunciators are to be initially expected shall be given.

c. A description of simulator failure capabilities for valves, breakers, indicators, and alarms.

d. Where the capability exists, an explanation of the ability to vary the severity of a particular malfunction shall be provided, i. e., ability to vary the size of a given LOCA or steam leak, or the ability to cause a slow failure of a component such as a feed pump, turbine generator, or major valve (e.g., drifting shut of a main feedwater control valve).

e. An identification of modeling conditions/problems that may impact the examination.

f. Identification of any known performance test discrepancies not yet corrected.

g. Identification of differences between the simulator and the reference plant's control room.

h. Copies of facility generated scenarios that expose the applicants to situations of degraded pressure control (PWR), degraded heat removal capability (PWR and BWR) and containment challenges (PWR and BWR) may be provided (voluntary by licensee).

i. Simulator instructors manual (voluntary by licensee).

j. Description of the scenarios used for the training class (voluntary by licensee).

18. Additional material required by the examiners to develop examinations that meet the requirements of these Standards and the regulations.

The above reference material shall be approved, final issues and shall be so marked. If a plant has not finalized some of the material, the Chief Examiner shall verify with the facility that the most complete, up-to-date material is available and that agreement has been reached with the licensee for limiting changes before the administration of the examination. All procedures and reference material shall be bound with appropriate indices or tables of contents so that they can be used efficiently. Failure to provide complete, properly bound and indexed plant reference materia' could result in cancellation or rescheduling of the examinations.

ENCLOSURE 2

REQUIREMENTS FOR ADMINISTRATION OF WRITTEN EXAMINATIONS

1. A single room shall be provided for administration of the written examination. The location of this room and supporting restroom facilities shall be such as to prevent contact with all other facility and/or contractor personnel during the written examination. If necessary, the facility should make arrangements for the use of a suitable room at a local school, motel, or other building. Obtaining this room is the responsibility of the licensee.

2. Minimum spacing is required to ensure examination integrity as determined by the Chief Examiner. Minimum spacing should be one applicant per table, with a 3-foot space between tables.

3. Suitable arrangements shall be made by the facility if the applicants are to have lunch, coffee, or other refreshments. These arrangements shall comply with Item 1 above and shall be reviewed by the proctor

4. The facility licensee shall provide pads of 8-1/2 by 11 inch lined paper in unopened packages for each applicant's use in completing the examination. The proctor shall distribute these pads to the applicants as needed.

5. Applicants may bring pens, pencils, calculators, or slide rules into the examination room. Only black ink or dark pencils should be used for writing answers to questions.

6. The licensee shall provide one set of steam tables for each applicant. The proctor shall disiribute the steam tables to the applicants. No wall charts, models, and/or other training materials shall be present in the examination room. No other equipment or reference material shall be allowed unless provided by the proctor.

7. The facility staff shall be provided a copy of the written examination and answer key after the last candidate has handed in his written examination. The facility staff shall have five (5) working days to provide formal written comments with supporting documentation regarding written examination questions and answers to the Chief Examiner.

ENCLOSURE 3

PROCEDURES FOR THE ADMINISTRATION OF WRITTEN EXAMINATIONS

1. Check identification badges.

2. Pass out examinations and all handouts. Remind applicants not to review examination until instructed to do so.

READ THE FOLLOWING INSTRUCTIONS VERBATIM:

During the administration of this examination the following rules apply:

1. Cheating on the examination means an automatic denial of your application and could result in more severe penalties.

2. After the examination has been completed, you must sign the statement on the cover sheet indicating that the work is your own and you have not received or given assistance in completing the examination. This must be done after you complete the examination.

READ THE FOLLOWING INSTRUCTIONS:

1. Restroom trips are to be limited and only one applicant at a time may leave. You must avoid all contacts with anyone outside the examination room to avoid even the appearance or possibility of cheating.

2. Use black ink or dark pencil only to facilitate legible reproductions.

3. Print your name in the blank provided in the upper right-hand corner of the examination cover sheet and each answer sheet.

4. Mark your answers on the answer sheet provided. USE ONLY THE PAPER PROVIDED, AND DO NOT WRITE ON THE BACK SIDE OF THE PAGE.

5. Before you turn in your examination, consecutively number each answer sheet, including any additional pages inserted when writing your answers on the examination question page.

6. Use abbreviations only if they are commonly used in facility literature. Avoid using symbols such as < or > signs to avoid a simple transposition error resulting in an incorrect answer. Write it out.

7. The point value for each question is indicated in parentheses after the question.

8. Show all calculations, methods, or assumptions used to obtain an answer to any short answer questions.

9. Partial credit may be given except on multiple choice questions. Therefore, ANSWER ALL PARTS OF THE QUESTION, AND DO NOT LEAVE ANY ANSWER BLANK.

10. Proportional grading will be applied. Any additional wrong information that is provided may count against you. For example, if a question is worth one point and asks for four responses, each of which is worth 0.25 points, and you give five responses, each of your responses will be worth 0.20 points. If one of your five responses is incorrect, 0.20 will be deducted, and your total credit for that question will be 0.80 instead of 1.00 even though you got the four correct answers.

11. If the intent of a question is unclear, ask questions of the examiner only.

12. When turning in your examination, assemble the completed examination with examination questions, examination aids, and answer sheets. In addition, turn in all scrap paper.

13. Ensure all information you wish to have evaluated as part of your answer is on your answer sheet. Scrap paper will be disposed of immediately following the examination.

14. To pass the examination, you must achieve a grade of 80% or greater.

15. There is a time limit of four (4) hours for completion of the examination.

16. When you are done and have turned in your examination, leave the examination area (DEFINE THE AREA). If you are found in this area while the examination is still in progress, your license may be denied or revoked.

ENCLOSURE 4

REQUIREMENTS FOR FACILITY REVIEW OF WRITTEN EXAMINATIONS

1. At the option of the Chief Examiner, the facility may review the written examination up to two weeks prior to its administration. This review may take place at the facility or in the Regional office. The review will be conducted using the same material sent to the NRC for exam generation purposes. The Chief Examiner will coordinate the details of the review with the facility. An NRC examiner will always be available during the review.

   Whenever this option of examination review is utilized, the facility reviewers will sign the following statement prior to being allowed access to the examination. The examination or written notes will not be retained by the facility.

   a. Pre-Examination Security Agreement

      I, _____, acknowledge that I have acquired specialized knowledge concerning the examination scheduled for _____ _____ at _____ as of the date of my signature below. I agree that I will not knowingly divulge any information concerning this examination to any unauthorized persons. I understand that I am not to participate in any instruction involving those applicants scheduled to be administered the above examination from this date until after the examination has been administered. I further understand that violation of the conditions of this agreement may result in the examination being canceled and/or enforcement action against myself or the facility licensee by whom I am employed or represent.

      _____
      Signature/Date

   In addition, the facility staff reviewers will sign the following statement after the written examination has been administered.

   b. Post-Examination Security Agreement

      I, _____, did not, to the best of my knowledge, divulge any information concerning the examinations administered during the week of _____ at _____ to any unauthorized persons. I did not participate in providing any instruction to those applicants who were administered the examination from the date I entered into this security agreement until the completion of examination administration.

      _____
      Signature/Date

2. Regardless of whether the above examination review option is exercised, immediately following the administration of the written examination, the facility staff shall be provided a marked-up copy of the examination and the answer key. The copy of the written examination shall include pen and ink changes made to questions during the examination administration.

   If the facility did not review the examination prior to its administration, they will have five (5) working days from the day of the written examination to submit formal comments. If the facility reviewed the examination prior to its administration, any additional comments must be given to an examiner prior to his/her leaving the site at the end of the week of the written examination administration. In either case, the comments will be addressed to the responsible Regional Office by the highest on-site level of corporate management for plant operations, e.g., Vice President for Nuclear Operations. A copy of the submittal will be forwarded to the Chief Examiner, as appropriate. Comments not submitted within the required time frame will be considered for inclusion in the grading process on a case-by-case basis by the Regional Office Section Chief. Should the comment submittal deadline not be met, a long delay in grading the examinations may occur.

3. The following format should be adhered to for submittal of specific comments:

   a. Listing of NRC question, answer, and reference.

   b. Facility comment/recommendation.

   c. Reference (to support facility comment).

NOTES:
(1) No change to the examination will be made without submittal of a reference to support the facility comment. Any supporting documentation that was not previously supplied, should be provided.

(2) Comments made without a concise facility recommendation will not be addressed.

4. A two-hour post-examination review may be held at the discretion of the Chief Examiner. If this review is held, the facility staff should be informed that only written comments that are properly supported will be considered in the grading of the examination.