

CITIZEN

July 15, 1992

Tennessee Valley Authority  
ATTN: Mr. D. A. Nauman, Senior Vice  
President, Nuclear Power  
6N 38A Lookout Place  
1102 Market Street  
Chattanooga, TN 37402-2601

Gentlemen:

SUBJECT: REQUALIFICATION PROGRAM EVALUATION - BROWNS FERRY NUCLEAR PLANT  
EXAMINATION REPORT NO. 50-259/92-301

Arrangements have been made between Mr. Mark DeRoche, License Training Manager, and Mr. D. Charles Payne, License Examiner, for an evaluation of the requalification program and licensed personnel at your Browns Ferry Nuclear Plant. The evaluation visit is scheduled for the weeks of November 30 and December 7, 1992. The requalification examinations and the subsequent evaluation of the facility requalification program will be performed in accordance with Sections 601 through 604 of NUREG 1021, Operator Licensing Examiner Standards, Revision 6. You are encouraged to ensure that your training staff and proposed examinees are familiar with these standards.

Please note that Revision 7 of the Examiner Standards may be available for use by the time of the examinations. We will coordinate with your staff to determine whether you would prefer to be evaluated under the new or old standards.

For the examiners to adequately prepare for this visit, it will be necessary for the facility to furnish the approved items listed in Enclosure 1, "Reference Material Requirements." Failure to supply the reference material as required by Enclosure 1 may result in postponement of the examination. The Chief Examiner may request that the facility submit a proposed examination for use during the examination weeks in addition to the material requirements of Enclosure 1. Submission of a proposed examination, even if requested, is optional. However, if a proposed examination is submitted, those personnel participating in its development may become subject to the security restrictions described below. Mr. DeRoche has been advised of our reference material requirements, whether a proposed examination is requested, and where these items are to be sent.

Your attention is directed to the guidance promulgated in Revision 6 to NUREG-1021 pertaining to the content and scope of simulator examination scenarios. The scenario examination bank should cover the entire spectrum of Emergency Operating Procedures (EOPs), including alternate decision paths within EOPs, and incorporate a range of failures with varying degrees of severity for the same type event. Each scenario should contain simultaneous events that require prioritization of actions and allocation of resources, and should exercise EOPs in-depth, i.e., scenarios require transitions and/or decisions to be made on actions to take within the EOPs.

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You are requested to designate at least one employee to be a member of a joint NRC-facility examination team. The employee shall be an active SRO (per the requirements of 10 CFR 55.53(e) or (f) from the Browns Ferry Nuclear Plant Operations Department. You are encouraged to designate a second employee from the training staff to be a member of the examination team. This employee should be an active SRO (per the requirements of 10 CFR 55.53(e) or (f)), but may be a facility or INPO certified instructor. If desired and agreed to by the Chief Examiner, you may designate one additional employee from the training staff with appropriate qualifications to be a member of the examination team. In addition to these individuals, a simulator operator must be made available for scenario preview and validation during the on-site examination preparation week. In some cases, it may be necessary to designate a simulator operator during the test item review period. This individual will also be subject to the examination security agreement.

Any facility representatives under the security agreement shall be restricted from knowingly communicating by any means the content or scope of the examination to unauthorized persons and from participating in any facility programs such as instruction, examination, or tutoring in which an identified requalification examinee(s) will be present. These restrictions shall apply from the day that the facility representative signs the examination security agreement indicating that the representative understands that he or she has specialized knowledge of the examination. The Chief Examiner will determine when facility representatives have received specialized knowledge concerning the examination and require execution of an examination security agreement. In most cases, the examination team members will not be required to enter into an examination security agreement more than 60 days prior to the examination week. The simulator operator will normally become subject to the requirements during the examination preparation and validation week, but in some cases, this may occur as much as 30 days prior to the examination week to support operating test item review and revision.

Sixty days prior to the examination administration date, the facility training staff shall identify and provide directly to the NRC's Chief Examiner a list of the proposed operators, including crew composition, for the examination. Also, to ensure privacy, the only copy of the current mailing address of each proposed operator should be mailed in an envelope labeled "To Be Opened By Addressee Only" to the attention of Mr. Thomas A. Peebles, Chief, Operations Branch, Division of Reactor Safety, Region II.

The facility management is responsible for providing adequate space and accommodations to properly develop and conduct the examinations. Enclosure 2, "Administration of Requalification Examinations," describes our requirements for developing and conducting the examinations. Mr. DeRoche has also been informed of these requirements. Also, a facility operations management representative (as a minimum, first level above shift supervisor) should observe the simulation facility examination process at the site.

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, copying, and mailing the required

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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 on the evaluation process, please contact Mr. Charles A. Casto, Chief, Operator Licensing Section 2, at (404) 331-5594, 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:

1. Reference Material Requirements
2. Administration of Requalification Examinations
3. NRC Rules and Guidance for Examinees

cc w/encls:

O. J. Zeringue, Vice President,  
Browns Ferry  
J. A. Scalice, Plant Manager  
C. T. Dexter, Training Supervisor  
State of Alabama

bcc w/o encls:

S. Ebner, RA  
E. Merschoff, DRS  
T. Ross, NRR  
P. Kellogg, DRP  
C. Payne, DRS  
C. Patterson, Browns Ferry Senior  
Resident Inspector

bcc w/encls:

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TPeebles  
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## ENCLOSURE 1

### REFERENCE MATERIAL REQUIREMENTS

Test items to support all aspects of the requalification examination must be provided to the NRC 60 days prior to the examination date.

All test items should be developed in accordance with the guidelines provided in Sections 602 through 604 of NUREG 1021, Operator Licensing Examiner Standards, and their respective attachments.

For the first requalification evaluation at the facility, the submittal must contain at least:

700 test items for use in the written examination. They should be equally divided between the two sections of the examination, and there must be at least 350 test items for use in each section.

75 Job Performance Measures (JPMs) for use on the walk-through portion of the operating examination. To the extent possible, approximately 40 percent of the JPMs should evaluate "in plant" tasks (system/component operation outside the control room).

15 simulator scenarios of approximately 50 minutes each in length for use on the simulator portion of the operating examination for examinations administered in one week.

For subsequent requalification examinations facilities are expected to make submittals reflecting progress toward the following targets over the next five years after the initial evaluation visit:

A minimum of 700 test items for use in the written examination equally divided between the two sections of the written examination and which cover all safety-related elements of the facility Job Task Analysis (JTA). The bank shall be dynamic in nature, in that at least 150 questions a year shall be reviewed, revised, or generated. New questions that are developed should cover equipment and system modifications, recent industry, and licensee events and procedural changes.

JPMs to evaluate each operator and senior operator safety-related task identified in the facility JTA, which meet the criteria in ES-603. The JPM bank should expand at a rate of at least ten JPMs per year until this goal is reached. It is estimated at 125 - 150 JPMs will be the final result. Development of the questions associated with the JPMs shall also continue, such that there is a representative sample of questions given the knowledges associated with the task listed in the JTA.

A bank of at least 30 simulator scenarios which reflect all plausible or expected abnormal and emergency situations to which control room operators are expected to respond or control. At least five scenarios per year should be generated until all aspects of the emergency operating procedures are covered with sufficient variation in the type and scope of initiating events and level of degradation.

For all requalification examination and evaluation visits, the facility shall:

Submit an Examination Test Outline/Sample Plan which meets the requirements of ES-601, Attachment 1.

Provide the associated examination banks (written, simulator, and JPM) and associated reference material to the region and contractor. At a minimum, this shall include Technical Specifications, applicable plant operating, surveillance and administrative procedures, abnormal and emergency operating procedures, emergency plan procedures, and training material utilized in the requalification training (including student handouts and lesson plans). Additional reference material may be requested by the Chief Examiner.

If a proposed examination is submitted to the region, also submit a copy of the simulator scenario portion to the Chief, Regional Support and Oversight Section, Operator Licensing Branch, Division of Licensee Performance and Quality, Washington, DC 20555, 45 days in advance of the first day of the examinations. *The reason for the increased period of days is to allow a reasonable amount of time for feedback, discussion and time to make any necessary changes.*

## ENCLOSURE 2

### ADMINISTRATION OF REQUALIFICATION EXAMINATIONS

1. An evaluation of at least 12 facility licensed operators is required for a program evaluation. Normally the crew scheduled for requalification training during the period selected for the program evaluation should be selected. The sample will include other licensed operators who are not routinely performing shift duties or are not maintaining an active license per 10 CFR 55.53(3). The restrictions on crew composition in the simulator are described in ES-601 C.1.b. and ES-604.
2. The simulator and simulator operator(s) shall be provided for examination development. The date(s) and duration of time needed to develop the examinations will be agreed upon by the Chief Examiner and the facility.
3. The reference material used in the simulator will be reviewed by the Chief Examiner. No material will be used that is solely used for training.
4. A single room shall be provided for completing Section B of the written examination. The location of this room and supporting rest room facilities shall be such as to prevent contact with all other facility and/or contractor personnel for the duration of the examination.
5. Minimum spacing is required to ensure examination integrity and will be evaluated by the Chief Examiner. Minimum spacing consists of one examinee per table and a 3-foot space between tables. No wall charts, models, and/or other training materials shall be present in the examination room.
6. Copies of reference material for Section B of the written examination shall be provided for each examinee. The reference material will be reviewed by the Chief Examiner and will consist of Technical Specifications, operating/abnormal procedures, administrative procedures, and Emergency Plans as available to the plant operators.
7. Video taping capabilities may be utilized. The facility should contact the Chief Examiner for restrictions related to its usage.
8. An attempt will be made to distinguish between RO and SRO knowledge and abilities to the extent that such a distinction is supported by the facility training materials.
9. Prudent scheduling of exam week activities is important to help alleviate undue stress on the operators. Your training staff and the Chief Examiner should work very closely in formulating a schedule which does not result in excessive delays in crews or individuals being administered their examination. The following are some suggestions for structuring the exam activities to achieve this purpose:

- Don't bring in crews or individuals well before their scheduled exam times.
- When examining operators in groups, it is better to hold the group just completing their exam vice the groups that are taking their exam later.
- Following simulator scenarios, the facility evaluators and NRC examiners should quickly determine whether follow-up questioning is required, so that the crew may be released to talk among themselves about the scenario.
- Ensure that time validation of JPMs, particularly those performed in the simulator, is conducted accurately. A reasonable schedule should be established to prevent operators from waiting for simulator availability to complete their JPMs.

### ENCLOSURE 3

#### NRC RULES AND GUIDANCE FOR EXAMINEES

1. Use black ink or dark pencil ONLY to facilitate legible reproduction.
2. Print your name in the blank provided on the cover sheet of the examination.
3. Fill in the date on the cover sheet of the examination, if necessary.
4. Answer each question on the examination. If additional paper is required, use only the lined paper provided by the examiner.
5. Use abbreviations only if they are commonly used in facility literature.
6. The point value for each question is indicated in parentheses after the question and can be used as a guide for the depth of answer required.
7. Show all calculations, methods, or assumptions used to obtain an answer to a short answer test item, whether asked for in the question or not.
8. Unless solicited, the location of references need not be stated.
9. 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 response 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, even though you may have listed the four correct responses in the answer key.
10. Partial credit may be given, except on multiple choice questions. Therefore, ANSWER ALL PARTS OF THE QUESTION, AND DO NOT LEAVE ANY ANSWERS BLANK.
11. If parts of the examination are not clear with respect to their intent, ask questions of the examiner only.
12. You must sign the statement on the cover sheet that indicates the work on the examination is your own and that you have not received or been given any assistance in completing the examination. This must be signed AFTER the examination has been completed.
13. Rest room trips are to be limited, and only one examinee at a time may leave. You must avoid all contact with anyone outside the examination room to avoid even the appearance or possibility of examination compromise.
14. Cheating on the examination would result in a revocation of your license and could result in more severe penalties.



15. Each section of the examination is designed to take approximately 90 minutes to complete. You will be given two hours to complete each section to allow for thirty minutes of review.
16. The examination has been time validated by knowledgeable persons. You should be aware that not every answer needs to be verified by consulting a reference, and excessive usage of reference material may cause you to not complete the exam in the allotted time.
17. Due to the existence of questions that will require all examinees to refer to the same indications or controls, particular care must be taken to maintain individual examination security and avoid any possibility of compromise or appearance of cheating.
18. When you are finished and have turned in your completed examination, leave the examination area.