

APR 16 1991

Docket No. 50-334

Duquesne Light Company
ATTN: Mr. J. D. Sieber
Vice President
Nuclear Group
Post Office Box 4
Shippingport, Pennsylvania 15077

Gentlemen:

Subject: SENIOR REACTOR OPERATOR LICENSING EXAMINATIONS AND REQUALIFICATION
PROGRAM EVALUATION

In a telephone conversation between Mr. T. Burns, Operations Training Supervisor, and Mr. P. Bissett, Senior Operations Engineer, arrangements were made for the administration of licensing examinations and an evaluation of the requalification program at the Beaver Valley Power Station, Unit No. 1.

The initial license examinations are scheduled for the week of August 12, 1991. The requalification program evaluation and NRC administered requalification examinations are scheduled for the weeks of August 12 and 19, 1991.

To meet the above examination dates, it will be necessary for you to furnish the reference material listed in Enclosure 1, "Reference Material Requirements" by June 12, 1991. Any delay in receiving approved, properly bound and indexed reference material, or the submittal of inadequate or incomplete reference material may result in the examinations being rescheduled. NRC reserves the right to postpone NRC administered requalification examinations if the facility generated materials are inadequate for examination preparation. Mr. Burns 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 Examinations," describes our requirements for conducting these examinations. The facility management is responsible for ensuring that all applicants are aware of these rules.

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

For the requalification examinations, the NRC examiners will administer NRC prepared operating and written examinations. The NRC examiners will visit the site approximately fourteen days in advance to meet with the appropriate facility personnel to review the schedule and the process for these examinations.

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As Mr. Burns has agreed, 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.

You are requested to designate at least one employee to be a member of a joint NRC-facility requalification examination team. The employee shall be an active SRO (per the requirements of 10 CFR 55.53(e) or (f)) from the Beaver Valley Power Station, Unit No. 1, Operations Department. You are encouraged to designate a second employee from the training staff to be a member of the requalification 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.

The Chief Examiner may request that the facility submit a proposed requalification examination for use during the requalification examination week in addition to the reference 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 will become subject to the security restrictions described below.

Any facility representatives under the security agreement shall be restricted from knowingly communicating by any means the content or scope of the requalification 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 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.

The facility shall identify to the NRC 60 days prior to the requalification examination administration date, the proposed operators, including crew composition, for the examination. This information should be provided by the facility training staff to the NRC's Chief Examiner.

Preliminary reactor operator and senior reactor operator license applications should be submitted at least 30 days before the initial examination date 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 initial examination date, it is likely

that a postponement will be necessary. Applications certifying completion of all training requirements should be received by the Region fourteen (14) days prior to the initial examination date.

As agreed to by your representative, the initial examination will be conducted in accordance with Revision 6 of the Examiners Standards. To better document the simulator portion of the initial license examinations, the Chief Examiner will have the simulator operator record predetermined plant conditions (i.e., plant pressure, temperature, reactor vessel water 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 examinations scenario information until all applicants who took examinations have either passed the operating examination, accepted the denial of their license, or filed an appeal.

Mr. Burns has been informed of the above requirements.

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 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 me at (215) 337-5211.

Sincerely,

Original Signed By:

Larry E. Eselgroth
for PETER W. ESELGROTH
Peter W. Eselgroth, Chief
PWR Section
Operations Branch
Division of Reactor Safety

Enclosures:

1. Reference Material Requirements
2. Requirements for Administration of Examinations
3. NRC Rules and Guidelines for Written Examinations
4. Requirements for Facility Review of Examinations

cc w/encls.:

J. J. Carey, Executive Vice President, Operations
G. S. Thomas, General Manager, Corporate Nuclear Services
N. R. Tonet, Manager, Nuclear Safety
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bcc w/encls.:

Region I Docket Room (with concurrences)
Management Assistant, DRMA (w/o encls.)
A. DeAgazio, NRR/PD 1-4
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P. Bissett, DRS
OL Facility File
DRS Files (3)

RI:DRS *dmg*
Bissett/dmg

04/10/91

RI:DRS *ES*
Eselgroth

04/15/91

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ENCLOSURE 1

REFERENCE MATERIAL REQUIREMENTS

1. Existing learning objectives, Job Performance Measures and lesson plans (including training manuals, plant orientation manual, system descriptions, 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 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, tabbed, and indexed. 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
9. All annunciator/alarm response procedures
10. Radiation protection manual (radiation control manual or procedures)
11. Emergency plan implementing procedures
12. Technical Specifications (and interpretations, if available)
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. Licensee Event Reports for the previous two years (as applicable to licensed operators).
17. Questions and answers specific to the facility training program which may be used in the written or operating examinations in addition to the items specified in item 19 (voluntary by licensee)
18. The following on the plant reference simulation facility:
 - a. List of all pre-programmed 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 should 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 feed-water 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 heat removal capability and containment challenges (voluntary by licensee)
 - i. Simulator instructors manual (voluntary by licensee)
 - j. Description of the scenarios used for the training class (voluntary by licensee)
19. Test items to support the written simulator, and plant walk-through portions of the requalification examinations
- a. 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)
 - b. A minimum of 75 job performance measures (JPMs) for use on the walk-through portion of the operating examination. To the extent possible, approximately 40% of the JPMs should evaluate "in plant" tasks (system/component operation outside the control room)
 - c. Fifteen 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.
- 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.
20. An Examination Test Outline/Sample Plan which meets the requirements of ES-601, Attachment 2;

21. Any additional training material utilized in licensed operator requalification training not included in Items 1 through 18.

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 material could result in cancellation or rescheduling of the examinations.

ENCLOSURE 2

REQUIREMENTS FOR ADMINISTRATION OF EXAMINATIONS

1. A single room shall be provided for administration of the initial written examination and Section B of the requalification examinations. 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 three foot space between tables. No wall charts models, other training materials shall be present in the examination room.
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 examiner and/or 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 initial examination. The examiner 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 reference material used in the simulator for Section A of the requalification examination will be reviewed by the chief examiner. No material will be used that is solely used for training.
7. Copies of reference material for Section B of the requalification written examination shall be provided. 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.
8. An evaluation of at least twelve facility licensed operators is required for a requalification 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(e). The restrictions on crew composition in the simulator are described in ES-601(C.1.b) and ES-604.

9. Video taping capabilities may be utilized for the requalification examination only. The facility should contact the chief examiner for restrictions related to its usage.
10. 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.
11. 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.
12. A facility operations management representative (as a minimum, first level above shift supervisor) should observe the simulator requalification examination process at the site.

ENCLOSURE 3

NRC RULES AND GUIDELINES FOR WRITTEN EXAMINATIONS

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 or answer sheet provided. If additional paper is required, use only the lined paper provided by the examiner. Do not write on the back side of the page.
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.
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 assistance in completing the examination. This must be signed AFTER the examination has been completed.
13. Restroom 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. When you are done and have turned in your examination, leave the examination area. If you are found in this area while the examination is still in progress, your license may be denied or revoked.
16. To pass the examination, you must achieve a grade of 80% or greater.

For Requalification Examinations:

17. 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 30 minutes of review.
18. 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.
19. Due to 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.

For initial examinations:

20. There is a time limit of four (4) hours for completion of the examination.
21. When turning in your examination, assemble the completed examination with examination questions, examination aids and answer sheets. In addition, turn in all scrap paper.

ENCLOSURE 4

REQUIREMENTS FOR FACILITY REVIEW OF EXAMINATIONS

1. At the option of the Chief Examiner, the facility may review the written examination for initial licensing up to two weeks prior to its administration. This review may take place at the facility or in the Regional office. The Chief Examiner will coordinate the details of the review with the facility. An NRC examiner will always be present during the review.

When 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 _____ agree that I will not knowingly divulge any information concerning the examination scheduled for _____ to any unauthorized persons. I understand that I am not to participate in any instruction involving those reactor operator or senior reactor operator applicants scheduled to be administered the above examination from now until after the examination has been administered. I understand that violation of this security agreement could result in the examination being voided.

Signature/Date

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

b. Post-Examination Security Agreement

I _____ did not, to the best of knowledge, divulge any information concerning the examinations administered during the week of _____ to any unauthorized persons. I did not participate in providing any instruction to those reactor operator and senior reactor operator applicants who were administered the examination from the time that I was allowed access to the examination.

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 examination 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 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.