



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

February 2, 2000

Dr. Steven S. Koblik, President  
Reed College  
3203 SE Woodstock Blvd.  
Portland, Oregon 97202

Dear Dr. Koblik:

I made arrangements with Mr. Stephen Frantz for the administration of operator licensing examinations at the Reed Reactor Facility. The written and operating examinations are scheduled for the week of May 1, 2000.

To meet this schedule, please furnish the material listed in Enclosure 1, "Reference Material for Senior Reactor Operator Limited to Fuel Handling Licensing Examinations" at least 60 days prior to the examination date to the following address:

(U.S. Postal Service)  
U.S. Nuclear Regulatory Commission  
ATTN: Patrick Isaac  
Mail Stop O-11 D-19  
Washington, D.C. 20555

(Overnight Delivery)  
U.S. Nuclear Regulatory Commission  
ATTN: Patrick Isaac  
Mail Stop O-11 D-19  
11555 Rockville Pike  
Rockville, MD 20852-2738

You are responsible for providing adequate space for proper conduct of the written examination. Enclosure 2, "Administration of Written Examinations," describes our process for conducting these examinations.

Enclosure 3 contains the Rules and Guidelines that will be in effect during the administration of the written examination. Please ensure that all applicants are aware of these rules.

Your review of the written examination will be conducted in accordance with the procedures specified in Enclosure 4, "Facility Review of Written Examinations."

Final, signed senior reactor operator license applications certifying that all training has been completed must be submitted at least 14 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 process the applications. If our review cannot be completed in time to make a determination of applicant eligibility, the candidate may not be permitted to sit for the examination. Therefore, it is recommended that license applications be provided as soon as possible to ensure an appropriate level of review.

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DFO 1

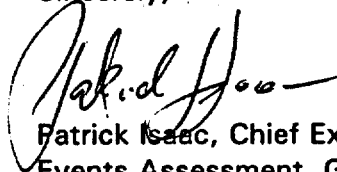
Dr. Koblik

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This request is covered by Office of Management and Budget (OMB) Clearance Number 3150-0101, which expires April 30, 2000. 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, T-6 F-33, 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, NEOB-10202, Office of Management and Budget, Washington, D.C. 20503.

If you have any questions regarding the examination procedures and requirements, please contact me at (301) 415-1019, or Internet e-mail [pxi@nrc.gov](mailto:pxi@nrc.gov).

Sincerely,



Patrick Isaac, Chief Examiner  
Events Assessment, Generic Communications and  
Non-Power Reactors Branch  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No. 50-288

- Enclosures:
1. Reference Material for Reactor/Senior  
Reactor Operator Licensing Examinations
  2. Administration of Written Examinations
  3. Procedures for Administration of  
Written Examinations
  4. Facility Review of Written Examinations

cc w/enclosures: Mr. Stephen Frantz, Reed Reactor Facility

**REFERENCE MATERIAL FOR REACTOR/SENIOR REACTOR OPERATOR  
LICENSING EXAMINATIONS (NON-POWER)**

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

Training materials should include all substantive written material used for preparing applicants for initial RO and SRO licensing. The written material should include learning objectives if available and the details presented during lectures, rather than outlines. Training materials should be identified, bound, and indexed. Training materials which include the following should 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 and applicable system.

Complete and operationally useful descriptions of all safety-system interactions, secondary 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 temporary procedures).
3. All administrative procedures as applicable to reactor operation or safety.
4. All integrated plant procedures, normal or general operating procedures and procedures for experiments.
5. All emergency procedures, emergency instructions, abnormal or special procedures.
6. Standing orders or procedures changed by reactor supervision and important orders or changes that are safety related and may supersede the regular procedures.
7. Applicable procedures (procedures that are run frequently).
8. Fuel-handling and core-loading procedures and initial core-loading procedure, when appropriate.
9. Any annunciator/alarm procedures, as applicable.

10. Radiation protection manual, radiation control manual or procedures.
11. Emergency plan implementing procedures.
12. Safety Analysis Report, Technical Specifications and interpretations, if available.
13. System operating procedures, including experiments.
14. Piping and instrumentation diagrams, electrical single-line diagrams, or flow diagrams, as applicable.
15. Technical Data Book, and/or plant curve information as used by operators and facility precautions, limitations, and set points 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. Additional material as requested by the examiners to develop examinations that meet the requirements of the Non-power Reactor Examiner Standards and Regulations.

The above reference material should be approved final issues and so marked. If a facility has not finalized some of the material, the Chief Examiner should 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.

## ADMINISTRATION OF WRITTEN EXAMINATIONS

1. A single room must be provided for administration of the written examination. The location of this room and supporting restroom facilities should be such as to prevent contact with all other facility personnel during the written examination.
2. Minimum spacing is necessary to ensure examination integrity as determined by the Chief Examiner (i.e., one applicant per table, with a three-foot space between tables).
3. Acceptable arrangements should 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 must be reviewed by the examiner and/or proctor.
4. The facility licensee provides pads of 8 ½ by 11 inch lined paper in unopened packages for each applicant's use in completing the examination. The examiner distributes 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. No wall charts, models, and/or other training materials can be present in the examination room. No other equipment or reference material will be allowed unless provided by the examiner.
7. The facility staff is provided with a copy of the written examination and answer key after the last candidate has handed in his written examination. The facility staff will then have five (5) working days to provide formal written comments with supporting documentation regarding written examination questions and answers to the Chief Examiner.

## PROCEDURES FOR THE ADMINISTRATION OF WRITTEN EXAMINATIONS

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

### READ THE FOLLOWING INSTRUCTIONS VERBATIM:

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 contact 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.
6. The point value for each question is indicated in [brackets] after the question.
7. If the intent of a question is unclear, ask questions of the examiner only.
8. When turning in your examination, assemble the completed examination with examination questions, examination aids and answer sheets. In addition, turn in all scrap paper.
9. 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.

10. To pass the examination, you must achieve a grade of 70 percent or greater in each category.
11. There is a time limit of three (3) hours for completion of the examination.
12. When you have completed and turned in your examination, leave the examination area (DEFINE THE AREA). If you are observed in this area while the examination is still in progress, your license may be denied or revoked.

February 2, 2000

Dr. Koblik

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Sincerely,

Original /s/

Patrick Isaac, Chief Examiner  
Events Assessment, Generic Communications and  
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cc w/enclosures: Mr. Stephen Frantz, Reed Reactor Facility

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