

JUL 28 1987

In Reply Refer To:
Docket: 50-267/OL-88-01

Public Service Company of Colorado
ATTN: Robert O. Williams, Jr.
Vice President, Nuclear Operations
P. O. Box 840
Denver, Colorado 30201-0840

Gentlemen:

SUBJECT: OPERATOR LICENSING EXAMINATIONS AT FORT ST. VRAIN

In a telephone conversation between Mr. Steve Willford, Training Manager, and Mr. Ralph A. Cooley, Chief, Operator Licensing Section (OLS), arrangements were made for the administration of operator license examinations at the Fort St. Vrain Nuclear Station. This will involve one site visit during the week of October 5, 1987. As agreed with Mr. Willford, reactor startups for all license candidates will be conducted on a single day during the week, depending on plant availability. Written and operating examinations will be scheduled based on the date of the reactor startups.

The OLS currently maintains a copy of the reference material listed in Enclosure 1, "Reference Material Requirements for Reactor/Senior Reactor Operator Licensing Examinations," but any updates or corrections not previously submitted should be received no later than August 24, 1987. Any delay in receiving update material may result in use of the material on hand. Mr. Willford has been advised of our reference material requirements.

The facility management is responsible for providing adequate space and accommodations in order to properly conduct the written examinations. Enclosure 2, "Administration of Reactor/Senior Reactor Operator Licensing Written Examinations," describes NRC requirements for conducting these examinations. Mr. Willford has also been informed of these requirements.

In addition, the chief examiner may request copies of selected plant parameters (e.g., temperature, pressure, level, etc.) for each reactor startup for examination record purposes. Candidates who appeal the operating examination are responsible for providing this type of information as a part of the appeal. Therefore, the facility should retain such information until all examination results are finalized, including appeals.

The facility review of the written examination should be conducted in accordance with the specifications in Enclosure 3, "Requirements for Facility Review of Written Examination." Mr. Willford has been informed of these requirements.

RIV:RSB/OL
JLPellet *RP*
7/22/87

OL
RACooley *KAC*
7/23/87

RSB *A*
TFWesterman
7/23/87

RPB *RP*
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7/23/87

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Public Service Company of Colorado

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Preliminary copies of all operator license applications should be submitted at least 60 days before the scheduled examination date so that the NRC will be able to review the training and experience of the candidates, process medical certifications, and issue examiner assignments. If preliminary copies of the applications are not received at least 30 days before the examination date, a postponement may be necessary. When ALL training and qualification requirements have been met by the candidates scheduled for the current license examination, final applications with all required signatures must be received by the Chief, OLS, not less than one week before the scheduled examination date. Significant differences between the preliminary and final applications may result in a candidate being removed from the examination.

This request for information was approved by the Office of Management and Budget under Clearance Number 3150-0101, which expires May 31, 1989. Comments on burden and duplication may be directed to the Office of Management and Budget, Reports Management Room 3208, New Executive Office Building, Washington, DC 20503.

Thank you for your consideration in this matter. If you have any questions regarding the examination procedures and requirements, please contact Mr. John L. Pellet, Chief Examiner at (817) 860-8159 or Mr. Ralph A. Cooley, Chief, Operator Licensing Section at (817) 860-8147.

Sincerely,
Original Signed By

E. M. Johnson

Jim Gagliardo, Chief
Reactor Projects Branch

Enclosures:
As Stated

cc w/ enclosures:
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P. Tomlinson, Manager, Manager
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(same address)

S. Willford, Training Manager
(same address)

Colorado Radiation Control Program Director

Colorado Public Utilities Commission

bcc to DMB (IE42)
bcc distrib. by RIV:

*RFB	Section Chief (RPB/A)
*RRI	Section Chief (RSB/ES)
*RIV File	*D. Weiss, RM/ALF
*RSB	*Project Inspector
	*K. Heitner, NRR PD4

R. D. Martin, RA
R. Cooley
J. Pellet
D. Graves
E. Haycraft

ENCLOSURE 1

REFERENCE MATERIAL REQUIREMENTS FOR REACTOR/SENIOR REACTOR OPERATOR LICENSING EXAMINATIONS

1. Existing learning objectives 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 candidates for initial RO and SRO licensing. The written material should be inclusive of learning objectives and the details presented during lecture, rather than outlines. Training materials should be identified by plant and unit, bound, and indexed. Failure to provide complete, properly bound and indexed reference material will result in canceling and rescheduling of the examinations. Training materials which include the following should be provided:

- o 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.
- o 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.
- o Training material used to clarify and strengthen understanding of emergency operating procedures.
- o Comprehensive theory material that includes fundamentals in the area of theory of reactor operation, thermodynamics, heat transfer and fluid flow, as well as specific applications to actual in-plant components. For example, mechanical theory material should include pump theory as well as descriptions of how these principles actually apply to major plant pumps and the system in which they are installed (i.e., reactor coolant pumps, all ECCS pumps, recirculation pumps, feedwater and emergency feedwater pumps). Reactor theory material should include descriptions that draw explicit ties between the fundamental and actual operating limits followed in the plant (e.g., reactor theory material should contain explanations how principles relate to the actual curves use by operators to verify shutdown margin or calculate an ECP).

2. Procedure Index (alphabetical by subject).

3. All administrative procedures (as applicable to reactor operation or safety).
4. All integrated plant procedures (normal or general operating procedures).
5. Emergency procedures (emergency instructions, abnormal or special procedures).
6. Standing orders (important orders that are safety related and may supersede the regular procedures).
7. Fuel handling and core-loading procedures, (initial core-loading procedure, when appropriate).
8. Annunciator procedures (alarm procedures, including set points).
9. Radiation protection manual (radiation protection manual or procedures).
10. Emergency plan implementing procedures.
11. Technical Specifications.
12. System operating procedures.
13. Piping and instrumentation diagrams, electrical single-line diagrams, or flow diagrams.
14. Technical data book, and/or plant curve information as used by operators and facility precautions, limitations, and set points (PLS) for the facility.
15. Questions and answers that the facility licensee has prepared (voluntary by facility licensee).
16. The following on the plant reference simulation facility (if available):
 - a. List of all readily available initialization points.
 - b. List of all preset malfunctions with a clear identification number. The list should include cause and effect information. Specifically, for each malfunction a concise description of the expected result, or range of results, that will occur on implementation should 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 should be provided, i.e., the 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 indication of modeling conditions or problems that may impact the examination.
 - f. Identification of unknown Performance Test Failures not yet completed.
 - g. Identification of significant differences between the simulator and the control room.
 - h. Copies of facility licensee generated scenarios that expose the candidates to situations of degraded pressure control (PWR), degraded heat removal capability (PWR and BWR), and containment challenges (BWR) may be provided (voluntary by facility licensee).
 - i. Simulator instructors manual (voluntary by facility licensee).
 - j. Description of the scenarios used for the training class (voluntary by facility licensee).
17. Additional material required by the examiners to develop examinations that meet the requirements of these standards and regulations.

The above reference material should be approved, final issues, and so marked. If a plant has not finalized some of the material, the chief examiner is responsible for ensuring that the most complete, up-to-date material is available and that agreement has been reached with the facility licensee for limiting changes before the administration of the examination. All procedures and reference material should be bound or IN THE FORM USED BY THE CONTROL ROOM OPERATORS, WITH appropriate INDEXES or TABLES OF CONTENTS so that they can be used efficiently.

ENCLOSURE 2

REQUIREMENTS FOR ADMINISTRATION OF WRITTEN EXAMINATIONS

1. A single room shall be provided for completing the written examination. The location of this room and supporting rest room facilities shall be such as to prevent contact with all other facility licensee and/or contractor personnel during the duration of the written examination. If necessary, the facility licensee should make arrangements for use of a suitable room at a local school, motel, or other building. Obtaining this room is the responsibility of the facility licensee.
2. Minimum spacing is required to ensure examination integrity as determined by the chief examiner. Minimum spacing should be one candidate per table, with a 3-foot space between tables. No wall charts, models, and/or other training materials shall be present in the examination room.
3. Suitable arrangements shall be made by the facility licensee if the candidates are to have lunch, coffee, or other refreshments. These arrangements shall comply with Item 1 above. These arrangements shall be reviewed by the chief examiner and/or proctor.
4. The facility licensee shall provide pads of 8-1/2 by 11-in. lined paper in unopened packages for each candidate's use in completing the examination. The examiner shall distribute these pads to the candidates. The facility licensee shall provide unmarked steam tables for candidate use as requested by the chief examiner. When requested by the chief examiner the facility licensee shall also prepare copies of large documents (i.e., Technical Specifications, Emergency Plan Implementing Procedures, Emergency Operating Procedures, Etc.) for use by the candidates. Such requests will normally be made known to the facility licensee the working day prior to the written examination. All other reference material needed to complete the examination shall be furnished by the examiner. Candidates may bring pens, pencils, non-programmable calculators, or slide rules into the examination room. No other equipment or reference material shall be allowed.
5. Only black ink or dark pencils should be used for writing answers to questions.

ENCLOSURE 3

REQUIREMENTS FOR FACILITY REVIEW OF WRITTEN EXAMINATIONS

1. There shall be no review of the written examination by the facility licensee staff before or during the administration of the examination. Following the administration of the written examination, the facility licensee staff shall be provided a marked-up copy of the examination and the answer key.
2. The facility licensee will have five (5) working day from the day the written examination is given to submit formal comments. The formal comments will be approved by the highest level of corporate management for plant operations, e.g., Vice President for Nuclear Operations, and submitted to the Region IV office with a copy to the Section Chief for Operator Licensing. Comments not submitted within five (5) working days will be incorporated into the grading process on a case by case basis as determined by the Section Chief. No grading will be done until the formal comments are received and resolved. If the formal comments are not received by the deadline, the final examination results may be delayed several weeks since the grading may have to be rescheduled in a later time slot.
3. The following information shall be provided for each individual comment:
 - a. NRC question number
 - b. Facility licensee comment
 - c. Copy of supporting documentation (the reference may be cited if the document is held by the Operator Licensing Section)

- NOTES:
1. No change to the examination will be made without submittal of, or proper reference to, complete, current, and approved reference material.
 2. Comments made without a clear, concise, facility licensee, recommendation will not be addressed.