

June 9, 2000

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

SUBJECT: INITIAL EXAMINATION REPORT NO. 50-288/OL-00-01

Dear Dr. Koblik:

During the week of May 1, 2000, the NRC administered examinations to employees of your facility who had applied for a license to operate your Reed College Reactor. The examination was conducted in accordance with NUREG-1478, "Non-Power Reactor Operator Licensing Examiner Standards," Revision 1. At the conclusion of the examination, the examination questions and preliminary findings were discussed with those members of your staff identified in the enclosed report.

In accordance with 10 CFR 2.790 of the Commission's regulations, a copy of this letter and the enclosures will be placed in the NRC Public Document Room. The NRC is forwarding the individual grades to you in a separate letter which will not be released publicly. Should you have any questions concerning this examination, please contact Patrick Isaac at 301-415-1019.

Sincerely,

*/RA/*

Ledyard B. Marsh, Chief  
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. Initial Examination Report  
No. 50-288/OL-00-01  
2. Examination and answer key

cc w/enclosures:  
Please see next page

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ADAMS ACCESSION #: ML003716857

TEMPLATE #: NRR-074

OFFICE	DIPM:IOLB	REXB:CE	REXB:BC
NAME	EBarnhill	PIsaac	LMarsh
DATE	05/ 25 /2000	05/ 23 /2000	06/ 09 /2000

C = COVER

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Reed College

Docket No. 50-288

cc:

Mayor of City of Portland  
1220 Southwest 5<sup>th</sup> Avenue  
Portland, OR 97204

David Stewart-Smith, Administrator  
Oregon Office of Energy  
Energy Resources Division  
625 Marion Street, NE  
Salem, OR 97310

U. S. NUCLEAR REGULATORY COMMISSION  
OPERATOR LICENSING INITIAL EXAMINATION REPORT

REPORT NO.: 50-288/OL-00-01

FACILITY DOCKET NO.: 50-288

FACILITY LICENSE NO.: R-112

FACILITY: Reed College

EXAMINATION DATES: 05/01 - 05/2000

EXAMINER: Patrick Isaac, Chief Examiner

SUBMITTED BY: IRA 05/16/2000  
Patrick Isaac, Chief Examiner Date

SUMMARY:

During the week of May 1, 2000, NRC administered Operator Licensing Examinations to 12 Reactor Operator (RO) and two Senior Reactor Operator Upgrade (SROU) candidates. The candidates passed all portions of the examinations.

REPORT DETAILS

1. Examiners:

Paul V. Doyle  
Patrick Isaac, Chief Examiner

2. Results:

	<b>RO PASS/FAIL</b>	<b>SRO PASS/FAIL</b>	<b>TOTAL PASS/FAIL</b>
<b>Written</b>	<b>12/0</b>	<b>2/0</b>	<b>14/0</b>
<b>Operating Tests</b>	<b>12/0</b>	<b>2/0</b>	<b>14/0</b>
<b>Overall</b>	<b>12/0</b>	<b>2/0</b>	<b>14/0</b>

3. Exit Meeting:

Mr. Ryan Gaffney, Assistant Director, REED College Reactor  
Patrick Isaac, Chief Examiner

Following his review of the written examination, Mr. Gaffney requested that, due to a recent change to the facility, question C.006 of the written examination be deleted from the examination. The NRC examiner agreed with the request and the examination answer key was modified accordingly.

DOCUMENT NAME: G:\REXB\ISAAC\REEDEXAMRPT2000.wpd DATE: 6/12/00  
ORIGINATOR: PISAAC  
TYPIST:  
SUBJECT: INITIAL EXAMINATION REPORT NO. 50-288/OL-00-01

<u>NAME</u>	<u>DATE</u>
1. P. Isaac	05/ /00
2. E. Barnhill	05/ /00
3. L. Marsh	05/ /00
4. Secretary (DISPATCH)	05/ /00

PLEASE DO NOT REMOVE THIS SHEET FROM THE PACKAGE

CAN THIS DOCUMENT BE DELETED? YES X NO   

SHOULD THIS DOCUMENT BE STORED ON A DISK? YES    NO

U. S. NUCLEAR REGULATORY COMMISSION  
NON-POWER INITIAL REACTOR LICENSE EXAMINATION

FACILITY: Reed  
REACTOR TYPE: TRIGA  
DATE ADMINISTERED: 2000/05/01  
REGION: IV  
CANDIDATE: \_\_\_\_\_

INSTRUCTIONS TO CANDIDATE:

Answers are to be written on the answer sheet provided. Attach the answer sheets to the examination. Points for each question are indicated in parentheses for each question. A 70% in each section is required to pass the examination. Examinations will be picked up three (3) hours after the examination starts.

\_\_\_\_\_  
Candidate's Signature

020 019b 018b 017b 016b 015b 014b 013b 012b 011b 010b 009b 008b 007b 006b 005b 004b 003b 002b 001b MULTIPLE CHOICE Answer

(\*\*\*\*\* END OF CATEGORY A \*\*\*\*\*)

**ANSWER S**

020 019b 018b 017b 016 015b 014b 013b 012b 011b 010b 09b 08b 07b 06b 05b 04b 03b 02b 01b MULTIPLE CHOICE BY NC

(\*\*\*\* END OF CATEGORY B \*\*\*\*)

**ANSWER S**

(\*\*\*\*\* END OF EXAMINATION \*\*\*\*\*)

(\*\*\*\* END OF CATEGORY C \*\*\*\*)

DELETED

ANSWERS





d. c. b. a. QUESTION: 1000 (10.00) is the result of the calculation  $1000 \times (1 + 0.05)^2 - 1000$ .

Amount of Fee: 1000 (10.00) is the result of the calculation  $1000 \times (1 + 0.05)^2 - 1000$ .

d. c. b. a. ~~QUESTION: 142 (1.00) is a correct statement. QUESTION: 143 (1.00) is a correct statement. QUESTION: 144 (1.00) is a correct statement. QUESTION: 145 (1.00) is a correct statement.~~

As RT power ~~is a function of the real part of the admittance, it is a function of the real part of the admittance. As RT power is a function of the real part of the admittance, it is a function of the real part of the admittance.~~

d.

c.

b.

a.

In QUESTION 11, moving one of the variables to the right of the equation will increase the value of the dependent variable.

A sudden increase in the price of a good will increase the quantity demanded of that good.

yy





d. c. b. a. A system composed of a function defined as  $W(t) = 100 - 20t$  (where  $W$  is in units of  $\text{m}^3/\text{hr}$  and  $t$  is in units of  $\text{hr}$ ).

a function that is a function of time. The function is defined as  $W(t) = 100 - 20t$  (where  $W$  is in units of  $\text{m}^3/\text{hr}$  and  $t$  is in units of  $\text{hr}$ ).

d. c. b. a. The operation of the following circuit is to be determined by the following conditions:

Rod Raising Rate Limited to 100 ft/min. The Emergency Stop Push Button is to be interlocked with the Rod Raising Rate Limiting Switch so that the Emergency Stop Push Button will stop the rod raising rate when it is pushed.

d. c. b. a. fuel for the Fukushima Daiichi nuclear power plant (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)

Argon Xenon Tritium Nitrogen

exceeds the release limit for the Fukushima Daiichi nuclear power plant (1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12) (13) (14) (15) (16) (17) (18) (19) (20) (21) (22) (23) (24) (25) (26) (27) (28) (29) (30) (31) (32) (33) (34) (35) (36) (37) (38) (39) (40) (41) (42) (43) (44) (45) (46) (47) (48) (49) (50) (51) (52) (53) (54) (55) (56) (57) (58) (59) (60) (61) (62) (63) (64) (65) (66) (67) (68) (69) (70) (71) (72) (73) (74) (75) (76) (77) (78) (79) (80) (81) (82) (83) (84) (85) (86) (87) (88) (89) (90) (91) (92) (93) (94) (95) (96) (97) (98) (99) (100)



d. c. b. a. power of the court based on the principle of stare decisis  
with respect to the principle of stare decisis of the court based on the principle of stare decisis

(\*\*\*\* END OF CATEGORY B \*\*\*\*)





d. c. b. a. QUESTION the following occur with the same frequency? (10) QUESTION the following occur with the same frequency? (10) QUESTION the following occur with the same frequency? (10) QUESTION the following occur with the same frequency? (10) QUESTION the following occur with the same frequency? (10)

Amberlight and Amberlight are both used for the same purpose. (10) QUESTION the following occur with the same frequency? (10) QUESTION the following occur with the same frequency? (10) QUESTION the following occur with the same frequency? (10) QUESTION the following occur with the same frequency? (10) QUESTION the following occur with the same frequency? (10)

d. c. b. a. ~~QUESTION 10 (10) does not include any points (20) at the end of the~~ ~~QUESTION 11 (10) does not include any points (20) at the end of the~~ ~~QUESTION 12 (10) does not include any points (20) at the end of the~~ ~~QUESTION 13 (10) does not include any points (20) at the end of the~~

County of Riverside (Royal Channel).

12 hours per hour.

Column A  
GSMAPM CAMRAM

4. Gas, Particulates and Particulates

Column B

d. c. b. a. this

Breakup

Column B

4. 3. 2. 1.

bottom











d ANSWER TO QUESTIONS 1-5, 7-10, 12-15, 17-20, 22-25, 27-30, 32-35, 37-40, 42-45, 47-50, 52-55, 57-60, 62-65, 67-70, 72-75, 77-80, 82-85, 87-90, 92-95, 97-100

2 3 4



Redacted content

DELETED

SCORE NUMBER OF ANSWERS CORRECT IN EACH SECTION OF THE EXAMINATION

(\*\*\*\*\* END OF EXAMINATION \*\*\*\*\*)

(\*\*\*\* END OF SECTION C \*\*\*\*)