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**Jerry C. Roberts**  
Director  
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May 31, 2000

Chief, Operations Branch, Division of Reactor Safety  
U. S. Nuclear Regulatory Commission  
Region IV  
611 Ryan Plaza Drive, Suite 400  
Arlington, Texas 76011

Attention: Mr. John Pellet

Subject: Grand Gulf Nuclear Station  
Docket No. 50-416  
License No. NPF-29  
Initial Examination Written Examination Results and Analysis

GNRO-2000/00044

Dear Mr. Pellet:

The Initial Licensed Operator Written Examination for Inspection Report 50-416/00-301 was administered at Grand Gulf Nuclear Station by Michael K. Rasch on Friday, May 19, 2000 in the Emergency Operations Facility. Six Initial License Candidates took the Examination. The candidates consisted of four Senior Reactor Operator Candidates and two Reactor Operator Candidates.

The Examination had an unusually high failure rate. The Examination results and questions were analyzed by the facility staff. The Examination was determined to be valid with comments on three of the questions.

Grand Gulf Condition Report CR-GGN-2000-0776 has been initiated to determine a Root Cause for the excessive failure rate.

The following information is included:

The Original Student Examination signed Cover Sheets (ES401-8) and student scantron sheets.

A copy of the Examination and Key as administered for both the RO and SRO Examinations.

ES-403 for the RO and ES-403 for the SRO examinations are included along with the examination analysis both written and scantron.

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Seating chart and questions asked during examination administration and start and stop times.

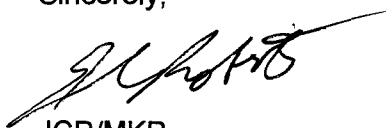
Comments and documentation are attached to copies of the original questions for review.

Electronic format on a CD of the following:

Initial Sample Plan  
Final Draft Examination  
As given Examination Material

You can contact Michael Rasch at (601) 437-6362 or Greg Sparks at (601) 437-2212 if you have any questions or need any further information.

Sincerely,



JCR/MKR

cc:

Ms. J. L. Dixon-Herrity, GGNS Senior Resident (w/o)  
Mr. D. E. Levanway (Wise Carter)  
Mr. L. J. Smith (Wise Carter) (w/o)  
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**U. S. NUCLEAR REGULATORY COMMISSION  
MAY 2000  
GRAND GULF NUCLEAR STATION  
DOCKET # 50-416  
LICENSE EXAMINATIONS**

**WRITTEN EXAMINATION**

The following is the examination analysis performed on the Licensed Operator Candidate Written Examinations (Reactor Operator and Senior Reactor Operator) administered on May 19, 2000 at Grand Gulf Nuclear Station.

All questions which were missed by any candidate on the written examination were reviewed and analyzed by a team consisting of:

- Operations Manager (Facility Representative)
- Previous Operations Manager
- Training Manager
- Operations Training Supervisor
- Licensed Operator Training Lead Instructor
- Examination Author

The Examination was determined to be a valid examination.

Scantron Keys and examination answer sheets were verified to be correct per the original Written Key. Grading of the answer sheets was consistent with the answer key.

On the questions which were on both RO and SRO examinations 16 questions had a miss rate of 50% or greater.

On the questions which were on the RO examination 8 questions had a miss rate of 50% or greater. (Only 2 RO Candidates took the examination therefore any misses were reviewed.)

On the questions which were on the SRO examination 10 questions had a miss rate of 50% or greater.

No questions on the examination were determined to be invalid questions in accordance with NUREG 1123 Rev 2, Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Boiling Water Reactors.

Review of topics missed revealed no discrepancies in the Licensed Operator Training Program.

**Question 58 (BOTH)**

4 of 6 missed

Original correct answer was "A".

Answer "A" is correct due to reasons stated in original examination material submittal.

Answer "D" is also correct because the answer states "The differential pressure is above the limit for opening the Post – LOCA Vacuum Relief Valves." The Post – LOCA Vacuum Relief Valves (Drywell Initial Vacuum Relief Valves) will operate only when the differential pressure between Drywell and the Containment is  $\leq + 0.87$  psig (Drywell Pressure is  $\leq 0.87$  psig above Containment Pressure).

Therefore with No Containment Pressure given the assumption must be that the differential pressure between Containment and the Drywell is 3.6 psi causing the Post – LOCA Vacuum Relief Valves not to operate.

Original premise of false hood for the answer was to compare this to the Containment Vent Valves that have an upper limit pressure at which they will not operate.

Answer B is incorrect due to the SRV Tailpipe check Valves flow from the Drywell to the SRV Tail Pipe and are not dependent on Drywell Pressure.

Answer C is incorrect due to the Drywell Airlock door has a pressure equalization system that equalizes the airlock internal pressure to the Drywell pressure to allow door operation.

**STANCE**

There are two correct answers accept answers "A" and "D" as correct.

**Question 88 (SRO Only)**

3 of 4 missed

Original correct answer was "D".

Stem stated error made during fuel movement was in final location of the fuel bundle in the Upper Containment Pool. Final Locations in the Fuel Pools are not Core Alterations and approval is only required by the Reactor Engineering personnel.

Procedure 17-S-02-300 SNM Movement and Inventory Control

Section 6.1.4.c (2)

None of the Answers stated Reactor Engineering personnel and / or designee only.

Author did not think about difference between core alteration and just movement of fuel in pools.

**STANCE**

There is no correct answer. The question should be DELETED.

**Question 46 (BOTH)**

3 of 6 missed

Original correct answer was "B".

Stem conditions do not require Containment Spray Initiation.

Answer "A" is incorrect due to Containment Spray Initiation Pressure Limit (CSIPL) curve of Emergency Procedure - 3 for given conditions indicates "SAFE TO INITIATE".

Answer "B" has been determined to be incorrect due to Suppression Pool Level will drop due to water retention in the higher elevations of the Containment instead of returning to the Suppression Pool. Reason for Level drop is incorrect. Author originally felt temperature drop in Suppression Pool would show a level drop due to specific volume drop.

Answer "C" is incorrect because Suppression Pool Level will not rise as Suppression Pool Temperature drops.

Answer "D" is incorrect because Suppression Pool Level will not rise due to the same reason as in answer "B".

STANCE

There is no correct answer. The question should be DELETED.

ADAMS ACCESSION NO. -  
TEMPLATE NO. - *XRR-075*