



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION V

1450 MARIA LANE  
WALNUT CREEK, CALIFORNIA 94596-5368

APR 23 1993

Docket Nos. 50-528/529/530

Arizona Public Service Company  
P. O. Box 53999, Sta. 9012  
Phoenix, Arizona 85072-3999

Attention: Mr. William F. Conway  
Executive Vice President, Nuclear

SUBJECT: REQUALIFICATION EXAMINATION RETAKE

Dear Mr. Conway:

In a telephone conversation on April 19, 1993, Mr. Philip Morrill, Chief, Operations Section, Region V, and Mr. E. Firth, Arizona Public Service Company (APS), Training Manager, arranged to conduct a requalification retest at the Palo Verde Nuclear Generating Station, Units 1, 2, and 3 (PVNGS). The retake examination was scheduled for the week of May 24, 1993. NRC examiners and evaluators from your facility will conduct requalification examinations, in accordance with Sections ES-601 through ES-604 of NUREG-1021, "Operator Licensing Examiner Standards," Revision 7. You are encouraged to ensure that your training staff and proposed examinees are familiar with these standards.

For the NRC to adequately prepare for the retake examinations, your staff will need to provide appropriate updates in the items listed in Enclosure 1, "Reference Material Requirements." You are also requested to submit, at your option, a proposed examination for use during the examinations. However, if you do submit a proposed examination, the personnel participating in its development may become subject to the security restrictions described in this letter.

Please review the guidance promulgated in Revision 7 to NUREG-1021 on the content and scope of simulator examination scenarios. The scenario examination bank should cover the entire spectrum of emergency operating procedures (EOPs), including alternative decision paths within the EOPs, and it should incorporate a range of failures with various degrees of severity for the same type of event. Each scenario should contain simultaneous events that require the senior reactor operator (SRO) to prioritize their actions and to assign other crew members particular tasks. Each scenario should also require the SRO to decide when to transition between EOPs and decide which actions to take within EOPs.

You are requested to designate at least one employee to be a member of a joint NRC-facility examination team. The employee is expected to be an active senior reactor operator (SRO) as defined by 10 CFR 55.53(e) or (f) from the PVNGS Operations Department. You are encouraged to designate a second employee from the training staff to be a member of the examination team. This

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employee should also be an active SRO, but may be a 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, you will need to designate a simulator operator for scenario preview and validation during the on-site examination preparation week. In some cases, you may need to designate a simulator operator during the test item review period. All these individuals will be subject to the examination security agreement.

The NRC restricts any facility licensee representatives under the security agreement from knowingly communicating by any means the content or scope of the examination to unauthorized persons and from participating in any facility licensee programs such as instruction, examination, or tutoring in which an identified requalification examinee will be present. These restrictions apply from the day that the facility licensee representative signs the examination security agreement indicating that the representative understands that he or she has specialized knowledge of the examination. The chief examiner will determine when a facility licensee representative has received specialized knowledge concerning the examination and will execute an examination security agreement. In most cases, the examination team members will not be required to enter into an examination security agreement more than 60 days before the examination week. The simulator operator will normally become subject to the security restrictions during the examination preparation and validation week, however, this may occur as much as 45 days before the examination week.

As soon as possible before the examination administration date, please provide the NRC regional office with a list of proposed licensees, including crew composition, for the examination and the current mailing address for each proposed licensee, if different from that listed on the most recent Form 398 submitted to the NRC. The facility licensee training staff should send this information directly to the NRC's chief examiner, ensuring that each licensee address is sent in a manner to ensure privacy.

The facility licensee may request that the NRC chief examiner or another NRC representative meet with the licensees to be examined and the licensee managers during the examination preparation week, normally two weeks before the examination. However, if the schedule does not allow them to meet during the preparation week, they may meet at any mutually agreeable time. The NRC examiner will explain the examination and grading processes and will respond to any questions that licensees may have about the NRC's examination procedures. The facility licensee training staff should schedule this meeting, if it is desired, with the NRC chief examiner.

The facility licensee is requested to distribute the "Requalification Examination Feedback Form," attached as Enclosure 3. This feedback form may be completed by all operators, evaluators and facility licensee managers participating the NRC requalification examination. The feedback from this form will be used to measure the success of the NRC and facility licensee's efforts to reduce undue stress during the requalification examination.



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The facility licensee staff is responsible for providing adequate space and accommodations to properly develop and conduct the examinations. Enclosure 2, "Administration of Requalification Examinations," describes our requirements for developing and conducting the examinations. Also, a facility operations management representative above a shift supervisor level should observe the simulator examination process at the site.

This request is covered by Office of Management and Budget Clearance Number 3150-0101, which expires May 31, 1995. The estimated average burden is 7.7 hours per response, including gathering, copying, and mailing the required material. Send comments about this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Records and Reports Management Branch, Division of Information Support Services, Office of Information Resources Management, U.S. Nuclear Regulatory Commission, Washington, DC 20555; and to the Paperwork Reduction Project (3150-0101), Office of Management and Budget, Washington, DC 20503.

Thank you for your cooperation in this matter. Mr. Firth has been advised of the NRC guidelines and policies addressed in this letter. If you have any questions on the written examination retake and program evaluation process, please contact Mr. Tom Meadows at (510) 975-0305 or Mr. Philip Morrill at (510) 975-0293.

Sincerely,

  
L. F. Miller, Jr., Chief  
Reactor Safety Branch

Enclosures:

1. Reference Materials Required
2. Administration of Examinations
3. Requalification Feedback Form

cc w/enclosures (1), (2) and (3):

Mr. Steve Olea, Arizona Corporation Commission  
James A. Beoletto, Esq., Southern California Edison Company  
Mr. Charles B. Brinkman, Manager, ABB Combustion Engineering Nuclear Power  
Mr. Aubrey Godwin, Director, Arizona Radiation Regulatory Agency  
Chairman, Maricopa County Board of Supervisors  
Jack R. Newman, Esq., Newman & Holtzinger, P.C.  
Mr. Curtis Hoskins, Executive Vice President and Chief Operating Officer,  
Palo Verde Services  
Roy P. Lessey, Jr., Esq., Akin, Gump, Strauss, Hauer and Feld  
Bradley W. Jones, Esq., Akin, Gump, Strauss, Hauer and Feld

### Reference Material Guidelines

1. Provide test items to support all aspects of the requalification examination to the NRC 60 days before the examination date.
2. The following reference material:

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). The facility licensee is expected to maintain a dynamic bank by reviewing, revising or generating at least 150 questions a year. New questions should cover equipment and system modifications and recent industry and licensee events and procedural changes.

JPMs to evaluate each reactor operator and senior reactor operator safety-related task identified in the facility JTA, which meet the criteria in ES-603. The JPM bank should expand at a rate of at least 10 JPMs per year until this goal is reached. It is estimated that 125-150 JPMs will be the final result.

A bank of at least 30 simulator scenarios which reflect all abnormal and emergency situations to which a licensee is expected to respond or control. At least 5 scenarios per year should be generated until all aspects of the emergency operating procedures are covered with sufficient variation in the type and scope of initiating events and level of degradation. Emphasis should be placed on scenarios that include applicable industry events.

These target levels are expected to be attained by the facility licensees on 10/1/95, five years after the implementation of Revision 6 of NUREG-1021 (10/1/90).

3. For all licensee requalification examination and program evaluation visits, the facility shall:
  - Submit an Examination Sample Plan which meets the requirements of ES-601, Attachment 2;
  - Provide the associated examination banks (written, simulator and JPM) and associated reference material. At a minimum this shall include Technical Specifications, abnormal and emergency operating procedures, and emergency plan procedures utilized in the requalification training.
  - Provide additional reference material as requested by the NRC chief examiner.

Administration of Requalification  
Examinations

1. The NRC must evaluate at least 12 licensees to perform a program evaluation. Normally the crew scheduled for requalification training during the period selected for the program evaluation should be selected. The evaluation will include other licensees who are not routinely performing shift duties or are not maintaining an active license as defined in 10 CFR 55.53(e). The restrictions on crew composition in the simulator are described in ES-601 Section C.2 and ES-604.
2. The simulator and simulator operators need to be available for examination development. The chief examiner and the facility representatives will agree on the dates and duration of time needed to develop the examinations.
3. The chief examiner will review the reference material used in the simulator. The NRC will not authorize the use of reference material that is not normally used for plant operation in the control room to be used during the simulator test.
4. The facility licensee will provide a single room for completing Section B of the written examination. The examination room and the supporting rest room facilities will be located to prevent the examinees from contacting all other facility and contractor personnel during the examination.
5. The chief examiner will inspect the examination room to see that it meets the minimum standard that will ensure examination integrity. The minimum spacing standard consists of one examinee per table and a 3-foot space between tables. No wall charts, models, or other training materials are allowed in the examination room.
6. The facility licensee is expected to provide a copy of each reference document for each examinee for Section B of the written examination. The material should include documents that are normally available to the licensees in the control room such as the technical specifications, operating and abnormal procedures, administrative procedures, and the emergency plans. The chief examiner will review the reference material before the examinations begin.
7. The NRC requalification examination will attempt to distinguish between RO and SRO knowledge and abilities to the extent that the facility training materials allow the developers to make these distinctions.

8. Prudent scheduling of examination week activities is important to help alleviate undue stress on the licensees. The facility training staff and the NRC chief examiner should attempt to formulate a schedule that will minimize delays while conducting the examination.

The following are some suggestions for structuring the examination activities to achieve this objective:

- Bring in licensees in accordance with their scheduled examination times.
  - It is better to segregate the group of licensees completing their examination, instead of the group of licensees that are scheduled to start their examination.
  - Following simulator scenarios, the facility evaluators and NRC examiners should quickly determine whether follow-up questioning is required so that the crew members may be released to talk among themselves about the scenario.
  - Ensure that time validation of JPMS, particularly those performed in the simulator, is accurate. Establish a reasonable schedule to prevent licensees from waiting for simulator availability to complete their JPMS.
9. The NRC no longer requires the facility licensee to videotape dynamic simulator examinations. If the facility licensee requests to videotape the examination, any use of the tape must be completed before the NRC leaves the site at the end of the examination. If a disagreement over the grading of a licensee still exists at the end of the examination week, the facility licensee may retain the tape for the purpose of submitting it to support a request for regrade by the NRC. During the regrade, the NRC will review only the portion of the videotape under contention. After all requalification examination grades are finalized, including the review of any regrade requests, the facility licensee is expected to erase all video tapes made during the examination.

Requalification Examination  
Feedback Form

Introduction

The NRC is requesting feedback regarding the conduct of requalification examinations. The information provided will be used to monitor, on a generic basis, the effectiveness of the NRC's and facility licensee's efforts to minimize undue stress in the examination process.

This form is not intended as a means of resolving technical or process concerns pertaining to a specific examination. Such concerns will be resolved using the guidance in NUREG-1021, "Operator Licensing Examiner Standards."

Instructions

Completion of this form is voluntary. If you choose to provide feedback, please answer the questions in accordance with these instructions:

- The questions in this form regard the examination administered by (Region) at (facility licensee) during (exam dates). Although comparisons with previous examinations may be appropriate, responses to the questions should be based upon this requalification examination.
- Any examinee or individual involved in the development or administration of this examination is encouraged to complete this form.
- Mail completed forms to:
 

L. F. Miller, Jr.
Nuclear Regulatory Commission, Region V
1450 Maria Lane
Walnut Creek, CA 94596

Your Background

Please check the boxes that describe your involvement in this examination.

I was:

- an examinee  
 involved in developing the examination  
 involved in administering the examination  
 an examination observer  
 other: \_\_\_\_\_

Please check the boxes that describe your current position.  
(Check all that apply)

- RO \_\_\_\_\_ SRO \_\_\_\_\_ operating crew member  
 training department \_\_\_\_\_ operations department  
 other: \_\_\_\_\_

### Stress vs. Undue Stress

The following questions require you to make a judgment of whether there was undue stress during the examination. Examinations are inherently stressful events and therefore it is important that you make a distinction between stress and undue stress when making your judgments. Undue stress is unnecessary or inappropriate stress which can be practically eliminated without compromising the validity of the examination. The distinction between stress and undue stress is not a matter of whether the stress was extreme or mild. When making your judgments you should follow these steps:

First, consider the cause of the stress. Would it have been possible and practical to eliminate the cause of the stress without compromising the validity of the examination? If your answer is no, then no undue stress was present. (See point #1 on the rating scale below.)

If your answer is yes, consider the magnitude of the stress. A source of stress may be unnecessary but also sufficiently small in magnitude to be unlikely to affect an individual's performance in the examination. (See point #2 on the rating scale below.) The alternative is that the source may be unnecessary and also of sufficient magnitude to be likely to affect an individual's performance in the examination. (See point #3 on the rating scale below.)

### Rating Scale:

1. No undue stress
2. Some undue stress

Inappropriate stress was present that could have been practically avoided but would not likely affect an individual's examination performance.

3. Significant undue stress

Inappropriate stress was present that could have been practically avoided and it would likely affect an individual's examination performance.

Examination Feedback

Ratings: Please use the rating scale described on the preceding page to indicate your judgment of the degree of undue stress that was present in each aspect of the examination identified below. Write the number (1, 2, or 3) in the space preceding the section.

Comments: Please comment about the source or cause of any undue stress, including who was affected (e.g., examinees, examiners) and suggested practical solutions. Attach additional sheets if necessary.

\_\_\_\_ Preexamination Interactions with NRC

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_ Administrative Controls/Procedural Limits

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_ Plant and Control Systems

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_ Dynamic Simulator

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_ Job Performance Measures

Comments: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please comment on any practices which you believed were successful in reducing undue stress.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Your cooperation in completing this form is appreciated.

April 23, 1993

bcc w/enclosures (1), (2), and (3):  
 C. Trammell, Project Manager, NRR  
 J. Martin, RV  
 B. Faulkenberry, RV  
 K. Perkins, RV  
 S. Richards, RV  
 G. Cook, RV  
 L. Miller, RV  
 H. Wong, RV  
 P. Morrill, RV  
 R. Cross, RV (2 copies)  
 J. Sloan, SRI, PV  
 Docket File  
 Document Control Desk (RIDS)

MORRILL *PJM* MILLER *W/M* *for Miller*

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REQUEST COPY	REQUEST COPY
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

SEND TO DCS	SEND TO PDR
YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>	YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>

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