



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400  
ARLINGTON, TEXAS 76011-8064

AUG 23 1995

Southern California Edison Company  
San Onofre Nuclear Generating Station  
ATTN: Harold B. Ray  
Executive Vice President  
P.O. Box 128  
San Clemente, California 92674-0128

SUBJECT: MEETING ON PILOT EXAMINATION DEVELOPMENT PROGRAM

The purpose of this letter, is to inform you that we will be hosting a meeting on Thursday, September 7, 1995, from 1:00 p.m. until 4:00 p.m., in the Region IV offices. We specifically invite representatives from your staff involved in training and licensing of operators, as well as other interested parties.

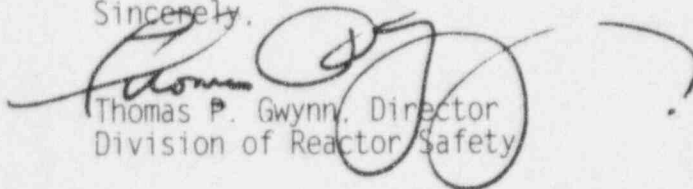
This working level meeting will discuss implementation of the pilot examination development program. We have included, as Attachment 1, a copy of the preliminary staff guidance and modifications to NUREG-1021, "Examiner Standards." Also included, as Attachment 2, is a copy of Generic Letter 95-06.

We would be happy to accept any written questions in advance by mail or facsimile, directed as described below.

The meeting will be held in the Region IV Training Conference Room on the 4th floor of our building. Because of the size of this facility, we anticipate no attendance limits for interested personnel on your staff; however, we ask that you notify Ms. Laura Hurley, Operator Licensing Assistant, at (817)860-8253 by September 1, with an attendance list so that appropriate room arrangements can be made. We have discussed this meeting with members of your training staff. Due to the subject matter and nature, this meeting is open to attendance by members of the general public.

If you or your staff have any suggested topics or questions, please contact John Pellet, Chief, Operations Branch, at (817)860-8159 voice or (817)860-8212 facsimile.

Sincerely,

  
Thomas P. Gwynn, Director  
Division of Reactor Safety

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Dockets: 50-361  
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Licenses: NPF-10  
NPF-15

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IE42  
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Attachments:

1. ES-201 Pilot Guidance
2. NRC Generic Letter 95-06

cc w/attachments:

County of San Diego  
ATTN: Chairman, Board of Supervisors  
1600 Pacific Highway, Room 335  
San Diego, California 92101

Rourke & Woodruff  
ATTN: Alan R. Watts, Esq.  
701 S. Parker St. No. 7000  
Orange, California 92668-4702

Public Utilities Department  
City of Riverside  
ATTN: Sherwin Harris, Resource  
Project Manager  
3900 Main Street  
Riverside, California 92522

Southern California Edison Company  
San Onofre Nuclear Generating Station  
ATTN: R. W. Krieger, Vice President  
P.O. Box 128  
San Clemente, California 92674-0128

California Department of Health Services  
ATTN: Dr. Harvey Collins, Chief  
Division of Drinking Water and  
Environmental Management  
P.O. Box 942732  
Sacramento, California 94234-7320

Bechtel Power Corporation  
ATTN: Richard Kosiba, Project Manager  
12440 E. Imperial Highway  
Norwalk, California 90650

San Diego Gas & Electric Company  
ATTN: Richard Krumvieda, Manager  
Nuclear Department  
P.O. Box 1831  
San Diego, California 92112

Southern California Edison Company -3-

Radiological Health Branch  
State Department of Health Services  
ATTN: Mr. Steve Hsu  
P.O. Box 942732  
Sacramento, California 94234

City of San Clemente  
ATTN: Mayor  
100 Avenida Presidio  
San Clemente, California 92672

Southern California Edison Company  
ATTN: Rob Sandstrom  
Training Manager  
San Onofre Nuclear Generating Station  
P. O. Box 128  
San Clemente, CA 92674-0128

bcc to DMB (IE42)

bcc distrib. by RIV:

L. J. Callan

DRSS-FIPB

Branch Chief (DRP/F, WCFO)

RIV File

Leah Tremper (OC/LFDCB, MS: TWFN 9E10)

M. Hammond (PAO, WCFO)

S. Richards (NRR/HOLB)

Resident Inspector

MIS System

Senior Project Inspector (DRP/F, WCFO)

Branch Chief (DRP/TSS)

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bcc to DMB (IE42)

bcc distrib. by RIV:

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DRSS-FIPB	MIS System
Branch Chief (DRP/F. WCFO)	Senior Project Inspector (DRP/F. WCFO)
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RE:OB:DRS	C:OB:DRS	D:DRS					
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ATTACHMENT 1

ES-201 PILOT GUIDANCE

ES-201 PILOT GUIDANCE

1. The facility licensee should designate a point of contact to work with the NRC chief examiner and assign additional personnel as required (subject to the security guidelines on Interim Attachment 5) to ensure that the examinations are developed, reviewed, administered, and graded in accordance with the applicable Examiner Standards.

The point of contact or another authorized facility representative shall independently review and approve the proposed examination outlines and the proposed written examinations and operating tests before they are submitted to the NRC regional office. The facility reviewer shall be subject to the security guidelines on Interim Attachment 5 shall have the authority to speak for the facility licensee.

2. The examiner who contacts the facility licensee shall use the attached "INTERIM Sample Corporate Notification Letter" as a guide and discuss the following examination arrangements:

- the guidelines for ensuring examination security (refer to Interim Attachment 5);
- the need to have the examination outlines and a copy of the security agreements (actual plus expected additions, including titles and training involvement) delivered to the regional office at least 60 days before the scheduled examination date;
- the guidelines for developing, administering, and grading the written examinations (ES-401, ES-402, and ES-403, respectively);
- the need to have the simulator available and the guidelines for developing and administering the operating tests (ES-301 and ES-302, respectively);
- the need to have the final examination(s) and the supporting reference materials identified in ES-201, Attachment 2, delivered to the regional office at least 30 days before the scheduled examination date (only those references that are actually necessary to prepare for the examination shall be requested; electronic format is encouraged; hard copies should normally be limited to support selected test items); and
- the requirements (refer to 10 CFR 55.31) and guidelines (refer to Attachment 1) for submitting the license applications.

3. The attached Form ES-201-1, "INTERIM Examination Preparation Checklist," may be useful to track the activities leading up to the examination.

4. The attached form, "INTERIM Examination Outline Quality Assurance Checklist," shall be used to review the proposed examination outlines. A thorough and timely (i.e., within 5 working days) review with appropriate feedback to the facility licensee should minimize the potential for significant problems with the final examinations. If the outlines are significantly deficient refer to Item 8 for additional guidance.

5. The chief examiner will work with the designated facility contact, as necessary, to ensure that the final examinations are developed in accordance with the applicable Examiner Standards and the previously approved, facility-developed examination outlines.
6. The chief examiner will review the proposed written examinations and operating tests for quality in accordance with the applicable INTERIM Quality Assurance Checklists (refer to ES-301 and ES-401 pilot guidance). It is especially important that the exams and tests be reviewed promptly because of the extra time that may be required if extensive changes are necessary. The QA reviews should be completed within two weeks after the examinations and tests are received.

The chief examiner will note any changes that need to be made and forward the examinations and tests to the responsible supervisor (or a designated actor other than the chief examiner) for review and comment before reviewing the consolidated comments with the facility licensee. The supervisory review is not intended to be another technical review, but rather a check to ensure that all the applicable administrative requirements have been implemented. There are no minimum or maximum limits on the number or scope of changes the NRC may direct the facility licensee to make provided they are necessary to make the examination conform with established acceptance criteria.

7. The chief examiner may discuss the NRC's concerns and changes with the facility representative(s) (normally personnel involved with the development of the proposed examinations) via telephone, in the regional office, or at the facility depending on the extent of the changes and as approved by the responsible regional supervisor. The facility review shall be conducted in accordance with the guidelines and instructions in Attachment 4 (less Item 7) about 2 weeks before the week in which the examinations are scheduled to be given. If the reviews are conducted over the phone, the written exam and operating test changes may be communicated separately so that the facility may begin making the required revisions.

If the facility reviewers have significant disagreements with the changes directed by the chief examiner, the chief examiner will inform the responsible regional supervisor so that the disagreements can be resolved before the examinations are administered.

8. If the facility-prepared examination outlines or final examinations are so deficient that they cannot be corrected before the scheduled examination date or cause the chief examiner to question the adequacy of the facility licensee's training program, the chief examiner shall discuss the problems with the responsible supervisor to determine the appropriate course of action. Regional management should consult HOLB as appropriate and make a decision whether to proceed with the facility-developed examinations or develop the examinations in-house. If the region does not have the resources to ensure that acceptable

examinations are prepared by the scheduled administration date, regional management shall negotiate with the facility licensee to reschedule the examinations as necessary.

9. Normally, the facility licensee will make the examination and test changes, and the chief examiner shall verify that the changes were entered as directed. The final examinations and tests and a copy of the original submittal shall be routed to the responsible supervisor for final approval regardless who enters the examination changes.

10. As a general rule, the written examinations should be scheduled before the operating tests, however, other sequences are permissible if agreed to by the facility licensee. Normally, the written examinations should be administered no more than one week before the operating tests.

Under extenuating circumstances and with prior approval from HOLB, written examinations may be given up to 30 days before the operating tests, as soon as the license applications are accepted, any applicable waiver requests are resolved, and the examinations are approved.

11. When reviewing the written examination administration guidelines with the facility licensee (per Item 13 on Interim Form ES-201-1), the region should confirm the applicant status on the examination assignment sheet so that the facility will know who should be administered a written exam.

NRC Letterhead

(date)(Name, title)(Name of facility)(Address)(City, State, Zip code)Dear (Name):

In a telephone conversation on (date) between Mr./Ms. (Name, title) and Mr./Ms. (Name, title), arrangements were made for the administration of licensing examinations at the (facility name) during the week(s) of (date).

Your staff has agreed to participate in a voluntary pilot examination program in which your staff will prepare the written examinations and operating tests and submit them to the NRC regional office for evaluation and approval. Your staff will prepare the proposed examinations in accordance with the guidelines in Revision 7, Supplement 1, of NUREG-1021, "Operator Licensing Examiner Standards," Revision 5 of NUREG/BR-0122, "Examiners' Handbook for Developing Operator Licensing Written Examinations, and the attachment to this letter. The NRC regional office will discuss with your staff any examination changes that might be necessary prior to their administration.

To meet the above schedule, it will be necessary for your staff to furnish the proposed examination outlines by (date). The proposed written examinations, operating tests, and the supporting reference materials will be due by (date). Any delay in receiving the required reference and examination materials or the submittal of inadequate or incomplete materials may result in the examinations being rescheduled.

In order to conduct the requested written examinations and operating tests, it will be necessary for your staff to provide adequate space and accommodations in accordance with ES-402 and to make the simulation facility available on the dates noted above.

ES-402, Attachment 1, and ES-302, Attachment 1, contain a number of NRC policies and guidelines that will be in effect while the written examinations and operating tests are being administered. In accordance with ES-302, your staff should retain the original simulator performance data (e.g., system pressures, temperatures, and levels) generated during the dynamic operating tests until the examination results are final.

Your staff should submit preliminary reactor operator and senior reactor operator license applications and waiver requests at least 30 days before the first examination date so that the NRC will be able to review the applications and the medical certifications and evaluate any requested waivers. If the applications are not received at least 30 days before the examination date, a



postponement may be necessary. Signed applications certifying that all training has been completed should be submitted at least 14 days before the first examination date.

This request is covered by Office of Management and Budget (OMB) Clearance Number 3150-0101, which expires April 30, 1997. The estimated average burden is 7.7 hours per response, including gathering, copying 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, Mail Stop T-6 F33, 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.

Thank you for your cooperation in this matter. (Name) has been advised of the policies and guidelines referenced in this letter. If you have any questions regarding the NRC's examination procedures and guidelines, please contact (Name of regional contact) at (telephone number), or (Name of responsible regional supervisor) at (telephone number).

Sincerely,

(Appropriate regional  
representative)

Attachment:  
Pilot Examination Guidelines

Docket No.: 50-(Number)

Distribution:     Public  
                     NRC Document Control System  
                     Regional Distribution

## PILOT EXAMINATION GUIDELINES

Facility licensees will prepare the written examinations and operating tests (dynamic simulator and walkthrough) in accordance with the instructions in Revision 7, Supplement 1, of NUREG-1021 ("Operator Licensing Examiner Standards") and Revision 5 of NUREG/BR-0122 ("Examiners' Handbook for Developing Operator Licensing Written Examinations"), subject to the following additional criteria:

- (1) The facility licensee will prepare an integrated examination outline (written and operating test) and submit it to the NRC regional office for review, comment, and approval at least 60 days before the scheduled examination date. The NRC chief examiner will work with the facility licensee to resolve any problems and to avoid unnecessary revision of the final examination products.
- (2) Facility employees who are involved with developing the examinations and tests will sign a standard security agreement (Form ES-201-2) before they gain specific knowledge of the examinations and tests. Facility employees who played a substantial role in training the license applicants will generally not be involved in developing the license examinations or tests. If the facility licensee considers such employees necessary for developing the examinations or tests, it will define the process it will take to ensure that the integrity of the examinations is not compromised and discuss the process with the NRC chief examiner.
- (3) The written examinations and operating tests will satisfy the following specific criteria:
  - A maximum of 50 percent of the written examination questions may be taken directly from the facility question bank; up to an additional 40 percent of the questions may be taken from the facility bank but must be significantly modified; and a minimum of 10 percent of the questions will be newly developed. As discussed in NUREG/BR-0122, new questions should emphasize the applicants' understanding at the comprehension or application levels of knowledge because they have the greatest operational and discriminatory validity.
  - No more than 25 percent of the questions on the examination may be repeated from examinations, quizzes, or tests administered to the license applicants during their license training class, or from the past two NRC license examinations at the facility. No questions may be drawn directly from the applicants' audit examination or similar testing vehicle given at the end of the license training class.
  - Each walkthrough test will include at least two job performance measures (JPMs) that are either new or significantly altered, and

each simulator scenario set will include at least one new or significantly altered scenario. Other scenarios used may be drawn directly from the facility scenario bank; however, they will be altered to the degree needed to prevent the applicants from immediately recognizing the scenarios based on initial conditions or other cues.

- A significant modification, for purposes of the written questions, means a change to the conditions in the stem and at least one distractor significantly changed. Similarly, JPMs and simulator scenarios will have at least one substantive event or condition change that alters the course of action in the JPM or scenario.
- (4) The facility licensee will submit the final written examinations and operating tests to the NRC regional office at least 30 days before the scheduled examination date. In its submittal, the facility licensee will include a history (e.g., bank, revised, new, and date last used) of each test item used on the written and operating tests.
  - (5) The NRC regional office will assign a chief examiner to coordinate the review, revision (as determined necessary by the NRC), and validation of the written examinations and operating tests with the facility licensee. Additional NRC staff examiners will be assigned as necessary (typically one or two, depending on the number of applicants) to assist the chief examiner with administering and grading the operating tests in accordance with existing procedures. The facility licensee will administer and grade the written examinations; NRC examiners will review and approve the licensee's grading.

Facility:		Date of Examination:	
Due Date*		Task Description	Date Complete
-180	1.	Examination schedule agreement reached	
-120	2.	NRC Examiners assigned	
-120	3.	Facility contact briefed on security requirements	
-120	4.	Corporate notification letter sent	
-60	5.	Proposed examination outline(s) received from facility	
-55	6.	Proposed examination outline(s) reviewed by NRC and feedback provided to facility licensee	
-30	7.	Preliminary license applications received	
-30	8.	Proposed examinations and supporting reference material received from facility (ES-401)	
-14	9.	Final license applications received	
-14	10.	Assignment sheet prepared	
-14	11.	Examination comments/changes approved by NRC supervisor for facility review	
-14	12.	Final examination comments reviewed with facility licensee	
-7	13.	Proctoring/written examination administration guidelines reviewed with facility licensee	
-7	14.	Final applications reviewed; assignment sheet updated; waiver letters sent	
-7	15.	Final written examinations and operating tests approved by NRC supervisor	
-7	16.	Approved scenarios, job performance measures, and questions distributed to examiners	

\* Dates are for planning purposes and may be adjusted case-by-case.

1. Pre-examination

I acknowledge that I have acquired specialized knowledge about the NRC Licensing examinations scheduled for the week(s) of \_\_\_\_\_ as of the date of my signature and agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to participate in any instruction involving those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration. I further understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee.

2. Post examination

I did not, to the best of my knowledge, divulge any information concerning the NRC licensing examinations administered during the week(s) of \_\_\_\_\_ to any unauthorized persons. I did not participate in instructing those applicants who were administered these licensing examinations from the date that I entered into this security agreement until the completion of examination administration.

PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE
1. _____	_____	_____	_____	_____	_____
2. _____	_____	_____	_____	_____	_____
3. _____	_____	_____	_____	_____	_____
4. _____	_____	_____	_____	_____	_____
5. _____	_____	_____	_____	_____	_____
6. _____	_____	_____	_____	_____	_____
7. _____	_____	_____	_____	_____	_____
8. _____	_____	_____	_____	_____	_____
9. _____	_____	_____	_____	_____	_____
10. _____	_____	_____	_____	_____	_____
11. _____	_____	_____	_____	_____	_____
12. _____	_____	_____	_____	_____	_____
13. _____	_____	_____	_____	_____	_____
14. _____	_____	_____	_____	_____	_____
15. _____	_____	_____	_____	_____	_____

Facility:		Date of Examination:		
Item	Task Description	Initials		
		a.	b.	c.
1. W R I T T E N	a. Verify that the outline fits the appropriate Examiners' Handbook model.			
	b. Verify that all 6 knowledge and 4 ability categories are appropriately sampled.			
	c. Verify that the outline does not over-emphasize any systems, evolutions, and generic topics.			
2. S I M	a. Using form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, and major transients.			
	b. Verify that there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity; ensure each applicant can be tested using at least one new scenario.			
	c. To the extent possible, verify that the outlines conform with the qualitative criteria in Section D.4 of ES-301 and Attachment 3 of ES-604.			
3. W T	a. Verify that the outlines contain the required number of control room and in-plant tasks.			
	b. Verify that the tasks are distributed among the safety function groupings as specified in ES-301; ensure one task requires a low power or shutdown condition, one requires the applicant to implement an alternate path procedure, and one requires entry to the RCA.			
	c. Check the follow-up K/As for balance, distribution, and overlap with the written exam.			
	d. Verify that the required administrative topics are covered, with emphasis on performance-based activities.			
	e. Verify that there are enough different outlines to test the projected number and mix of applicants.			
4. G E N E R A L	a. Verify that plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.			
	b. Verify that the 10 CFR 55.41/43 and 55.45 sampling is appropriate.			
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.			
	d. Check for duplication and overlap among exam sections, between successive operating tests, and with prior examinations.			
	e. Check the entire exam for balance of coverage.			
	f. Assess whether the selected K/As/test items are operationally oriented (i.e., do they relate to the tasks listed for the system?).			
	g. Assess whether the exam fits the appropriate job level (RO or SRO).			
Printed Name / Signature		Date		
a. Author	_____	_____		
b. Facility Reviewer	_____	_____		
c. Chief Examiner	_____	_____		
d. NRC Supervisor	_____	_____		



In accordance with 10 CFR 55.49, facility licensees (as well as applicants and licensees) shall not engage in any activity that compromises the integrity of any examination required by Part 55. NRC examiners and facility licensees must be attentive to examination security measures to ensure compliance with the regulation. The following guidelines covering personnel restrictions, physical security, and limitations on the use of examination banks shall be reviewed with the facility licensee at the time the examination arrangements are confirmed.

#### Personnel Restrictions

1. Facility employees who played a substantial role in training the license applicants will generally not be involved in developing the license examinations or tests. If the facility licensee considers such employees necessary to develop the examinations or tests, it shall define the process it will take to ensure that exam integrity is not compromised and discuss the process with the NRC chief examiner. The region shall keep HOLB informed of any compensatory measures that might be necessary.
2. The facility licensee shall minimize the number of personnel who have detailed knowledge of the NRC licensing examination. If the facility licensee believes that more than 15 people are necessary it should submit a justification to the regional office for approval.
3. All personnel who receive detailed knowledge of any portion of the NRC license examination, including the examination outline, must acknowledge their responsibilities by signing a form, such as the attached "INTERIM Examination Security Agreement," at the time they obtain detailed knowledge and again after the examinations are complete. The facility licensee will provide a copy of the form (listing the expected signatories) to the chief examiner at the time the examination arrangements are confirmed. The facility licensee shall inform the chief examiner if additional personnel need to be added. The original forms must be submitted to the regional office after the examinations are complete.

#### Physical Security

1. The NRC expects that the facility licensee will exercise the same physical security precautions with the initial examinations as it does with its requalification examinations. If the facility licensee has a procedure in place, it is expected to be implemented.
2. All examination-specific materials (i.e., the proposed examination outlines and final examinations) shall be controlled and protected as sensitive information and shall not be transmitted via non-secure electronic means.

The proposed examination outlines, written examinations, and operating tests that are mailed to the regional office shall be placed in a double envelope. The inner envelope shall be conspicuously marked "FOR OFFICIAL USE ONLY" and "TO BE OPENED BY ADDRESSEE ONLY." Furthermore, the cover letter forwarding the examination materials should request that the materials be withheld from public disclosure until after the examinations are complete.

The outlines and proposed examinations may be transmitted via the NRC's AUTOS network.

3. The facility licensee and the chief examiner will review the "Security Considerations for Simulator Operating Examinations" to ensure that the instructor station features, programmers' tools, and external interconnections do not compromise examination integrity.

The primary objective is to ensure that the exam material cannot be read or recorded at other unsecured consoles and that examination material is either physically secured or electronically protected when not in use by individuals on the security agreement.

4. An NRC examiner may inspect the facility licensee's administration of the written examinations. The NRC will also review the results of the examination to determine if there is any indication of compromise.
5. The facility licensee and the NRC should determine if examination security problems were noted in the past and ensure that corrective actions have been taken to preclude recurrence.

#### Examination Bank Limitations

1. The facility licensee and chief examiner shall ensure that written examinations and operating tests conform with the guidelines in ES-301 and ES-401 (as modified herein) regarding the use of bank items directly from the bank, modified items, and new items. The guidance herein supersedes conflicting guidance in NUREG-1021; for example, the 10% limit on facility bank use (ES-301, Paragraph D.1.b. and ES-401, Paragraph C.1.c) would not apply during the pilot examinations.
2. If the facility licensee has an open bank, it will not place any new or modified items to be used on the examination (written questions, job performance measures, or simulator scenarios) in their examination bank until after the last examination has been administered.

## SECURITY CONSIDERATIONS FOR SIMULATOR OPERATING EXAMINATIONS

Simulators present a unique set of integrity concerns for operating examinations. Examiners should ensure that operating examination security is provided in three areas: the instructor station, the programmers' tools, and the external interconnections. This note lists representative features that the examiner should check to ensure that the planned examination is not inadvertently left behind during pre-examination activities.

Most of the instructor station features can be checked through the tableau or graphic interface provided at the instructor's console. The programmers' tools and the external interconnections are not generally apparent to the instructor or the examiner. The simulator staff should be consulted to determine the status of these latter items.

### INSTRUCTOR STATION FEATURES

- TREND RECORDING - Most simulators have the ability to monitor and graph several parameters that are selected by the instructor. Many simulators allow any global variable to be assigned to the trending feature. Often, the trend data can be spooled to a file for later printing.
- SNAPSHOTS - All simulators have snapshot capability. Initial conditions (ICs) are recorded for future recall.
- BACKTRACK - Backtrack files are snapshots that are automatically recorded at pre-determined intervals, usually up to 1 hour of operation at intervals as frequent as a minute. Backtrack files are usually only accessible through the BACKTRACK feature. The files typically cannot be erased, only overwritten by real-time operation.
- REPLAY/PLAYBACK - The replay/playback feature steps through a series of snapshots and displays the I/O status (lights, meters, etc.) for each sequentially. Often, the replay feature uses the backtrack files, although separate replay file storage may be provided.
- SCRIPTS/COMPUTER ASSISTED EXERCISES - Many simulators have a feature that allows pre-programmed implementation of malfunctions and remote functions based on time and/or logical conditions. Scripts may be used by the simulator staff to facilitate scenario administration. Scripts can typically be stored for future use. Stored scripts can also be selected for review and editing from the instructor station.
- INITIAL CONDITIONS SUMMARY - Snapshots are usually labeled on the instructor station IC menu with date/time recorded, pertinent plant parameter status, and instructor comments. Even if the comment field has been changed to indicate that a snapshot is available for re-use, the data (scenario initialization) may still be representative of test conditions until the snapshot is actually overwritten or updated.
- MALFUNCTION SUMMARY - Malfunction summary menus display the status of selected malfunctions, both active and inactive. The malfunction summary is usually IC dependent and therefore depicts the malfunctions that were active or staged when an IC, such as a scenario validation, was stored.

- MONITORED PARAMETERS - Instructors are afforded the capability to define individual or groups of parameters for display or printout. The monitored parameter group assignments can be recalled for review and editing. If used to facilitate scenario validation or examination administration, the monitored parameters can provide insight into the focus of the examination.
- TREND RECORDING - Groups of parameters can be defined and assigned to trend recorders. The recorders may be, but is not necessarily, located at the instructor station. The recording may also be in file format for presentation on instructor station screens. Recording sessions are typically activated or de-activated at the instructor station.
- STUDENT PERFORMANCE MONITORING - Special groups of parameters and simulated plant operating conditions can often be assigned to a tracking and recording function that plots an individual student's performance during training exercises. Recording sessions are typically activated or de-activated at the instructor station.
- VIDEO & AUDIO RECORDING - Many simulators are equipped with video and audio recording capability in the control room. Video and audio controls are typically located at the instructor station.

#### PROGRAMMERS' TOOLS

- SOFTWARE TERMINALS - Simulator engineers have access to real-time monitoring and control of simulator and model conditions through software support terminals. These terminals may be located in the computer facility or at the engineer's desk.
- INDEPENDENT EXECUTIVES - The conditions for scenarios can sometimes be replicated off-line using independent executive programs. These programs should not be in communication with the I/O. Independent executives and their associated initialization files may provide an indication of planned exercises if they have been used to resolve problems during scenario validation.
- GRAPHICAL USER INTERFACES - Instructor station graphical user interfaces often display simulated plant conditions and performance in real-time. At remote locations, such as a programmer's desk, the GUI could display the full scenario.

#### EXTERNAL INTERCONNECTIONS

- ESF FEEDS - Many simulators have data links to the ESF and the operations management offices for emergency planning drills. These links can display simulated plant condition to observers outside the simulated control room during scenario validation or examinations.
- REMOTE PLANT PROCESS COMPUTER & INSTRUCTOR STATION SCREENS - Repeater screens in the training area can display scenarios in real time to observers outside the simulated control room.
- MODEMS & REMOTE SIMULATOR SUPPORT SYSTEMS - Many simulators are equipped with modems from the instructor station or simulation computers for outside monitoring and control of simulator status and activities by parties off site.

### ES-301 PILOT GUIDANCE

1. The facility licensee will prepare the proposed operating test outlines (i.e., Forms ES-301-1, 2, and 3) in accordance with Section D and submit them to the NRC regional office with the written exam outlines for review and approval 60 days before the scheduled examination date.

Sufficient operating test outlines shall be developed to ensure that all the applicants can be tested with the personnel available on the schedule agreed upon by the NRC regional office and the facility licensee. Day-to-day overlap or duplication between walk-through tests and dynamic simulator scenarios shall be limited or precautions shall be taken to ensure that test integrity is not compromised.

Each walk-through test shall include at least two (one for upgrade SROs) job performance measures (JPMs) that are either new or significantly altered and each simulator scenario set shall include at least one new or significantly altered scenario. Other scenarios used may be drawn directly from the facility's scenario bank, however they will be altered to the degree needed to prevent the applicants from recognizing the scenarios early based on initial conditions or other cues. A significant modification, for purposes of the JPMs and simulator scenarios means at least one substantive event or condition change that alters the course of action in the JPM or scenario.

The facility licensee should evaluate the dominant accident sequences (DAS) for the facility to determine if they are suitable for testing on the simulator or during the walk-through. DAS are those sequences where the frequency of core damage is greatest as determined by the facility licensee's probabilistic risk assessment (PRA) or individual plant examination (IPE).

Each scenario set should expose the applicants to situations in which their performance could cause plant degradation or threaten the health and safety of the public. The scenarios should ensure that all the rating factors within each competency can be evaluated and should include events that would require unsatisfactory rating factor evaluations if an applicant performs poorly.

The administrative topics should be evaluated in a performance-based (i.e., using JPMs) mode whenever possible, rather than by asking prescribed questions.

2. The region will review, revise as necessary, and approve the facility-prepared operating test outline(s) in conjunction with the written examination using the form provided (refer to ES-201 pilot guidance).
3. The facility licensee will prepare the operating tests in accordance with the previously approved examination outline(s) and the instructions in Section D. An authorized facility representative should review and approve the tests before submitting them to the NRC regional office for review and approval 30 days before the scheduled examination date. If it is necessary to deviate from the previously approved operating test outlines, the facility should explain each deviation. The explanation should include a reason why the original proposal could not be implemented and a justification why the proposed replacement is considered an acceptable substitute.



The facility licensee shall identify which test items are new, which ones are taken directly from the facility licensee's item banks, the origin of items that were modified from existing bank items, and the date on which each item was last used on a licensing or practice examination or quiz.

4. The region will review, work with the facility licensee to revise as necessary, and approve the final operating tests in accordance with the "INTERIM Operating Test QA Sheet," and the instructions in the ES-201 pilot guidance.



Facility:		Date of Examination:		
Task Description		Initials		
		a.	b.	c.
1. G E N E R A L	a. Verify that the final operating tests conform with the previously approved outlines and that deviations are justified.			
	b. Ensure that there are sufficient different operating tests (and contingency materials) to examine the field of applicants on the schedule agreed upon with the facility licensee.			
	c. Ensure that the duplication from previous license examinations and between successive operating tests is within acceptable limits and does not compromise test integrity.			
	d. To the extent possible, assess whether the operating tests will differentiate between competent and less-than-competent applicants.			
2. A D M I N	a. Review the proposed JPMs using the quality checklist (Form ES-603-1) as a guide.			
	b. Review the proposed questions using the open reference test item checklist (Form ES-602-1) as a guide.			
	c. Verify that there are no direct look up questions.			
3. W I T H	a. Review the proposed JPMs using the quality checklist (Form ES-603-1) as a guide.			
	b. Review the proposed follow-up questions using the open reference test item checklist (Form ES-602-1) as a guide.			
	c. Verify that 20% or more of JPMs and follow-up questions on each test are new or significantly modified.			
	d. Verify that there are no direct look up questions.			
4. S I M	a. Review the scenario events (Form ES-301-3) and the expected operator actions (Form ES-301-4) to ensure that every significant activity is documented.			
	b. Verify that each applicant is tested using at least one new or significantly modified scenario.			
	c. Using Form ES-301-6, ensure that planned scenario sets will enable each applicant to be evaluated on all the required competencies and rating factors.			
Printed Name / Signature		Date		
a. Author	_____	_____		
b. Facility Reviewer	_____	_____		
c. NRC Chief Examiner (*)	_____	_____		
d. NRC Regional Supervisor (*)	_____	_____		

(\*) Two independent NRC reviews are required.

ES-302 PILOT GUIDANCE

1. The chief examiner should confirm with the facility licensee that the simulator instructor's station, programmers' tools, and external interconnections do not compromise operating test security while conducting the examinations. The primary objective is to ensure that the exam material cannot be read or recorded at other unsecured consoles and that examination material is either physically secured or electronically protected when not in use by individuals on the security agreement.

### ES-401 PILOT GUIDANCE

1. The facility licensee will prepare the proposed written examination outlines in accordance with the ES and the Examiners' Handbook and submit them to the NRC regional office with the operating test outlines for review and approval 60 days before the scheduled examination date.

Facility licensees are encouraged to use the appropriate K/A record form(s) in the Examiners' Handbook (or a facsimile) to facilitate the quality assurance reviews.

2. The region will review, work with the facility licensee to revise as necessary, and approve the facility-prepared examination outline in conjunction with the operating test outline(s) using the form provided (refer to ES-201 pilot guidance).
3. The facility licensee will prepare the examination in accordance with the previously approved outline and the instructions in the ES. An authorized facility representative should review and approve the exam before submitting it to the NRC regional office for review and approval 30 days before the scheduled examination date. If it is necessary to deviate from the previously approved exam outline, the facility should explain each deviation. The explanation should include a reason why the original proposal could not be implemented and a justification why the proposed replacement is considered an acceptable substitute.

A maximum of 50% of the written examination questions may be taken directly from their bank; up to an additional 40% of the questions may be taken from the bank but must be significantly modified; and a minimum of 10% of the questions will be newly developed. As discussed in the Examiners' Handbook, the new questions should emphasize the applicants' understanding at the comprehension or application levels of knowledge because they have the greatest operational and discriminatory validity.

No more than 25% of the questions on the examination may be repeated from examinations, quizzes, or tests administered to the license applicants during their license training class, or from the past two NRC license examinations at the facility. No questions may be drawn directly from the applicants' audit examination or similar testing vehicle given at the end of the license training class.

The examinations shall be 100% multiple choice.

A significant modification, for purposes of the written questions, means a change to the conditions in the stem and at least one distractor significantly changed.

The facility licensee shall identify which test items are new, which ones are taken directly from the facility licensee's item banks (or another source such as the NRC EQB or an old NRC exam), the origin of items that were modified from existing bank items, and the date on which each item was last used on a licensing or practice examination.

4. The region will review, work with the facility licensee to revise as necessary, and approve the proposed written exams in accordance with the "INTERIM Written Examination Quality Assurance Checklist."

The facility licensee is primarily responsible for ensuring the technical accuracy of the license examinations and compliance with the question duplication and distribution guidelines (i.e., Items 1, 4, 5, and 6 on the QA Checklist). However, the chief examiner is expected to use his or her best judgment and take reasonable measures to verify these items when reviewing the examination.

If the questions are not technically accurate, it should be self-revealing during the grading process if the facility licensee accepts double answers for items or recommends deletions.

Facility/Unit: \_\_\_\_\_ Date of Examination: \_\_\_\_\_

Examination Level: SRO / RO

Item Description	Initial		
	a.	b.	c.
1. Questions and answers technically accurate and applicable to facility.			
2. K/As and learning objectives referenced for all questions.			
3. RO/SRO overlap no more than 75%.			
4. Item duplication from practice exams, quizzes, and the last two licensing exams is no more than 25%.			
5. No item duplication from the license screening/audit exam.			
6. Bank use meets limits (50% bank / 40% modified / 10% new), with new items at the analysis/comprehension level.			
7. References/handouts provided do not give away answers.			
8. Question distribution meets Examiners' Handbook and proposed examination outline.			
9. Question psychometric quality and format meet Examiners' Handbook guidelines (refer to Chapter 4, Appendix A, Sections 1 and 3).			
10. The proposed exam contains 100, one-point, multiple choice items. Total correct and corresponds to value on cover sheet.			
Printed Names / Signatures		Date	
a. Author	_____	_____	_____
b. Facility Reviewer	_____	_____	_____
c. NRC Chief Examiner	_____	_____	_____
d. NRC Regional Supervisor	_____	_____	_____

NOTE: Two independent NRC reviews are required.  
See special instructions for shaded boxes.



### ES-402 PILOT GUIDANCE

1. The facility licensee shall provide the necessary copies of the approved examinations, answer sheets, and handouts (e.g., equation sheets, selected technical specifications, and steam tables) for each applicant, as approved by the NRC chief examiner.

The facility licensee may use machine-gradable answer sheets if desired, but it is NOT required.

2. The facility licensee will administer the examinations to the applicants identified on the examination assignment sheet (Attachment 3 of ES-201) as arranged with the NRC chief examiner and in accordance with the specific instructions in Section D.
3. As a general rule, the written examinations should be scheduled before the operating tests, however, other sequences are permissible if agreed to by the facility licensee. Normally, the written examinations should be administered no more than one week before the operating tests.

Under extenuating circumstances and with prior approval from HOLB, written examinations may be given up to 30 days before the operating tests, as soon as the license applications are accepted, any applicable waiver requests are resolved, and the examinations are approved.

4. If the facility licensee will be conducting the written examinations while the NRC examiners are on-site, the chief examiner should inspect the examination facilities to ensure their adequacy and periodically monitor the exam to ensure the proctor is appropriately addressing the applicants' questions. If this is not feasible, the region should consider having an examiner check the facilities upon arrival at the site for the operating tests or via another method as determined appropriate by the responsible regional supervisor.
5. At least one individual who is familiar with the intent of the questions (i.e., a facility employee who took part in the examination development) shall be available to clarify examination questions for the applicants during the examination.

This individual must be extremely careful not to lead the applicants or give away answers when clarifying questions. If he or she has any doubt about how to respond to an applicant's question, it is best to withhold additional guidance and instruct the applicant to do his or her best with the information that is provided. All questions asked and statements of clarification must be documented verbatim for later review by the NRC chief examiner.

6. The proctor should construct a chart illustrating the seating arrangement of the applicants during the examination. The proctor should also record the starting time of the examination and the time at which each applicant completed the exam.
7. The proctor shall collect the examinations, exam cover and answer sheets for grading in accordance with ES-403; the examinations may be



distributed to the applicants after the last examination is collected.

8. When four hours have elapsed, the proctor shall instruct the remaining applicants to stop work, sign their examination cover sheets, and turn in their examinations.
9. The proctor shall deliver the completed examination packages, the marked-up master examinations, and the list of applicant questions to the appropriate facility representative for grading per ES-403.

### ES-403 PILOT GUIDANCE

1. The facility licensee will grade the written license examinations in accordance with the instructions in the ES.

In order not to bias the operating test evaluations, the facility licensee should not provide the examination results to the NRC examiners until after the operating tests are complete. The facility should not disseminate the examination grades to the license applicants until after the NRC reviews and approves the grading.

2. The facility will evaluate all the questions posed by the applicants and the pen-and-ink changes made on the master examination while it was administered to determine if any of the questions should be deleted from the examination or any of the answers changed. The facility will document the reason for every change or deletion. The facility shall not change the examination unless there is a valid reference to support the change.

3. It is expected that the facility licensee will analyze the examination for problems with the test items and possible training deficiencies that might indicate a need for remedial training or program changes. Machine grading and computerized item analysis are acceptable, but NOT required.

The chief examiner should request the facility licensee to prepare a matrix summarizing the applicants' performance on each examination question (i.e., answers per distractor) and forward it to the regional office with the examination package.

4. An authorized facility representative should review the grading and submit the answer and cover sheets, applicant questions and clarifications, grading matrix, master exam changes and justifications to the NRC regional office within 5 working days after the exit meeting.

5. The chief examiner shall review the examination grading using the attached "INTERIM Examination Grading Quality Assurance Checkoff Sheet." The chief examiner should apply his or her judgment when reviewing the examination results and adjust the level of the review based on the applicants' and the facility licensee's performance (e.g., the number of items changed or deleted, the average grade, the number of marginal or failing grades, etc.).

The chief examiner should also be alert for any indication that the examination was compromised.

6. If 5% or more of the examination answers are changed or questions are deleted during the grading process, the regional office should request the facility licensee to explain why so many post-examination changes were necessary and what actions will be taken to improve future license examinations. The region should also consult the Operator Licensing Branch staff for further guidance.

If 10% or more of the questions are deleted, the region should take action per the ES to verify the validity of the examination.

Grader's Name: _____		Date of Examination: _____	
Facility/Unit: _____		Examination Level: SRO / RO	
Item Description	Initials		
	a.	b.	c.
1. Answer key changes and question deletions justified and documented.			
2. Applicants' scores checked for addition errors (reviewers spot check 25% of examinations).			
3. Grading for all borderline cases (80% +/- 2%) reviewed in detail.			
4. All other failing examinations checked to ensure grades are justified.			
5. Performance on missed questions checked for training deficiencies and wording problems; evaluate items missed by half or more of the applicants for validity.			
Printed Names / Signatures		Date	
a. Grader	_____	_____	
b. Facility Reviewer	_____	_____	
c. NRC Chief Examiner (*)	_____	_____	
d. NRC Supervisor (*)	_____	_____	

(\*) Two independent NRC reviews are required.

### ES-501 PILOT GUIDELINES

1. The examination report should document any significant deficiencies in the original examinations submitted by the facility licensee and other problems (e.g., security concerns) encountered during the examination development, administration, and grading process. If necessary, the region should request the facility licensee to describe the actions it will take to improve future performance.
2. The examiners involved with the pilot examinations shall document any significant questions or problems that they or the facility licensees may have regarding the new examination process; answers and solutions should also be documented, if available.
3. As soon as possible after the examinations are complete, the examiners involved shall respond to the attached questionnaire and return it to HOLB along with the questions from item 2. HOLB will evaluate the feedback, disseminate the information as necessary, and incorporate lessons learned in future examinations.
4. In addition to the items identified in ES-501, the region will place a copy of the proposed outlines and the original examinations submitted by the facility licensee, including the NRC's comments and resolutions, in the master examination file.

The region will ensure that a copy of the facility licensee's submittals are placed in the PDR after the examinations are administered.

### PILOT QUESTIONNAIRE

Please complete this questionnaire electronically and submit it to HOLB via e-mail (SAR, AJM, and SXG) as soon as possible after the examinations are complete.

Facility Name:

Date of Examinations:

1. How did the overall quality of the examinations compare with recently administered NRC-developed examinations?

Are the following QA checklists adequate? Are there any items that should be added or deleted?

Examination outline.

Operating test. Should it replace the competency and event checklists in Rev. 8?

Written exam.

written exam grading.

What level of facility management should QA the materials before they are sent to the NRC?

2. How much time did it take to perform the following activities?

Outline review:

Operating test review:

Written exam review:

Other (not chief) examiner preparation (how many):

Administer the operating tests (including travel time):

Review the written exam grading:

Document and grade the operating tests:

Prepare the report:

Fill out this questionnaire:



3. Was a preparation trip conducted for this examination? Explain why.

How many examiners participated in the preparation trip?

4. What items on the routine reference list can be deleted if the facility develops the examinations?

Were reference materials that were submitted in electronic format adequate for reviewing and preparing for the examinations? Were there any significant problems?

5. Are the interim security guidelines adequate? Should anything be added or deleted for Rev. 8?

How many personnel were signed up on the security agreement?

How did the facility licensee deal with the restrictions on personnel who can participate in exam development? What problems, if any, did they create for the facility licensee? Do they need to be more specifically defined?

Was there any value added by having the expected signatories identified early in the process?

6. Are the due dates for the examination reference materials, outlines, and final examinations reasonable: do they need to be adjusted?

7. What criteria should be used to delay or reject the exams?

8. Describe any significant problems encountered in meeting the following exam integrity criteria?

The 50%/40%/10% written exam question distribution.

The 25% duplication limit from previous exams and quizzes.

The prohibition on duplicating any written exam items from the audit exam.

One "new" scenario for each applicant.

Two "new" JPMS on each operating test (one for upgrades).

Interday overlap/duplication for JPMS/scenarios. Does there need to be a specific limit?

Is the definition of "modified" material sufficient? Do we need to define "new?"

9. How did the overall level of difficulty of the examination compare with recently administered NRC-developed examinations?

Is there a need for more guidance on level of difficulty?

10. Should we encourage and further evaluate the practice of using the same walk-through for all the applicants (split over 2-3 days as necessary)? This would cut down on the resources necessary to develop and review the tests and hopefully result in better tests since resources could be more focused on quality than quantity.
11. How are facility licensees incorporating PRA/IPE/DAS insights into their exams? Is guidance to consider the insights when developing the exams sufficient or is more definitive guidance necessary?
12. Did restricting the timing of the written examination administration to one week prior to the operating tests create any problems?
13. Should any additional provisions be made for the NRC to inspect the written exam administration process?
14. Did allowing the facility to answer questions during the written exam create any apparent problems with exam integrity?
- What additional restrictions, if any, should be placed on proctors?  
Should we adopt the GFES no question policy?
15. Did the requirement to grade the written exams within 5 days create any problems for the licensee? Is there an alternate proposal?
16. Is 5 written exam item changes a reasonable threshold for asking the licensee to explain the examination deficiencies?
17. Were facility licensee comments received on preparing and submitting a matrix of applicant responses to every test question?
18. Do you think the overall examination process was less effective, just as effective, or more effective than the old method? Briefly explain.
19. Do you have any other comments?

ATTACHMENT 2

NRC GENERIC LETTER 95-06

ATTACHMENT 2

UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF NUCLEAR REACTOR REGULATION  
WASHINGTON, D.C. 20555-0001

August 15, 1995

NRC GENERIC LETTER 95-06: CHANGES IN THE OPERATOR LICENSING PROGRAM

Addressees

All holders of operating licenses (except those licenses that have been amended to a possession only status) or construction permits for nuclear power reactors.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this generic letter to (1) notify addressees of NRC's intent to change the operator licensing process so that facility licensees will have the option to prepare draft written examinations and operating tests used by the NRC to determine the competence of operator license applicants at power reactor facilities and (2) to solicit volunteers to participate in a pilot program that will evaluate and refine the new examination development process.

Background

On March 24, 1995, the staff informed the Commission of its intent to revise the manner in which the NRC administers the initial operator licensing program to allow greater participation by facility licensees and the elimination of contractor assistance in this area. On April 18, 1995, the Commission consented to the staff's proposal to initiate a transition process to revise the operator licensing program and directed the staff to carefully consider experience from the pilot examinations before full implementation.

Description of Circumstances

Part 55, "Operators' Licenses," of Title 10 of the *Code of Federal Regulations* (10 CFR Part 55) establishes the Commission's procedures and criteria for issuing licenses to operators and senior operators. Part 55 states the minimum training and educational requirements for applying for a license, the content requirements for licensing examinations, and the process for making a license application; however, it does not define the specific process for conducting licensing examinations. Specific guidance in this area is given in NUREG-1021, "Operator Licensing Examiner Standards," which includes the procedures that NRC staff examiners and NRC-certified contract examiners use to prepare and conduct both the written and operating portions of the licensing examinations. The role of the facility licensees has historically been limited to reviewing and validating the NRC-prepared examinations before they are given, and to providing administrative and logistical support to the NRC and contract examiners while the examinations are in progress.

The staff now intends to revise the initial operator licensing program to permit facility licensees to draft and, in part, conduct initial licensing examinations with NRC oversight. NRC participation in the examinations will range from conducting part to all of the examination. This change is expected to result in significant resource savings because facility employees, who are more familiar with their plant and its procedures, will be able to develop the examinations more efficiently than NRC or contract examiners. The change is part of the NRC's continuing effort to streamline the functions of the Federal Government consistent with Administration initiatives and to accommodate anticipated resource reductions. The pilot program described herein will evaluate and refine the proposed examination process to ensure that acceptable levels of effectiveness, objectivity, and independence are maintained.

### Discussion

The staff has historically determined the level of knowledge and abilities of applicants for operator licenses at power reactor facilities by conducting examinations developed fully by the NRC. This approach has been appropriate to meet the requirement of Section 107 of the Atomic Energy Act of 1954, as amended, to prescribe uniform conditions for licensing individuals and to provide an appropriate independent assessment of an applicant's qualifications to be licensed. During the period from the 1950s to the mid-1980s, the amount of training provided to license applicants and the facility licensees' focus on training varied considerably. During the mid- to late-1980s, the industry's emphasis in the training area increased significantly, and all power reactor licensees established formal training programs that have been accredited by the National Academy for Nuclear Training.

In 1987, the NRC amended 10 CFR Part 55 to establish detailed criteria for implementing licensed operator requalification programs and to require each licensed operator to pass an NRC-conducted requalification examination as a condition for license renewal. After conducting requalification examinations for more than five years, the NRC concluded that the industry had established a high standard of performance in the requalification area and that the NRC was largely duplicating the licensees' efforts. Therefore, in 1994, the NRC amended 10 CFR Part 55 to remove the requirement for every operator to pass an NRC-conducted requalification examination so the staff could shift its involvement in the requalification area to one of inspection oversight.

The improvements in operator training and performance that prompted the NRC to reduce its level of involvement in the requalification program have also been evident in the initial operator licensing process. That fact, in conjunction with the aforementioned streamlining initiative, has motivated the NRC to reconsider its approach to the initial operator licensing examination program. The NRC now intends to change the guidance in NUREG-1021 to permit facility licensees to draft the written examinations and operating tests for operator and senior operator license applicants. The NRC will review and approve the licensees' proposed examinations and tests and independently conduct the operating tests. Facility licensees will not conduct any portion of the operating tests, however, they will conduct the written examinations. The NRC



will review the graded written examinations, grade each applicant's operating test performance, make the final pass or fail decisions, and issue licenses, as appropriate.

From October 1995 through March 1996, the staff intends to conduct a voluntary pilot program to evaluate and refine the proposed examination process; other potential examination efficiencies may also be evaluated during the pilot period. The NRC regional offices will be contacting those facility licensees who have requested initial operator license examinations during the pilot period to discuss the details of the program and to ascertain the licensees' willingness to participate. As usual, the regional office will confirm the examination arrangements in a corporate notification letter.

To maintain uniform standards of examination format, difficulty, and integrity, the staff will expect participants in the pilot program to prepare the written examinations and operating tests in accordance with the existing procedures and guidelines in Revision 7 of NUREG-1021, Revision 5 of NUREG/BR-0122 ("Examiners' Handbook for Developing Operator Licensing Written Examinations"), and the supplementary instructions outlined in Attachment 1. Departure from the stated guidelines may result in examination delays if the NRC has to rewrite the examinations.

Lessons learned during the pilot examinations will be incorporated in Revision 8 of NUREG-1021. The staff will make a draft copy of the revised report available for industry and public comment before it is implemented on a generic basis. The NRC intends to formally implement the facility-developed examination option in October 1996, contingent upon successful pilot examination experience and Commission approval.

#### Voluntary Response Requested

Those addressees who are scheduled for initial operator licensing examinations during the pilot period (October 1995 through March 1996) and are interested in participating in the program described herein should contact their NRC Regional Office to make the necessary arrangements.

#### Backfit Discussion

This generic letter requires no specific action or written response. The addressee's decision to participate in the pilot program is strictly voluntary. Therefore, the staff has not performed a backfit analysis. Formal implementation of the revised examination process may require a backfit analysis.

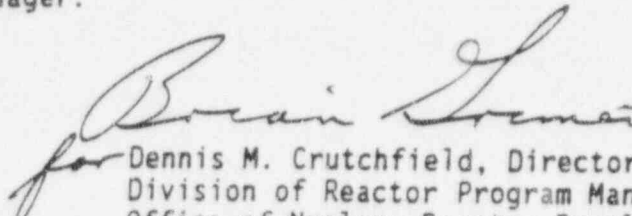
#### Federal Register Notification

A notice of opportunity for public comment was not published in the *Federal Register* because of the voluntary nature of the pilot program. However,

comments on the issues addressed by this generic letter may be sent to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001.

The staff intends to publish a notice of opportunity for public comment before issuing the revised examination procedures in Revision 8 of NUREG-1021.

If you have any questions about this matter, please contact one of the technical contacts listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.

  
for Dennis M. Crutchfield, Director  
Division of Reactor Program Management  
Office of Nuclear Reactor Regulation

Technical contacts: Stuart Richards, NRR  
(301) 415-1031

Thomas Burdick, RIII  
(708) 829-9703

Glenn Meyer, RI  
(610) 337-5211

John Pellet, RIV  
(817) 860-8159

Thomas Peebles, RII  
(404) 331-5541

Attachments:

1. Pilot Examination Guidelines
2. List of Recently Issued NRC Generic Letters

### PILOT EXAMINATION GUIDELINES

Facility licensees will prepare the written examinations and operating tests (dynamic simulator and walkthrough) in accordance with the instructions in Revision 7 of NUREG-1021 ("Operator Licensing Examiner Standards") and Revision 5 of NUREG/BR-0122 ("Examiners' Handbook for Developing Operator Licensing Written Examinations"), subject to the following additional criteria:

- (1) The facility licensee will prepare an integrated examination outline (written and operating test) and submit it to the NRC regional office for review, comment, and approval at least 60 days before the scheduled examination date. The NRC chief examiner will work with the facility licensee to resolve any problems and to avoid unnecessary revision of the final examination products.
- (2) Facility employees who are involved with developing the examinations and tests will sign a standard security agreement (Form ES-201-2) before they gain specific knowledge of the examinations and tests. Facility employees who played a substantial role in training the license applicants will generally not be involved in developing the license examinations or tests. If the facility licensee considers such employees necessary for developing the examinations or tests, it will define the process it will use to ensure that the integrity of the examinations is not compromised and discuss the process with the NRC chief examiner.
- (3) The written examinations and operating tests will satisfy the following specific criteria:
  - A maximum of 50 percent of the written examination questions may be taken directly from the facility question bank; up to an additional 40 percent of the questions may be taken from the facility bank but must be significantly modified; and a minimum of 10 percent of the questions will be newly developed. As discussed in NUREG/BR-0122, new questions should emphasize the applicants' understanding at the comprehension or application levels of knowledge because they have the greatest operational and discriminatory validity.
  - No more than 25 percent of the questions on the examination may be repeated from examinations, quizzes, or tests administered to the license applicants during their license training class, or from the past two NRC license examinations at the facility. No questions may be drawn directly from the applicants' audit examination or similar testing vehicle given at the end of the license training class.

Each walkthrough test will include at least two job performance measures (JPMs) that are either new or significantly altered, and each simulator scenario set will include at least one new or significantly altered scenario. Other scenarios used may be drawn directly from the facility scenario bank; however, they will be altered to the degree needed to prevent the applicants from immediately recognizing the scenarios based on initial conditions or other cues.

A significant modification, for purposes of the written questions, means a change to the conditions in the stem and at least one distractor significantly changed. Similarly, JPMs and simulator scenarios will have at least one substantive event or condition change that alters the course of action in the JPM or scenario.

- (4) The facility licensee will submit the final written examinations and operating tests to the NRC regional office at least 30 days before the scheduled examination date. In its submittal, the facility licensee will include a history (e.g., bank, revised, new, and date last used) of each test item used on the written and operating tests.
- (5) The NRC regional office will assign a chief examiner to coordinate the review, revision (as determined necessary by the NRC), and validation of the written examinations and operating tests with the facility licensee. Additional NRC staff examiners will be assigned as necessary (typically one or two, depending on the number of applicants) to assist the chief examiner with administering and grading the operating tests in accordance with existing procedures. The facility licensee will administer and grade the written examinations; NRC examiners will review and approve the licensee's grading.