

IOLB/HOIB REVIEW OF INITIAL LICENSING EXAMINATIONS

A. Purpose

To provide guidance for reviewing the regions' preparation, administration, grading, and documentation of initial operator licensing written examinations and operating tests. These reviews will emphasize examination consistency, quality and compliance with the guidance in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." The reviews may include the observation of on-site activities but will also allow for post-examination audits that can be conducted from the program office. By conducting these audits and reviews, the Operator Licensing and Training Branch (IOLB) and/or Human Performance, Operator Licensing and ITAAC Branch (HOIB) will verify that examination reliability, and therefore examination validity, remains at acceptable levels. Although many of the specific items per Attachment 1 and 2 are verified to ensure all aspects of the examination process are in accordance with NUREG 1021, the overall goal is to enhance the abilities of the individual examiners and to promote consistency between the regions in making operator licensing decisions.

B. Background

1. IOLB and HOIB are responsible for ensuring that the regional operator licensing examinations are administered in accordance with the current revision of NUREG-1021 (i.e., the Examination Standards (ES)).
2. The applicable ESs for administering initial examinations are ES-201, "Initial Operator Licensing Examination Process;" ES-301, "Preparing Initial Operating Tests;" ES-302, "Administering Operating Tests to Initial License Applicants;" ES-303, "Documenting and Grading Initial Operating Tests;" ES-401, "Preparing Initial Site-Specific Written Examinations or ES-401N, "Preparing Initial Site-Specific Written Examinations;" ES-402, "Administering Initial Written Examinations;" ES-403, "Grading Initial Site-Specific Written Examinations;" and ES-501, "Initial Post-Examination Activities." The reviewer shall evaluate the preparation, administration, grading, and documentation of the examinations to the extent required to confirm compliance with the ESs, and to assess the consistency and quality of examinations among the regions. The reviewer shall also evaluate NRC examination changes in order to verify compliance with the ES guidelines has not been compromised and to ensure consistency and uniformity of initial operator examinations.

3. A secondary goal of the IOLB and HOIB initial examination reviews is to provide feedback to individual examiners and the regions relative to the intent and objectives of the ESs.
4. The results of the initial examination reviews shall be incorporated with the findings of the quadrennial regional assessment (per OLMC-310, Regional Office Review Procedure), and other routine interactions such as an annual Regional Self-Assessment, if applicable. The reviews shall not be for the purpose of personnel performance appraisals, which are the responsibility of regional management.
5. On-site examination activities may be observed during the examination week or the preparatory/validation week. Most other reviews will be conducted post-examination from the program office to allow for a larger sample of examinations. The IOLB (or HOIB, if applicable) reviewer will make appropriate arrangements with the chief examiner and/or regional operator licensing branch chief ahead of time for any needed assistance.

C. Implementation Procedures

Specific information and requirements regarding sample selection and which program office has cognizance over reviews of initial exams at specific facilities can be found in OLMC-330, "Operator Licensing Oversight Program." Note that reviews are limited to exams for which there are no members of the IOLB program office serving in an examiner capacity. If on-site activities will be observed, the IOLB (or HOIB, if applicable) reviewer will contact the chief examiner approximately 90 days (if possible) before the scheduled start of the examination observation to plan the review. This should be sufficient time to ensure the IOLB (or HOIB, if applicable) reviewer completes all necessary documentation for unescorted access to the facility, if necessary. Since the review addresses certain aspects of the region's quality assurance process for which documentation is not required to be retained, the chief examiner and the IOLB (or HOIB, if applicable) reviewer will agree on the specific documentation necessary to satisfactorily complete the review.

1. Review of the site-specific written examinations may consist of any or all of the following four parts, as directed by the applicable IOLB or HOIB supervisor:
 - a. The reviewer may review the preparations for the administration of the written examination. For facility-developed examinations, the reviewer will request a copy of the proposed examination and the chief examiner's review comments on Form ES-401-9 or ES-401N-9, as applicable. For NRC-developed examinations, the reviewer will request a copy of the facility licensee's pre-review comments and the region's resolutions.

Attachment 1, Part A, shall be used to document this review. These reviews will generally be performed after the examinations have been administered to eliminate any expectation or perception that IOLB or HOIB is involved in the examination approval process. If any concerns are identified before the exams are given, the reviewer must obtain approval from the applicable IOLB or HOIB supervisor, before discussing them with the region.

- b. The reviewer may evaluate the administration of the written examination by interviewing the chief examiner and reviewing a copy of the proctor's clarification comments provided to the applicants, as appropriate. This activity may be observed first-hand if the reviewer is on-site while the written exams are being given, but will generally be evaluated post-examination. Attachment 1, Part B, shall be used to document this review.
 - c. The reviewer may evaluate the post-examination review process, including required documentation of examination security. A copy of the examination (RO and SRO), annotated with the changes promulgated to the applicants, will be requested from the chief examiner. Attachment 1, Part C, shall be used to document this review.
 - d. The reviewer may evaluate the grading and documentation of the written examination to confirm that the facility licensee's comments and recommendations were properly resolved and the master examination was revised, as necessary. Additionally, a quality assurance review of examination grading and a review of the examination report may also be conducted. Attachment 1, Part D, shall be used to document this review.
2. Review of the site-specific operating test may consist of any or all of the following three parts, as directed by the applicable IOLB or HOIB supervisor:
- a. The reviewer may review the preparations for the administration of the operating tests. Operating test content and coverage, as well as test quality and consistency, will be evaluated. For facility-developed tests, the reviewer will request a copy of the proposed test and the chief examiner's comments. For NRC-developed tests, the reviewer will request a copy of the facility licensee's pre-review comments and the region's resolutions. Attachment 2, Part A, shall be used to document this review. These reviews may be performed before or during the validation week, while the tests are being administered, or after the fact from the program office. The reviewer must be careful to dispel any expectation or perception that IOLB or HOIB is involved in the test approval process. If

any concerns are identified before the tests are given, the reviewer must obtain approval from the applicable IOLB or HOIB supervisor, before discussing them with the region.

- b. The reviewer may observe the administration of the operating test(s). Attachment 2, Part B, shall be used to document this review. Whenever possible, the observations should include dynamic simulator scenarios, simulator job performance measures (JPMs), in-plant JPMs, and administrative JPMs. The reviewer should also attempt to observe every examiner involved in administering any portion of the operating test(s).
 - c. The reviewer may review the grading and documentation of the operating tests to confirm compliance with the ES. The reviewer shall evaluate the documentation for technical accuracy and consistency among the applicants. Copies of the completed Individual Examination Reports, Form ES-303-1 through ES-301-4, should be requested from the chief examiner if the requested ADAMS operator docket files are unavailable. Attachment 2, Part C, shall be used to document this review.
3. Follow-up discussions between the IOLB or HOIB reviewer and the examiner(s) being reviewed will take place to provide feedback to the examiner(s) and to improve the reviewer's understanding of the practices applied in the administration of the operating tests. The reviewer may also note those aspects of the simulator examination that he/she thought were particularly well-conceived and carried out. The discussions shall not be used to review the performance of the applicant(s), and the reviewer shall not discuss with the examiner the pass/fail decision(s) to be made. If the reviewer's observations are sufficient to substantiate completion of an operating test audit (as required by IMC-0102, "Oversight and Objectivity of Inspectors and Examiners at Reactor Facilities") for any examiner(s), then an audit report may be completed upon request of the responsible regional supervisor. However, the information provided regarding these observations will be quantitative in nature and refrain from qualitative performance comments.

D. Documentation Required

1. Any amplifying remarks or comments should be documented in Part E of Attachment 1 and Part D of Attachment 2, as appropriate, with a cross-reference to the applicable item.
2. The two attachments used in conducting this portion of the regional assessment shall be included with the attachments of IOLB-MC-310, if conducting this review as part of the quadrennial regional office review. In the event that this portion is being conducted by a HOIB reviewer, they must ensure their documentation is

forwarded to the Team Leader assigned for the quadrennial regional assessment if their review is in the subject region.

3. If this review is not part of the quadrennial regional assessment visit, the two attachments shall be included in a report submitted to the applicable IOLB or HOIB supervisor, for transmittal to the appropriate regional management. Reports originating from HOIB will also be transmitted to the IOLB supervisor.
4. These reports, either the quadrennial regional assessment or the individual plant initial operator licensing examination assessment, will generally be signed by the Director (or Deputy), Division of Inspection and Regional Support, although the Director (or Deputy), Division of Construction Inspection and Operational Programs, may sign individual plant initial operator licensing examination assessments originating from HOIB.

E. Attachments

1. Review of the Written Examination
2. Review of the Operating Test

Attachment 1

Review of the Written Examination

Region: _____ Chief Examiner: _____
Facility: _____ Written Exam Date: _____

NOTE: The presence of an asterisk (*) indicates a comment related to that item in Section E, below.

A. Examination Preparation Activities

1. Confirm that the ADAMS examination package contains properly completed and signed copies of the following documents, as applicable to the subject exam's technology: (ES-501 F.1)

- ES-201, Attachment 4, "Examination Approval Letter," with Form ES-201-4, "List of Applicants." Form ES-201-4 is update to reflect any applicants who withdrew after the original list was generated.
- Form ES-201-2, "Examination Outline Quality Checklist"
- Form ES-401-1, "BWR Examination Outline" (as applicable)
- Form ES-401-2, "PWR Examination Outline" (as applicable)
- Form ES-401-3, "Generic Knowledge and Abilities Outline"
- Form ES-401-4, "Record of Rejected K/As"
- Form ES-401-6, "Written Examination Quality Checklist"
- Form ES-401-9, "Written Examination Review Worksheet"
- Form ES-401N-1, "ABWR Examination Outline" (as applicable)
- Form ES-401N-2, "AP-1000 Examination Outline" (as applicable)
- Form ES-401N-3, "Generic Knowledge and Abilities Outline"
- Form ES-401N-4, "Record of Rejected K/As"
- Form ES-401N-6, "Written Examination Quality Checklist"
- Form ES-401N-9, "Written Examination Review Worksheet"
- Form ES-403-1, "Written Examination Grading Quality Checklist"
- Draft written examination and any comments from facility licensee or NRC
- Final written examination and answer key
- Written exam sample plan

YES__ NO__

2. Independently review/verify items 1.a, c, and d on Form ES-201-2.

YES__ NO__

3. Verify the examination outline K/As were identified using a random and systematic sampling process. (ES-401 D.1.b or ES-401N D.1.b, Form ES-201-2, Item 1.b)

YES__ NO__

4. Perform an independent review on a sampling (generally 10 - 20%, as directed by the applicable IOLB or HOIB supervisor) of the written examination questions as follows:

NOTE: The sample shall include both RO and SRO questions (as applicable), bank, modified, and new questions, and questions that were identified as U, E, and S on Forms ES-401-9 or ES-401N-9. Do not sample questions that were the subject of post-exam comments by the facility licensee, as they will be evaluated in Section C.

- Review the draft and final versions, and the NRC examiner's notations, on Form ES-401-9 or ES-401N-9 to determine if they appear reasonable and if appropriate changes were made to address identified deficiencies. NRC-validated questions should only be revised to correct unacceptable technical and psychometric flaws. (ES-401 E.3.b or ES-401N E.3.b)
- Evaluate the final version of each sampled question using Form ES-401-9 or ES-401N-9 to identify latent flaws, confirm level of knowledge, level of difficulty, K/A match, and license level.
- Evaluate any references/handouts provided to determine if they give away any answers or aid in the elimination of distracters. (Form ES-401-6 or ES-401N-6)
- Review the modified questions to determine if the changes made from the original version were sufficient to meet the ES criteria for a significant modification. (ES-401 D.2.f or ES-401N D.2.f)
- Review the bank questions to determine if they were repeated from the previous two licensing exams at the facility. If more than 4 RO and/or 2 SRO questions were repeated from the last two exams, then verify the region

consulted the NRR (or NRO, for new reactor facilities) OL program office.
(Form ES-401-6 or ES-401N-6)

YES__ NO__

5. Question duplication on the facility-developed written examination from the licensee's screening/audit examination was controlled according to one of the methods listed in ES-401 C.1.f or ES-401N C.1.f, such that any duplication is appropriate and does not compromise the integrity of the examination. (Form ES-401-6 or ES-401N-6)

YES__ NO__

6. Bank use meets limits -- no more than 75% from the bank, at least 10 new questions at the comprehensive/analysis level (8 for the RO exam and 2 for the SRO exam), and the remainder new or modified. Confirm that a technical reference and cross-reference to the facility's examination bank is noted as applicable for each question. (ES-401 D.2.f & g or ES-401N D.2.f & g)

YES__ NO__

7. Confirm that the branch chief reviewed the exam before authorizing the facility pre-review, solicited facility feedback regarding the exam, approved the final exam on Form ES-401-6 or ES-401N-6, and issued an approval letter. (ES-201 C.2.i & j, and ES-401 E.3.a or ES-401N E.3.a)

YES__ NO__

B. Examination Administration Activities

1. The chief examiner reviewed the facility's exam security/administration policies for compliance with the guidelines in NUREG-1021. (ES-201, Attachment 1 and ES-402 C.1 & D)

YES__ NO__

2. The NRC chief examiner inspected the examination facilities during prep week to ensure their adequacy and, if on-site during examination administration, periodically monitored the facility's examination administration. (ES-402 C.2.b)

YES__ NO__

3. No more than 30 days elapsed between the written examination and operating tests without obtaining NRR or NRO (as applicable) program office concurrence. (ES-402 C.2.b)

YES___ NO___

4. If an NRC examiner did not proctor the exam, the chief examiner ensured that the proctor understood his/her duties and that at least one individual who was familiar with the intent of the questions (i.e., an NRC examiner or facility employee who took part in developing the examination) was available by telephone while the exams were in progress. (ES-402 D.1.b)

YES___ NO___ N/A___

5. All applicant questions regarding specific written examination test items and all statements of clarification are documented (verbatim if possible) for reference by the NRC in resolving grading conflicts. (ES-402 D.3.b)

YES___ NO___

6. Each examinee was briefed on the policies and guidelines for taking NRC written examinations according to Appendix E. (ES-402 D.2.c)

YES___ NO___

7. If necessary, the NRC verified each applicant's identity and examination level against the approved "List of Applicants." (ES-402 D.1.d and Form ES-201-4)

YES___ NO___ N/A___

8. The time allowed to complete the examination was not extended without notifying the NRC regional office. (ES-402 D.4.d)

YES___ NO___

9. All applicants signed their exam cover sheet before leaving the exam room. (ES-402 D.4.a)

YES___ NO___

10. The examiners audited approximately 10% of the license applications to confirm that they accurately reflected the applicants' qualifications. (ES-202 C.2.e)

YES___ NO___

C. Post-Examination Actions

1. After the completion of the written examination, the master copy of the examination was annotated to reflect all changes made to questions during the administration of the examination. A copy was given to the facility or NRC for review, as appropriate. (ES-402 D.3.b and E.1)

YES___ NO___

2. The facility personnel with prior knowledge of the exam content signed the post-examination security statement (Form ES-201-3) after the examinations were completed. (ES-201 D.2.b and ES-402 E. 3)

YES___ NO___

3. The facility submitted formal comments within 5 working days (or as arranged by regional management) after the examination was administered. The comments were signed by an authorized facility representative and include a facility position for any applicant comments. (ES-402 E.4 and E.6)

YES___ NO___ N/A___

D. Grading and Documentation

1. The facility licensee's comments and recommendations were properly resolved, examination item analysis performed, all questions posed by the applicants during the examination were evaluated, and the master examination was revised as necessary. (ES-403 D.1 & D.3)

NOTE: Verify that facility comments on the written examination, specific NRC resolution for each facility comment, including a precise explanation for accepting or rejecting each facility comment, and a specific justification for every additional item deletion or change are properly documented in the examination report. If the facility licensee recommends deleting or changing the answers to 4 (2) or more RO (SRO) questions that it developed, the regional office should ask the facility licensee to explain why so many post examination changes were

necessary and what actions will be taken to improve future licensee examinations. Additionally, 7 (2) or more RO (SRO) deletions during the grading process require program office consultation if examination validity is in question. (ES-501 E.3.a and E.3.b & Attachment 1 and ES-501 C.2.c)

YES__ NO__ N/A__

2. Assess whether the psychometric flaws that resulted in any question deletions or answer key changes should reasonably have been identified and corrected during examination development and review.

YES__ NO__ N/A__

3. Each applicant's answer sheet was copied before beginning the grading process and set aside for later use. (ES-403 D.2.a)

YES__ NO__

4. Each applicant's original answer sheet was graded and annotated to indicate which questions were answered incorrectly, the correct answer noted, and which questions (if any) were deleted. If the exam was machine graded then verify each applicant's profile report is attached to the original answer sheet. (ES-403 D.2.b)

YES__ NO__

5. Grading items listed on Form ES-403-1 were checked by the examination grader and all reviewers, including NRC chief examiner. The responsible supervisor reviewed and approved the completed checklist ensuring all requirements were completed. (ES-403 D.3.b)

YES__ NO__

6. Perform an independent review of the written examination grading using Form ES-403-1, and verify that the results agree with the region's Form ES-403-1.

YES__ NO__

7. Generic strengths and weaknesses identified as a result of grading and reviewing the written examinations, any significant grading deficiencies, any exam security issues, and any exam delays or time extensions are documented in the examination report. (ES-501 E.3.a)

YES__ NO__

8. The draft and as-given written examination material has been entered into ADAMS with a 2-year delayed-release date.

YES__ NO__

E. Comments and Notes on the Written Examination Process

Section and Item #: (Provide comment or evaluation for the associated item number)

Attachment 2

Review of the Operating Test

Region: _____ Chief Examiner: _____

Facility: _____ Prep Week Dates: _____

Exam Week Dates: _____

NOTE: The presence of an asterisk (*) indicates a comment related to that item in Section D, below.

A. Examination Preparation Activities

1. Confirm that the examination package in ADAMS contains properly completed and signed copies of the following documents (NOTE: some of these items will not be publically available): (ES-501 F.1)

- ES-201, Attachment 4, "Examination Approval Letter," with Form ES-201-4, "List of Applicants," including any annotations for applicants on the list who withdrew from any part of the exam
- Form ES-201-1, "Examination Preparation Checklist"
- Operating test outlines
- Form ES-201-2, "Examination Outline Quality Checklist"
- The proposed operating tests, including comments made by the facility licensee or the NRC, as appropriate
- The as-given scenarios (Forms ES-D-1, "Scenario Outline," and ES-D-2, "Required Operator Action" for each scenario administered)
- The as-given JPMs (Administrative JPMs and Control Room/In-Plant JPMs, including applicant cue sheets, examiner guides, and any other information included with the JPM submittal)
- Form ES-301-1, "Administrative Topics Outline"
- Form ES-301-2, "Control Room/In-Plant Systems Outline"
- Form ES-301-3, "Operating Test Quality Checklist"
- Form ES-301-4, "Simulator Scenario Quality Checklist"
- Form ES-301-5, "Transient and Event Checklist"

- Form ES-301-6, "Competencies Checklist"

YES___ NO___

2. Assess whether the Region's (facility's) draft comments were reasonable and appropriately resolved in the final tests.

YES___ NO___

3. Confirm that the same JPMs and simulator scenarios are not repeated on subsequent days and are not duplicated from the applicants' audit test. (ES-301 D.1.a)

YES___ NO___

4. Coverage of the administrative topics conforms to the guidance provided in ES-301 D.3:

- Each candidate was evaluated on the required number of subjects listed below during the operating test (ES-301 D.3.a):

<u>Topic</u>	<u>Number of Subjects</u>	
	<u>RO</u>	<u>SRO and RO retakes</u>
Conduct of Operations	1 (or 2)	2
Equipment Control	1 (or 0)	1
Radiation Control	1 (or 0)	1
<u>Emergency Procedures/Plan</u>	<u>1 (or 0)</u>	<u>1</u>
Total	4	5

YES___ NO___

- SRO applicants evaluated in greater depth than RO applicants. (ES-301 D.3.c)

YES___ NO___ N/A___

- Form ES-301-1, "Administrative Topics Outline," briefly describes the administrative subjects selected for evaluation. (ES-301 D.3.f)

(NOTE: Confirm criteria associated with bank use, inclusion of new or modified items, and repetition from the past two exams is acceptable)

YES___ NO___

- The quality of the final administrative walk-through per Form ES-301-3, "Operating Test Quality Checklist," in conjunction with the associated systems walk-through and the simulator operating test, is acceptable. (ES-301 D.3.i)

YES___ NO___

5. Coverage of the Control Room/In-Plant Systems conforms to the guidance provided in ES-301 D.4.a through D.4.e:

- Based on the applicant's license level, each candidate was evaluated on the required number of systems from the safety function groupings identified in the applicable K/A Catalog (BWR or PWR) listed below during the test: (ES-301 D.4.a)

<u>License Level</u>	<u>Control Room</u>	<u>In-Plant</u>	<u>Total</u>
RO	8	3	11
SRO-instant (I)	7	3	10
SRO-upgrade (U)	2 or 3	3 or 2	5

YES___ NO___

- Each of the control room systems and evolutions (and separately, each of the in-plant systems and evolutions) selected for RO and SRO-I applicants should evaluate a different safety function, and the same system or evolution should not be used to evaluate more than one safety function in each location. One of the control room systems or evolutions must be an engineered safety feature (ESF). For PWR operating tests, two systems (one primary and one secondary) may be selected from Safety Function 4 (ES-301 D.4.a)

YES___ NO___

- The 5 systems and evolutions selected for an SRO-U applicant evaluate 5 different safety functions. Additionally, one of the control room systems or evolutions *must* be an ESF, and the same system or evolution should not be used to evaluate more than one safety function. (ES-301 D.4.a)

YES___ NO___ N/A___

- No JPM tasks replicate tasks that have been selected for evaluation on the dynamic simulator test. (ES-301 D.1.h and D.4.b)

YES___ NO___

- The criteria requirements listed on Form ES-301-1, “Administrative Topics Outline” and Form ES-301-2, “Control Room/In-Plant Systems Outline,” are within limits for each type of applicant. (ES-301 D.2.a, D.4.b)

YES___ NO___

- The quality of the final walk-through test per Form ES-301-3, “Operating Test Quality Checklist,” in conjunction with the associated administrative topics and the simulator operating test, is acceptable. (ES-301 D.4.e)

YES___ NO___

6. All the JPMs, individually and as a group, have meaningful performance requirements that provide a basis for evaluating the applicant’s understanding of and ability to operate the plant. Overall level of difficulty and capacity to discriminate is acceptable. (ES-301 D.1.d, D.2.c, and E.2.a)

YES___ NO___

- Independently rate each JPM using a five-point difficulty rating scale and then develop an average rating for the entire set of JPMs. Provide a one or two sentence explanation that describes the basis for the rating. The rating scale is as follows:

DIFFICULTY RATING

1	2	3	4	5
Low		Ave/Med		High

- JPMs in the mid-range, ranging in scores between 2.0–4.0, are acceptable models for inclusion in the examination.
- JPMs at the extreme scores (1.0 - 1.99 and 4.01 - 5.0) are either too easy or too difficult and therefore have reduced validity and may be non-discriminatory.

Reviewer Assessed JPM Level of Difficulty (1-5)			
Administrative JPMs		Control Room JPMs	In-Plant JPMs
RO	SRO	S-1 (ALL)*:	P-1 (ALL):
A.1.a:	A.1.a:	S-2 (ALL):	P-2 (ALL):
A.1.b:	A.1.b:	S-3 (ALL):	P-3 (ALL):
A.2:	A.2:	S-4 (R,I):	

A.3:	A.3:	S-5 (R,I):	
	A4:	S-6 (R,I):	
		S-7 (R,I):	
		S-8 (R):	
Average:	Average:	Control Room and In-Plant Average:	

*Indicates which applicants were administered this JPM: (R)O, SRO-(I)ntant, or ALL (RO, SRO-Instant, and SRO-Upgrade). SRO-Upgrade requires a total of 5 control room and in-plant JPMs (2 or 3 control room and 3 or 2 in-plant JPMs).

7. Applicants at a facility qualifying for dual or multi-unit licenses are properly tested on the different systems, control board layouts, and any other differences between the units during the walk-through portion of the operating test. (ES-301 D.1.g)

YES___ NO___ N/A___

8. The alternate path tasks meet the criteria specified in Appendix C, Section C.

YES___ NO___

9. Performance-based follow-up questions during any part of the operating test comply with the criteria provided in Attachment 1 of ES-301 for guidelines regarding open-reference questions. (ES-301 D.1.k)

YES___ NO___ N/A___

10. Coverage of the simulator operating test conforms to the guidance provided in ES-301 D.5.a through D.5.f.

- Initial conditions, normal operations, malfunctions, and major transients are varied among the scenarios and include startup, low power, and full power situations. (ES-301 D.5.c)

YES___ NO___

- Each scenario set exercises each applicant on the types and quantities of evolutions, failures, technical specification (TS) evaluations, and transients, identified for the applicant's license level, as described on Form ES-301-5, "Transient and Event Checklist," with each event only counted once per applicant. (ES-301 D.5.d)

YES___ NO___

- For each event listed on Form ES-D-1, a Form ES-D-2, "Required Operator Actions," that describes the expected communications, actions, and reference material to be used by each operating position on the crew, is prepared. (ES-301 D.5.f)

YES___ NO___

- The scenario quantitative attributes are within the target bands established on Form ES-301-4, "Simulator Scenario Quality Checklist," or a scenario that does not fit into the ranges specified on ES-301-4 has been evaluated to ensure the overall level of difficulty is acceptable. (ES-301 D.1.d and D.5.d)

YES___ NO___

- Using Forms ES-301-5 and ES-301-6, review each scenario set to ensure that each competency and rating factor is adequately covered and to ensure that every applicant will have the opportunity to perform or respond to the required numbers and types of evolutions and events. (ES-301 D.5.d)

YES___ NO___

- Every operator is evaluated using at least one new or significantly modified scenario and all other scenarios have been altered according to ES-301 D.5. (ES-301 D.5.b)

YES___ NO___

- Scenario events do not duplicate operations that will be tested during the systems walk-through portion of the operating test. (ES-301 D.5.c)

YES___ NO___

- Independently rate each scenario using a five-point difficulty rating scale and then develop an average rating for the entire set of scenarios. Provide a one or two sentence explanation that describes the basis for the average rating and the basis for a scenario rating that is outside the mid-range. The rating scale is as follows:

DIFFICULTY RATING

1	2	3	4	5
Low		Ave/Med		High

- Scenarios in the mid-range, ranging in scores between 2.0 – 4.0, are acceptable models for inclusion in the examination.

- Scenarios at the extreme scores (1.0 - 1.99 and 4.01 - 5.0) are either too easy or too difficult and therefore have reduced validity and may be non-discriminatory.

11. The walk-through and simulator tests are not redundant, nor should they duplicate material that is covered on the written examination. (ES-301 D.1.h)
YES___ NO___
12. Operating tests do not duplicate test items (scenarios or JPMs) from the applicant's audit test given at or near the end of the license training class. (ES-301D.1.a)
YES___ NO___
13. Determine whether the chief examiner received supervisory approval prior to reviewing the proposed operating tests with the facility licensee by interviewing the chief examiner and/or the branch chief. Verify that the supervisor signed Form ES-301-3 after the pre-examination review/validation changes were incorporated. (ES-201 C.2.i and ES-301 E.3.a through c)
YES___ NO___

B. Examination Administration Activities

1. The Region obtained NRR (or NRO for new reactor facilities) operator licensing program office concurrence if the dates of the operating tests and written examination diverged by more than 30 days. (ES-302 C.2.a)
YES___ NO___ N/A___
2. An NRC examiner briefed all of the applicant(s) in accordance with parts A, C, D, and E of Appendix E before beginning the operating test. (ES-302 D.1.a)
YES___ NO___
3. The chief examiner scheduled the same examiner to administer all three operating test categories to an applicant, or an alternate schedule dividing the JPMs among different examiners for each applicant was used for efficiency (i.e., station keeping). In either case, the chief examiner ensured that every applicant received a complete set of JPMs. Additionally, the chief examiner ensured that simulator operating tests consisting of multiple scenarios per applicant were not divided among examiners. (ES-201 C.3.j & ES-302 D.1.d)
YES___ NO___

4. No NRC examiner should be scheduled to administer more than four complete simulator operating tests in any one week. (ES-201 C.2.e)
YES___ NO___
5. The chief examiner arranged for any NRC examiners not familiar with the facility to receive a plant tour before administering any operating tests. (ES-302 D.1.m)
YES___ NO___
6. The chief examiner confirmed with the facility licensee that the instructor's station, programmer's tools, and external connections cannot compromise operating test security while conducting examinations. (ES-302 D.1.k)
YES___ NO___
7. Any JPMs not validated by the NRC or facility licensee during the preparatory site visit are validated before use on the operating test. (ES-302 D.2.a)
YES___ NO___ N/A___
8. Each scenario was validated on the simulator before it was administered to the applicants. (ES-302 D.3.a)
YES___ NO___
9. The examiners reviewed the scenarios together and discussed the required procedures, technical specifications, and special circumstances related to the scenarios. (ES-302 D.3.d)
YES___ NO___
10. The simulator setup matches the conditions specified for each JPM. No JPM is administered without initial conditions discrepancies corrected. (ES-302 D.2.b)
YES___ NO___
11. The examiners asked the simulator operator to record selected parameters on the facility's safety parameter display system. The chief examiner retained the recordings as backup documentation. (ES-302 D.3.f)
YES___ NO___
12. The examiners should have had the simulator operator advance and mark with the date, time and initials any control room strip chart recorders useful in recreating the sequence of events. (ES-302 D.3.h)

YES___ NO___ N/A___

13. The examiner in charge of each scenario arranged a communication system with the simulator operator to insert event malfunctions without cuing the applicants. (ES-302 D.3.g)

YES___ NO___

14. Applicants are informed during the operating test briefing if time compression will be used during the simulator test. (ES-302 D.3.g)

YES___ NO___ N/A___

15. The examiners asked follow-up questions during the walk-through test JPMs *only* if the applicant failed to accomplish the task standard, demonstrated a lack of familiarity with equipment and procedures, or was unable to locate information, indications or controls. (ES-302 D.2.f)

YES___ NO___

16. Forms ES-D-1 and ES-D-2 reflect any changes made to the scenario events or the expected operator actions as a result of scenario validation runs. (ES-302 D.3.c) (NOTE: This review is to verify changes were made between the validation and the final, to-be-given scenario, NOT the as-run scenario. The as-run scenario is covered in C.4, below.)

YES___ NO___

17. The examiners reviewed and discussed the scenarios *immediately* before beginning the simulator tests with the simulator operator, including cueing and phone communication expectations, and provided him or her with a copy of Form ES-D-1. (ES-302 D.3.e, ES-302 D.3.j)

YES___ NO___

18. The examiners who administered the simulator test conferred immediately after completing the scenario set to compare notes and to verify that each examiner observed his or her applicant perform the required number of transients and events in a manner sufficient to justify an evaluation of all the required competencies. Planned events were not removed inappropriately, and additional events or scenarios were run when necessary. (ES-302 D.3.o)

YES___ NO___

19. The examiners monitored conversations between the simulator operator and the applicants to identify inappropriate cueing. (ES-302 D.3.j)

YES___ NO___

20. All of the examiner's observations are consistent and mutually supportive. A performance deficiency shared by more than one applicant is appropriately documented for those applicants. (ES-302 D.3.o)

YES___ NO___

21. The same simulator scenarios were not repeated during subsequent days. (ES-302 D.1.f)

YES___ NO___

22. The examiners monitored and documented the applicants' actions using Form ES-D-2 as a guide. (ES-302 D.3.m)

YES___ NO___

23. The examiners collect any sketches, flow paths, or other illustrations made by the applicants in answering any follow-up questions. (ES-302 D.2.c)

YES___ NO___ N/A___

24. The examiners asked the simulator operator to provide and retain copies of the logs, charts, and other materials that can assist in documenting the applicant's performance if they do not perform as expected. (ES-302 D.3.p)

YES___ NO___ N/A___

25. The applicants were given sufficient time (normally about 5 minutes) to familiarize themselves with plant conditions before starting each simulator scenario. (ES-302 D.3.k)

YES___ NO___

26. The number of persons present during the tests was minimized. Except for the simulation facility operators, no other member of the facility's staff observed an operating test without the chief examiner's permission. No applicant was allowed to witness any other applicant's operating test. Surrogate operators were used only when necessary and the use of STAs was consistent with the in-plant practice and both were briefed on their expected actions. (ES-302 D.1.j)

YES___ NO___

27. The chief examiner obtained, as applicable, NRR/NRO operator licensing program office approval for non-NRC personnel (e.g., representatives from the Institute of Nuclear Power Operators (INPO), etc.) to observe any portion of an operating test, and controlled the observer's activities in accordance with the guidance provided by NRR/NRO. (ES-302 D.1.j)
- YES___ NO___ N/A___

C. Operating Test Documentation and Grading Activities

NOTE: Perform an independent review on a sampling of the grading of the operating tests and verify that the examiner's comments, if required by ES-303 D.3.b, appropriately support his or her recommendation.

1. Documentation for applicants on the same operating crew is consistent. Operating errors that involved more than one applicant in an operating crew are noted by all involved evaluating examiners. (ES-302 D.3.o, ES-303 C.3.a)
- YES___ NO___
2. Any material generated or used by the applicant that contributes to an unsatisfactory performance evaluation is cross-referenced to the applicable deficiency and attached to the examination package. (ES-303 D.1.a)
- YES___ NO___
3. The validity and technical accuracy of any performance-based questions and any simulator test unexpected events or actions have been verified. (ES-303 D.1.b)
- YES___ NO___
4. The final simulator scenarios (Forms ES-D-1 and -2) were revised to reflect the "as run" conditions by deleting events that were not used and adding unplanned events. (ES-303 D.3.a)
- YES___ NO___
5. Unsatisfactory JPM grading evaluations based solely on follow-up questions are documented in accordance with ES-303. (ES-303 D.2.a and D.3)
- YES___ NO___ N/A___
6. All required rating factors were evaluated for every applicant. Any SRO upgrade applicants who acted in the reactor operator or balance of plant positions were

graded on SRO Competency 3, "Control Board Operations," even if they were not individually evaluated during the scenario. Rating factors that were "not observed" were limited and properly justified. (ES-302 D.1.d; ES-303 D.2.b and D.3.d)

YES ___ NO ___

7. Review each documented simulator operating test performance deficiency and verify that unsatisfactory grades are, when practicable, assigned to no more than two rating factors for the same performance deficiency. (ES-303 D.1.d)

NOTE: A significant deficiency can be coded with additional rating factors if the error is relevant to each of the rating factors according to the criteria in ES-303 D.3.b.

YES ___ NO ___

8. Simulator errors and critical errors were properly tabulated when determining rating factor scores and competency grades. (ES-303 D.2.b)

YES ___ NO ___

9. Every unsatisfactory grade is supported with detailed documentation as discussed in ES-303. (ES-303 D.3.b)

YES ___ NO ___

10. Any deviation from the nominal grading criteria in ES-303 was explained in detail and approved in writing by the applicable NRR or NRO program office. (ES-303 C.2 and D.3.d)

YES ___ NO ___

11. An independent pass or fail recommendation is made by the chief examiner or designee and reviewed by the responsible regional supervisor. The responsible supervisor concurs on any recommendation to overturn the examiner's results, and the specific reasons for this action are explained on Form ES-303-2. (ES-303 C.3.d)

YES ___ NO ___

12. All applicable examiner notes and documentation associated with the proposed denial are retained by the examiner until any denial becomes final. (ES-303 D.3.e)

YES___ NO___ N/A___

13. Any simulator fidelity issues that revealed themselves during the operating tests were documented and attached to the final examination report. (ES-302 D.3.q)

YES___ NO___ N/A___

14. The draft, final, and as-given operating test material has been entered into ADAMS with a 2-year delayed-release date.

YES___ NO___

D. Comments and Notes on the Operating Test

Section and Item #: (Provide comment or evaluation for the associated item number)