Facility: **SALEM 1&2** Date of Examination: **06/07/2004**

Examinations Developed by: Facility - **Written** / NRC - **Operating**

| Target Date* | Task Description / Reference | Chief Examiner's Initials |
|---|---|---|
| -180 **(12/10/03)** | 1. Examination administration date confirmed (C.1.a; C.2.a & b) | TF |
| -120 **(02/08/04)** | 2. NRC examiners and facility contact assigned (C.1.d; C.2.e) | TF |
| -120 **(02/08/04)** | 3. Facility contact briefed on security & other requirements (C.2.c) | TF |
| -120 **(02/08/04)** | 4. Corporate notification letter sent (C.2.d) | TF |
| [-90] **(03/09/04)** | [5. Reference material due (C.1.e; C.3.c)] | TF |
| -75 **(03/24/04)** | 6. Integrated examination outline(s) due (C.1.e & f; C.3.d) | TF |
| -70 **(03/29/04)** | 7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e) | TF |
| -45 **(4/23/04)** | 8. Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d) | TF |
| -30 **(05/08/04)** | 9. Preliminary license applications due (C.1.l; C.2.g; ES-202) | TF |
| -14 **(05/24/04)** | 10. Final license applications due and assignment sheet prepared (C.1.l; C.2.g; ES-202) | TF |
| -14 **(05/24/04)** | 11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f) | TF |
| -14 **(05/24/04)** | 12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g) | TF |
| -7 **(05/31/04)** | 13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h) | TF |
| -7 **(05/31/04)** | 14. Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204) | TF |
| -7 **(05/31/04)** | 15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k) | TF |
| -7 **(05/31/04)** | 16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i) | TF |

* Target dates are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.

[ ] Applies only to examinations prepared by the NRC.

Facility: **SALEM** Date of Examination: **6/6/04 – 6/18/04**

| Item | Task Description | Initials a | Initials b* | Initials c# |
|---|---|---|---|---|
| 1. WRITTEN | a. Verify that the outline(s) fit(s) the appropriate model per ES-401. | DWL | ML | TF |
| | b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled. | DWL | ML | TF |
| | c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics. | DWL | ML | TF |
| | d. Assess whether the justifications for deselected or rejected K/A statements are appropriate. | DWL | ML | TF |
| 2. SIM | 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. | N/A[1] | N/A[1] | N/A[1] |
| | b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotations schedule without compromising exam integrity; ensure each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s)*, and scenarios will not be repeated on subsequent days. | N/A[1] | N/A[1] | N/A[1] |
| | c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D. | N/A[1] | N/A[1] | N/A[1] |
| 3. W / T | a. Verify that:<br>(1) the outline(s) contain(s) the required number of control room and in-plant tasks,<br>(2) no more than 30% of the test material is repeated from the last NRC examination,<br>(3)* no tasks are duplicated from the applicants' audit test(s), and<br>(4) no more than 80% of any operating test is taken directly from the licensee's exam banks. | N/A[1] | N/A[1] | N/A[1] |
| | b. Verify that:<br>(1) the tasks are distributed among the safety function groupings as specified in ES-301,<br>(2) one task is conducted in a low-power or shutdown condition,<br>(3) 4-6 (2-3 for SRO-U) of the tasks require the applicant to implement an alternated path procedure,<br>(4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and<br>(5) the in-plant walkthrough requires the applicant to enter the RCS. | N/A[1] | N/A[1] | N/A[1] |
| | c. Verify that the required administrative topics are covered. | N/A[1] | N/A[1] | N/A[1] |
| | d. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days. | N/A[1] | N/A[1] | N/A[1] |
| 4. GENERAL | a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section. | N/A[2] | N/A[2] | N/A[2] |
| | b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate. | N/A[2] | N/A[2] | N/A[2] |
| | c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5. | N/A[2] | N/A[2] | N/A[2] |
| | d. Check for duplication and overlap among exam sections. | N/A[2] | N/A[2] | N/A[2] |
| | e. Check the entire exam for balance of coverage. | N/A[2] | N/A[2] | N/A[2] |
| | f. Assess whether the exam fits the appropriate job level (RO or SRO). | N/A[2] | N/A[2] | N/A[2] |

| | Printed Name / Signature | Date |
|---|---|---|
| a. Author | Donald W. LeGrand / Donald W. LeGrand | 1/7/04 |
| b. Facility Reviewer (*) | Marios Kefantaris / | 1/5/04 |
| c. NRC Chief Examiner (#) | Todd Fish / Todd Fish | 1/12/04 |
| d. NRC Supervisor | E.J. Conte / E.J. Conte | 2/10/04 |

Note: * Not applicable for NRC-developed examinations.
# Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.

N/A[1] – Not applicable based on NRC development of Simulator and Walk-Through portion of exam. DWL 1/7/04
N/A[2] – Not applicable until completion of Simulator and Walk-Through portion of exam. DWL 1/7/04

Facility: **Salem 1 & 2** **(NRC Developed Operating Test)** Date of Examination: **06/07/04**

| Item | Task Description | Initials a | Initials b* | Initials c# |
|---|---|---|---|---|
| 1. WRITTEN | a. Verify that the outline(s) fit(s) the appropriate model per ES-401. | N/A | | NA |
| | b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled. | | | |
| | c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics. | | | |
| | d. Assess whether the justifications for deselected or rejected K/A statements are appropriate. | | | |
| 2. SIM | 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. | | | TF |
| | b. Assess whether 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 or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s)*, and scenarios will not be repeated on subsequent days. | | | TF |
| | c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D. | | | TF |
| 3. W / T | a. Verify that:<br>(1) the outline(s) contain(s) the required number of control room and in-plant tasks,<br>(2) no more than 30% of the test material is repeated from the last NRC examination,,<br>(3)* no tasks are duplicated from the applicants' audit test(s), and<br>(4) no more than 80% of any operating test is taken directly form the licensee's exam banks. | | | TF |
| | b. Verify that:<br>(1) the tasks are distributed among the safety function groupings as specified in ES-301,<br>(2) one task is conducted in a low-power or shutdown condition,<br>(3) 4-6 (2-3 for SRO-U) of the tasks require the applicant to implement an alternate path procedure,<br>(4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and<br>(5) the in-plant walk-through requires the applicant to enter the RCA. | | | TF |
| | c. Verify that the required administrative topics are covered, | | | TF |
| | d. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days. | | | TF |
| 4. GENERAL | a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section. * on written | * | | TF |
| | b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate. | | | TF |
| | c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5. | | | TF |
| | d. Check for duplication and overlap among exam sections. | | | TF |
| | e. Check the entire exam for balance of coverage. | | | TF |
| | f. Assess whether the exam fits the appropriate job level (RO or SRO). | | | TF |

| | Printed Name / Signature | Date |
|---|---|---|
| a. Author | P. Presby | 4-2-04 |
| b. Facility Reviewer (*) | N/A | |
| c. NRC Chief Examiner (#) | TODD FISH / Todd Fish | 4/2/04 |
| d. NRC Supervisor | Richard J. Conte / | 4/7/04 |

Note: * Not applicable for NRC-developed examinations.
# Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.

NC.TQ-WB.ZZ-0027(Z)

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**ATTACHMENT 6**

Page 1 of 1

## NRC Examination Security Agreement

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 6/7/04-6/18/04 as of the date of my signature. I 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 instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and 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. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 6/7-18/04. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

| PRINTED NAME | JOB TITLE / RESPONSIBILITY | SIGNATURE (1) | DATE | SIGNATURE (2) | DATE | NOTE |
|---|---|---|---|---|---|---|
| MARK W PARRISH | INSTRUCTOR | | 12/31/03 | | 6/22/04 | |
| Theodore Broderick | IT Consultant | | 12/31/03 | per email for D W Le Strand | 6/22/04 | |
| Tim Shetrone | SRO | | 4/8/04 | per telecon B Harding | 6/25/04 | |
| RUDOLPH CHAN | SRO | | 4/9/04 | per telecon for D W Le Strand | 6/23/04 | |
| David Myers | RO | | 4.13.4 | per email for D W Le Strand | 6/22/04 | |
| PATRICK MARTINO | SRO | | 4.13.4 | per email for D W Le Strand | 6/21/04 | |
| John Garecht | SRO - (AOM-WM) | | 4-16-04 | | 6/17/04 | |
| KARL HANNTO | SRO | | 4/22/04 | | 6/17/04 | |
| Scott Bickhart | NCO | | 4/22/4 | | 6/25/04 | |
| Duwayne Cox | NCO | | 4-22-4 | per email D W Le Strand | 6/24/04 | |
| NHAN NGUYEN | SIM ENG | | 4/26/04 | | 6/21/04 | |

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## ATTACHMENT 6

Page 1 of 1

## NRC Examination Security Agreement

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 6/7/04-6-18/04 as of the date of my signature. I 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 instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and 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. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 6/7-18/04. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

| PRINTED NAME | JOB TITLE / RESPONSIBILITY | SIGNATURE (1) | DATE | SIGNATURE (2) | DATE | NOTE |
|---|---|---|---|---|---|---|
| GERALD S. GAUDIN | Nuclear Instructor | Gerald S. Gaudin | 11/7/03 | GSaudin | 6/17/04 | |
| DAVID M. REIN | INSTRUCTOR | D.M.R. | 11/7/03 | D.M.R. | 6/15/04 | |
| ARCHIE E FAULKNER | INSTRUCTOR | Archie E Faulkner | 11/10/03 | Archie E Faulkner | 6/15/04 | |
| Donald W. LeGrand | Instructor | Donald W LeGrand | 11/10/03 | Donald W LeGrand | 6/17/04 | |
| Marios Kafantaris | Supervisor | M.K. | 12/2/03 | M.K. | 6/17/04 | |
| JAMES G. REID | OPS TRNG LEAD | James G. Reid | 1/6/04 | James G. Reid | 6/23/04 | |
| Edward Gallagher | Instructor | Edward Gallagher | 1-13-04 | Edward Gallagher | 6-17-04 | |
| JAMES BERGLUND | INSTRUCTOR | | 1/15/04 | | 6/21/04 | |
| Harry Swartz | Supv Sim Op | | 2/7/04 | | 6/21/04 | |
| Scott Maylan | ~~Scott Maylan~~ Reactor Oper. | Scott J. Maylan | 4.8.4 | per email for Dr LeGrand | 6/22/04 | |

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**Attachment 6**
**NRC Examination Security Agreement**
Page 1 of 1

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 6/7-18/04 as of the date of my signature. I 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 instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and 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. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 6/7-18/04. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

| PRINTED NAME | JOB TITLE / RESPONSIBILITY | SIGNATURE (1) | DATE | SIGNATURE (2) | DATE | NOTE |
|---|---|---|---|---|---|---|
| Scott Bickhart | Reactor Operator | | 5/4/04 | | 6/23/4 | |
| GERALD D. HUMPHREYS, JR | NJ BNE | | 5/10/04 | per telecon DMcLeGrand | 6/21/04 | |
| John Ramski | Training Instr. | | 5/10/04 | per telecon D Gaudin | 6/28/04 | |
| Glenn Marshall | Training Inst | | 6/7/04 | Marshall | 6/25/04 | |
| M. D. Guirtz | Ops. Sup. - Training | | 6-7-04 | per telecon for DMcLeGrand | 6/23/04 | |
| Peter Harsh | Training Instr | | 6-7-04 | | 6-17-04 | |
| STEVEN B. MILLER | TRAINING INSTRUCTOR | | 6-7-04 | | 6-17-04 | |
| FRANCIS KAMINSKI | TRAINING INSTRUCTOR | | 6-7-04 | | 6-21-04 | |
| John Oliver | Training Instructor | | 6-7-04 | | 6-17-04 | |
| | | | | | | |

Submit this completed attachment with examination records

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## Attachment 6
## NRC Examination Security Agreement
Page 1 of 1

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 6/7-18/04 as of the date of my signature. I 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 instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC. Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and 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. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. Post-Examination

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of 6/7-18/04. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

| PRINTED NAME | JOB TITLE / RESPONSIBILITY | SIGNATURE (1) | DATE | SIGNATURE (2) | DATE | NOTE |
|---|---|---|---|---|---|---|
| Nicola F. Conicella | Trng manager | [signature] | 6/7/04 | [signature] | 6/23/04 | |
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Submit this completed attachment with examination records

Prior to validation trip

Facility: **Salem 1 & 2** Date of Examination: **06/07/2004** Operating Test Number: **HOTEL**

| | 1. GENERAL CRITERIA | Initials a | b* | c# |
|---|---|---|---|---|
| a. | The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution). | | | TF |
| b. | There is no day-to-day repetition between this and other operating tests to be administered during this examination. | | | TF |
| c. | The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a). | | | TF |
| d. | Overlap with the written examination and between different parts of the operating test is within acceptable limits. | | | TF |
| e. | It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level. | | | TF |
| | **2. WALK-THROUGH CRITERIA** | -- | -- | -- |
| a. | Each JPM includes the following, as applicable:<br>· initial conditions<br>· initiating cues<br>· references and tools, including associated procedures<br>· reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee<br>· specific performance criteria that include:<br>- detailed expected actions with exact criteria and nomenclature<br>- system response and other examiner cues<br>- statements describing important observations to be made by the applicant<br>- criteria for successful completion of the task<br>- identification of critical steps and their associated performance standards<br>- restrictions on the sequence of steps, if applicable | | | TF |
| b. | Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity. | | | TF |
| c. | At least 20 percent of the JPMs on each test are new or significantly modified. | | | TF |
| | **3. SIMULATOR CRITERIA** | -- | -- | -- |
| a. | The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached. | | | TF |

| | Printed Name / Signature | Date |
|---|---|---|
| a. Author | Peter Presby / | 5-5-04 |
| b. Facility Reviewer(*) | | |
| c. NRC Chief Examiner (#) | TODD FISH / Todd Fish | 5/5/04 |
| d. NRC Supervisor | Richard J. Conte / | 5/5/04 |

NOTE: * The facility signature is not applicable for NRC-developed tests.
# Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.

Prior to validation trip

Facility: **Salem 1 & 2** Date of Exam: **06/07/04** Scenario Numbers: **1 / 2 / 3** Operating Test No.: **HOTEL**

| | QUALITATIVE ATTRIBUTES | Initials a | b* | c# |
|---|---|---|---|---|
| 1. | The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events. | | | TF |
| 2. | The scenarios consist mostly of related events. | | | TF |
| 3. | Each event description consists of<br>· the point in the scenario when it is to be initiated<br>· the malfunction(s) that are entered to initiate the event<br>· the symptoms/cues that will be visible to the crew<br>· the expected operator actions (by shift position)<br>· the event termination point (if applicable) | | | TF |
| 4. | No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event. | | | TF |
| 5. | The events are valid with regard to physics and thermodynamics. | | | TF |
| 6. | Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives. | | | TF |
| 7. | If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given. | N/A | | NA |
| 8. | The simulator modeling is not altered. | | | TF |
| 9. | The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios. | N/A | | NA |
| 10. | Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301. | | | TF |
| 11. | All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios). | | | TF |
| 12. | Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios). | | | TF |
| 13. | The level of difficulty is appropriate to support licensing decisions for each crew position. | | | TF |

| | TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d) | Actual Attributes | -- | -- | -- |
|---|---|---|---|---|---|
| 1. | Total malfunctions (5-8) | 4 / 5 / 5 | | | TF |
| 2. | Malfunctions after EOP entry (1-2) | 1 / 2 / 1 | | | TF |
| 3. | Abnormal events (2-4) | 4 / 3 / 4 | | | TF |
| 4. | Major transients (1-2) | 1 / 1 / 1 | | | TF |
| 5. | EOPs entered/requiring substantive actions (1-2) | 2 / 1 / 2 | | | TF |
| 6. | EOP contingencies requiring substantive actions (0-2) | 1 / 1 / 0 | | | TF |
| 7. | Critical tasks (2-3) | 2 / 2 / 2 | | | TF |

Prior to validation trip

Facility: **Salem 1 & 2** Date of Exam: **06/07/04** Scenario Numbers: **4 / /** Operating Test No.: **HOTEL**

| QUALITATIVE ATTRIBUTES | | Initials a | Initials b* | Initials c# |
|---|---|---|---|---|
| 1. | The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events. | RO | | TF |
| 2. | The scenarios consist mostly of related events. | RO | | TF |
| 3. | Each event description consists of<br>· the point in the scenario when it is to be initiated<br>· the malfunction(s) that are entered to initiate the event<br>· the symptoms/cues that will be visible to the crew<br>· the expected operator actions (by shift position)<br>· the event termination point (if applicable) | RO | | TF |
| 4. | No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event. | RO | | TF |
| 5. | The events are valid with regard to physics and thermodynamics. | SRO | | TF |
| 6. | Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives. | RO | | TF |
| 7. | If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given. | N/A | | NA |
| 8. | The simulator modeling is not altered. | SRO | | TF |
| 9. | The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios. | N/A | | NA |
| 10. | Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301. | SRO | | TF |
| 11. | All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios). | SRO | | TF |
| 12. | Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios). | RO | | TF |
| 13. | The level of difficulty is appropriate to support licensing decisions for each crew position. | RO | | TF |

| TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d) | | Actual Attributes | -- | -- | -- |
|---|---|---|---|---|---|
| 1. | Total malfunctions (5-8) | 7/ / | SRO | | TF |
| 2. | Malfunctions after EOP entry (1-2) | 3/ / | RO | | TF |
| 3. | Abnormal events (2-4) | 4/ / | RO | | TF |
| 4. | Major transients (1-2) | 1/ / | SRO | | TF |
| 5. | EOPs entered/requiring substantive actions (1-2) | 2/ / | RO | | TF |
| 6. | EOP contingencies requiring substantive actions (0-2) | 1/ / | RO | | TF |
| 7. | Critical tasks (2-3) | 2/ / | SRO | | TF |

Facility: **Salem 1 & 2** Date of Examination: **06/07/2004** Operating Test Number: **HOTEL**

| | 1. GENERAL CRITERIA | Initials a | b* | c# |
|---|---|---|---|---|
| a. | The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution). | | | TF |
| b. | There is no day-to-day repetition between this and other operating tests to be administered during this examination. | | | TF |
| c. | The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a). | | | TF |
| d. | Overlap with the written examination and between different parts of the operating test is within acceptable limits. | | | TF |
| e. | It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level. | | | TF |
| | **2. WALK-THROUGH CRITERIA** | -- | -- | -- |
| a. | Each JPM includes the following, as applicable:<br>· initial conditions<br>· initiating cues<br>· references and tools, including associated procedures<br>· reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee<br>· specific performance criteria that include:<br>- detailed expected actions with exact criteria and nomenclature<br>- system response and other examiner cues<br>- statements describing important observations to be made by the applicant<br>- criteria for successful completion of the task<br>- identification of critical steps and their associated performance standards<br>- restrictions on the sequence of steps, if applicable | | | TF |
| b. | Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity. | | | TF |
| c. | At least 20 percent of the JPMs on each test are new or significantly modified. | | | TF |
| | **3. SIMULATOR CRITERIA** | -- | -- | -- |
| a. | The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached. | | | TF |

| | Printed Name / Signature | Date |
|---|---|---|
| a. Author | Peter Presby / Peter Presby | 5/26/04 |
| b. Facility Reviewer(*) | NA (*) | NA |
| c. NRC Chief Examiner (#) | TODD FISH / Todd Fish | 5/26/04 |
| d. NRC Supervisor | Richard J. Conte / RJC | 5/27/04 |

NOTE: * The facility signature is not applicable for NRC-developed tests.
# Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.

Facility: **Salem 1 & 2** Date of Exam: **06/07/04** Scenario Numbers: **1 / 2 / 3** Operating Test No.: **HOTEL**

| | QUALITATIVE ATTRIBUTES | Initials a | b* | c# |
|---|---|---|---|---|
| 1. | The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events. | | | TF |
| 2. | The scenarios consist mostly of related events. | | | TF |
| 3. | Each event description consists of<br>· the point in the scenario when it is to be initiated<br>· the malfunction(s) that are entered to initiate the event<br>· the symptoms/cues that will be visible to the crew<br>· the expected operator actions (by shift position)<br>· the event termination point (if applicable) | | | TF |
| 4. | No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event. | | | TF |
| 5. | The events are valid with regard to physics and thermodynamics. | | | TF |
| 6. | Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives. | | | TF |
| 7. | If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given. | | | TF |
| 8. | The simulator modeling is not altered. | | | TF |
| 9. | The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios. | | | TF |
| 10. | Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301. | | | TF |
| 11. | All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios). | | | TF |
| 12. | Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios). | | | TF |
| 13. | The level of difficulty is appropriate to support licensing decisions for each crew position. | | | TF |

| | TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d) | Actual Attributes | – | – | – |
|---|---|---|---|---|---|
| 1. | Total malfunctions (5-8) | 4 / 5 / 5 | | | TF |
| 2. | Malfunctions after EOP entry (1-2) | 1 / 2 / 1 | | | TF |
| 3. | Abnormal events (2-4) | 4 / 3 / 4 | | | TF |
| 4. | Major transients (1-2) | 1 / 1 / 1 | | | TF |
| 5. | EOPs entered/requiring substantive actions (1-2) | 2 / 1 / 2 | | | TF |
| 6. | EOP contingencies requiring substantive actions (0-2) | 1 / 1 / 0 | | | TF |
| 7. | Critical tasks (2-3) | 2 / 2 / 2 | | | TF |

Facility: **Salem 1 & 2** Date of Exam: **06/07/04** Scenario Numbers: **4 / /** Operating Test No.: **HOTEL**

| QUALITATIVE ATTRIBUTES | | Initials a | b* | c# |
|---|---|---|---|---|
| 1. | The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events. | | | TF |
| 2. | The scenarios consist mostly of related events. | | | TF |
| 3. | Each event description consists of<br>· the point in the scenario when it is to be initiated<br>· the malfunction(s) that are entered to initiate the event<br>· the symptoms/cues that will be visible to the crew<br>· the expected operator actions (by shift position)<br>· the event termination point (if applicable) | | | TF |
| 4. | No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event. | | | TF |
| 5. | The events are valid with regard to physics and thermodynamics. | | | TF |
| 6. | Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives. | | | TF |
| 7. | If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given. | | | TF |
| 8. | The simulator modeling is not altered. | | | TF |
| 9. | The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios. | | | TF |
| 10. | Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301. | | | TF |
| 11. | All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios). | | | TF |
| 12. | Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios). | | | TF |
| 13. | The level of difficulty is appropriate to support licensing decisions for each crew position. | | | TF |

| TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.5.d) | | Actual Attributes | – | – | – |
|---|---|---|---|---|---|
| 1. | Total malfunctions (5-8) | 7/ / | | | TF |
| 2. | Malfunctions after EOP entry (1-2) | 3/ / | | | TF |
| 3. | Abnormal events (2-4) | 4/ / | | | TF |
| 4. | Major transients (1-2) | 1/ / | | | TF |
| 5. | EOPs entered/requiring substantive actions (1-2) | 2/ / | | | TF |
| 6. | EOP contingencies requiring substantive actions (0-2) | 1/ / | | | TF |
| 7. | Critical tasks (2-3) | 2/ / | | | TF |

**Salem 1 & 2** OPERATING TEST NO.: **HOTEL**

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 1 | | 2 | | 3 | | 4 | |
| | | | RO | BOP | RO | BOP | RO | BOP | RO | BOP |
| RO | Reactivity | 1* | 1 | | 1 | | 1 | | 1 | |
| | Normal | 1* | | 1 | | 1 | | 1 | | 1 |
| | Instrument / Component | 4* | 2 | 3 | 2 | 3 | 4 | 2 | 2 | 3 |
| | Major | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| As RO | Reactivity | 1* | 1 | | 1 | | 1 | | 1 | |
| | Normal | 0 | | | | | | | | |
| | Instrument / Component | 2* | 2 | | 2 | | 4 | | 2 | |
| | Major | 1 | 1 | | 1 | | 1 | | 1 | |
| SRO-I | | | | | | | | | | |
| As SRO | Reactivity | 0 | | | | | | | | |
| | Normal | 1* | 1 | | 1 | | 1 | | 1 | |
| | Instrument / Component | 2* | 4 | | 5 | | 5 | | 4 | |
| | Major | 1 | 1 | | 1 | | 1 | | 1 | |
| SRO-U | Reactivity | 0 | | | | | | | | |
| | Normal | 1* | | | | | | | | |
| | Instrument / Component | 2* | | | | | | | | |
| | Major | 1 | | | | | | | | |

Instructions:
(1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
(2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.45.d) but must be significant per Section C.2.a of Appendix D. * Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a one-for-one basis.
(3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author: Peter Presby

NRC Reviewer: Todd Fish

| Competencies | SRO SCENARIO | | | | RO SCENARIO | | | | BOP SCENARIO | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Interpret / Diagnose Events and Conditions | 2.3,4. 5.6 | 1,2,3, 4,5,7 | 2,3,4, 5,6 | 2,3, 4,5, 6,7 | 2,4,5 | 1,3,5 | 2,3,5, 6 | 2,3, 5,7 | 3,4,6 | 3,4,6, 7 | 3,4,6, 7 | 3,4,5 |
| Comply With and Use Procedures (1) | 1,2,3, 4,5,6 | ALL 1-7 | ALL 1-7 | ALL 1-7 | 2,4,5 | 1,3,5 | 2,,5 | 2,3, 5 | 3,4,5 | 3,4 | 4 | 3,4 |
| Operate Control Boards (2) | NA | NA | NA | NA | 1,2,4, 5 | 1,3,4, 5 | 1,2,5, 6 | 1,2, 3,5, 7 | 1,3,4, 5,6 | 3,4,6, 7 | 4,6,7 | 4,6 |
| Communicate and Interact | 1,2,3, 4,5,6 | ALL 1-7 | ALL 1-7 | ALL 1-7 | 1,2,3, 4 | 1,3,4, 5,7 | 1,2,5, 6 | 1,2, 3,5, 7 | 1,3,4, 5,6 | 3,4,6, 7 | 3,4,6, 7 | 3,4,6 |
| Demonstrate Supervisory Ability (3) | 1,2,3, 4,5,6 | 1,3,4, 5,6,7 | ALL 1-7 | ALL 1-7 | NA | NA | NA | NA | NA | NA | NA | NA |
| Comply With and Use Tech. Specs. (3) | 2,3 | 1,2 | 2,3 | 2,3 | NA | NA | NA | NA | NA | NA | NA | NA |

Notes:

(1) Includes Technical Specification compliance for an RO.
(2) Optional for an SRO-U.
(3) Only applicable to SROs.

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Author: Steve Seeley

NRC Reviewer: Todd Fish

Facility: Salem Generating Station Date of Exam: 6/14/04 Exam Level: (RO) SRO

| Item Description | | | | | Initial a | b* | c# |
|---|---|---|---|---|---|---|---|
| 1. | Questions and answers technically accurate and applicable to facility | | | | | | |
| 2. | a. NRC K/As referenced for all questions<br>b. Facility learning objectives referenced as available | | | | | | |
| 3. | ~~RO/SRO overlap is no more than 75 percent, and~~ SRO questions are appropriate per Section D.2.d of ES-401 | | | | | | |
| 4. | Question selection and duplication from the last two NRC licensing exams appears consistent with a systematic sampling process | | | | | | |
| 5. | Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate:<br>X the audit exam was systematically and randomly developed; or<br>__ the audit exam was completed before the license exam was started; or<br>__ the examinations were developed independently; or<br>__ the licensee certifies that there is no duplication; or<br>__ other (explain) | | | | | | |
| 6. | Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual RO / SRO-only question distribution(s) at right | Bank | Modified | New | | | |
| | | 23/6 | 7/4 | 45/15 | | | |
| 7. | Between 50 and 60 percent of the questions on the RO exam ~~(including 10 new questions)~~ are written at the comprehension/analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right | Memory | | C/A | | | |
| | | 33/12 | | 42/13 | | | |
| 8. | References/handouts provided do not give away answers | | | | | | |
| 9. | Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the Tier to which they are assigned; deviations are justified | | | | | | |
| 10. | Question psychometric quality and format meet ES, Appendix B, guidelines | | | | | | |
| 11. | The exam contains ~~100~~; the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet | | | | | | |

| | Printed Name / Signature | Date |
|---|---|---|
| a. Author | Gerald S. Gauding / Gerald S. Gauding | 4/20/04 |
| b. Facility Reviewer (*) | Maria Kafantaris | 4/21/04 |
| c. NRC Chief Examiner (#) | TODD FISH / Todd Fish | 5/20/04 |
| d. NRC Regional Supervisor | Richard V. Crlenjak / | 5/21/04 |

Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations.
# Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required.

Facility: Salem Date of Exam: 6/14/04 Exam Level: (RO)/SRO

| Item Description | | Initials a | b | c |
|---|---|---|---|---|
| 1. | Clean answer sheets copied before grading | | | TF |
| 2. | Answer key changes and question deletions justified and documented | | | TF |
| 3. | Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations) | | | TF |
| 4. | Grading for all borderline cases (80 +/- 2% overall and 70 +/- 4% on the SRO-only) reviewed in detail | | | TF * |
| 5. | All other failing examinations checked to ensure that grades are justified | | | N/A |
| 6. | Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants | | | TF |

| | Printed Name / Signature | Date |
|---|---|---|
| a. Grader | GERALD GAULING Gerald Gauling | 6/15/04 |
| b. Facility Reviewer(*) | Marios Kafantaris | 6/18/04 |
| c. NRC Chief Examiner (*) | * F.J. LAUGHLIN Todd Fish | 6/21/04 6/24/04 |
| d. NRC Supervisor (*) | Richard V. Conte | 6/25/04 |

(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.