

| Facility: FENOC BVPS Unit 2 | | Date of Examination: 12/2002 | | |
|---------------------------------------|---|-------------------------------------|---|----|
| Item | Task Description | Initials | | |
| | | A | B | C |
| 1. W R I T T E N | (a) Verify that the outline fits the appropriate model per ES-401. | TW | Q | FA |
| | (b) Assess whether the outline was systematically and randomly prepared in accordance with section D.1 of ES-401 and whether all knowledge and ability categories are appropriately sampled. | TW | Q | FA |
| | (c) Assess whether the outline overemphasizes any systems, evolutions, or generic topics. | TW | Q | FA |
| | (d) Assess whether the justifications for deselected or rejected K/A statements are appropriate. | TW | Q | FA |
| 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. | TW | Q | FA |
| | (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 scenario. Scenarios will not be repeated over successive days. | TW | Q | FA |
| | (c) To the extent possible, assess whether the outline conforms with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D. | TW | Q | FA |
| 3. W/T | (a) Verify that: (1) the outline contains the required number of control room and in-plant tasks (2) no more than 30% of the test material is repeated from the last NRC examination (3) no tasks are duplicated from the applicant's audit test, and (4) no more than 80% of any operating test is taken directly from the licensee's exam banks | TW | Q | FA |
| | (b) Verify that: (1) the tasks are distributed among the safety function groupings as specified in ES-301 (2) one task is conducted in a low power or shutdown condition (3) 40% of the tasks require the candidate to implement an alternate path procedure (4) one in-plant task tests the applicant's response to an emergency or abnormal condition (5) the in-plant walkthrough requires the applicant to enter the RCA | TW | Q | FA |
| | (c) Verify that the required administrative topics are covered, with emphasis on performance-based activities. | TW | Q | FA |
| | (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 successive days. | TW | Q | FA |
| 4. G E N E R A L | (a) Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section. | TW | Q | FA |
| | (b) Assess whether the 10CFR55.41/43 and 55.45 sampling is appropriate. | TW | Q | FA |
| | (c) Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5. | TW | Q | FA |
| | (d) Check for duplication and overlap among exam sections. | TW | Q | FA |
| | (e) Check the entire exam for balance of coverage. | TW | Q | FA |
| | (f) Assess whether the exam fits the appropriate job level (RO or SRO). | TW | Q | FA |
| Printed Name/Signature | | Date | | |
| 1. Author | T. WOOLEY / T. WOOLEY | 10/2/02 | | |
| 2. Facility Reviewer (*) | STEVEN BIEDERBACH / OR TRN SUPV. | 10/3/02 | | |
| 3. Chief Examiner | F.J. LAUGHLIN / F. J. LAUGHLIN | 10-25-02 | | |
| 4. NRC Supervisor | Richard J. Conte / R. J. CONTE | 11/20/02 | | |

(*) Not applicable for NRC developed examinations

| Facility: FENOC BVPS-2 | | Date of Examination: 12/16/2002 | Operating Test Number: 2002-01 | | | | | | | | | | | | | | | | |
|---|---|--|---------------------------------------|------|-----------|-----------------------|---------|-------------------------|----------------------------|---------|---------------------------|---|----------------------|-------------------|------------------|---------|--|--|--|
| 1. GENERAL CRITERIA | | Initials | | | | | | | | | | | | | | | | | |
| | | a | B* | C# | | | | | | | | | | | | | | | |
| a. | The operating test conforms to the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution). | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| b. | There is no day-to-day repetition between this and other operating tests to be administered during this examination. | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| c. | The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a). | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| d. | Overlap with the written examination and between operating test categories is within acceptable limits. | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| e. | It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level. | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| 2. WALK-THROUGH (CATEGORY A & B) CRITERIA | | - | - | - | | | | | | | | | | | | | | | |
| a. | Each JPM includes the following, as applicable: <ul style="list-style-type: none"> ≡ initial conditions ≡ initiating cues ≡ references and tools, including associated procedures ≡ validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee ≡ specific performance criteria that include: <ul style="list-style-type: none"> ○ detailed expected actions with exact criteria and nomenclature ○ system response and other examiner cues ○ statements describing important observations to be made by the applicant ○ criteria for successful completion of the task ○ identification of critical steps and their associated performance standards ○ restrictions on the sequence of steps, if applicable | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| b. | The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301. | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| c. | Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and does not compromise test integrity. | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| d. | At least 20 percent of the JPMs on each test are new or significantly modified. | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| 3. SIMULATOR (CATEGORY C) CRITERIA | | - | - | - | | | | | | | | | | | | | | | |
| a. | The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached. | TW | BDS | JR/B | | | | | | | | | | | | | | | |
| <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width: 10%;"></td> <td style="text-align: center;">Printed Name / Signature</td> <td style="text-align: center;">Date</td> </tr> <tr> <td>a. Author</td> <td>T. WOOLEY / T. Wooley</td> <td>11-7-02</td> </tr> <tr> <td>b. Facility Reviewer(*)</td> <td>B. SOMMER / Barrett Sommer</td> <td>11-7-02</td> </tr> <tr> <td>c. NRC Chief Examiner (#)</td> <td>R.H. BISSETT / RHB F.J. LAUGHLIN / FJL</td> <td>11/20/02 11-29-02</td> </tr> <tr> <td>d. NRC Supervisor</td> <td>R.J. Conte / RJC</td> <td>12/2/02</td> </tr> </table> | | | Printed Name / Signature | Date | a. Author | T. WOOLEY / T. Wooley | 11-7-02 | b. Facility Reviewer(*) | B. SOMMER / Barrett Sommer | 11-7-02 | c. NRC Chief Examiner (#) | R.H. BISSETT / RHB F.J. LAUGHLIN / FJL | 11/20/02 11-29-02 | d. NRC Supervisor | R.J. Conte / RJC | 12/2/02 | | | |
| | Printed Name / Signature | Date | | | | | | | | | | | | | | | | | |
| a. Author | T. WOOLEY / T. Wooley | 11-7-02 | | | | | | | | | | | | | | | | | |
| b. Facility Reviewer(*) | B. SOMMER / Barrett Sommer | 11-7-02 | | | | | | | | | | | | | | | | | |
| c. NRC Chief Examiner (#) | R.H. BISSETT / RHB F.J. LAUGHLIN / FJL | 11/20/02 11-29-02 | | | | | | | | | | | | | | | | | |
| d. NRC Supervisor | R.J. Conte / RJC | 12/2/02 | | | | | | | | | | | | | | | | | |
| (*) The facility signature is not applicable for NRC-developed tests | | | | | | | | | | | | | | | | | | | |
| (#) Independent NRC reviewer initial items in column "C". Chief Examiner concurrence required. | | | | | | | | | | | | | | | | | | | |

Facility: **FENOC BVPS-2** Date of Exam **12/16/2002** Scenario Numbers: **1 / 2 / 3** Operating Test No.: **2002-02**

| 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. | TW | Jah | Jah | Jah | Jah | |
| 2. | The scenarios consist mostly of related events. | TW | Jah | Jah | Jah | Jah | |
| 3. | Each event description consists of ≡ the point in the scenario when it is to be initiated ≡ the malfunction(s) that are entered to initiate the event ≡ the symptoms/cues that will be visible to the crew ≡ the expected operator actions (by shift position) ≡ the event termination point (if applicable) | TW | Jah | Jah | Jah | Jah | |
| 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. | TW | Jah | Jah | Jah | Jah | |
| 5. | The events are valid with regard to physics and thermodynamics. | TW | Jah | Jah | Jah | Jah | |
| 6. | Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives. | TW | Jah | Jah | Jah | Jah | |
| 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 | N/A | NA | Jah | Jah | |
| 8. | The simulator modeling is not altered. | TW | Jah | Jah | Jah | Jah | |
| 9. | The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios. | TW | Jah | Jah | Jah | Jah | |
| 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.4 of ES-301. | TW | Jah | Jah | Jah | Jah | |
| 11. | All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios). | TW | Jah | Jah | Jah | Jah | |
| 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). | TW | Jah | Jah | Jah | Jah | |
| 13. | The level of difficulty is appropriate to support licensing decisions for each crew position. | TW | Jah | Jah | Jah | Jah | |
| TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D) | | | | Actual Attributes | | | |
| | | | | -- | -- | -- | |
| 1. | Total malfunctions (5-8) | 7 | 6 | 9 | TW | Jah | Jah |
| 2. | Malfunctions after EOP entry (1-2) | 2 | 1 | 4 | TW | Jah | Jah |
| 3. | Abnormal events (2-4) | 4 | 4 | 4 | TW | Jah | Jah |
| 4. | Major transients (1-2) | 1 | 1 | 1 | TW | Jah | Jah |
| 5. | EOPs entered/requiring substantive actions (1-2) | 2 | 2 | 3 | TW | Jah | Jah |
| 6. | EOP contingencies requiring substantive actions (0-2) | 1 | 0 | 1 | TW | Jah | Jah |
| 7. | Critical tasks (2-3) | 2 | 4 | 2 | TW | Jah | Jah |

Facility: **FENOC BVPS-2** Date of Exam **12/16/2002** Scenario Numbers: **4 / /** Operating Test No.: **2002-02**

| 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. | TW | JCH | JCH |
| 2. | The scenarios consist mostly of related events. | TW | JCH | JCH |
| 3. | Each event description consists of ≡ the point in the scenario when it is to be initiated ≡ the malfunction(s) that are entered to initiate the event ≡ the symptoms/cues that will be visible to the crew ≡ the expected operator actions (by shift position) ≡ the event termination point (if applicable) | TW | JCH | JCH |
| 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. | TW | JCH | JCH |
| 5. | The events are valid with regard to physics and thermodynamics. | TW | JCH | JCH |
| 6. | Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives. | TW | JCH | JCH |
| 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 | N/A | N/A |
| 8. | The simulator modeling is not altered. | TW | JCH | JCH |
| 9. | The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios. | TW | JCH | JCH |
| 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.4 of ES-301. | TW | JCH | JCH |
| 11. | All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios). | TW | JCH | JCH |
| 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). | TW | JCH | JCH |
| 13. | The level of difficulty is appropriate to support licensing decisions for each crew position. | TW | JCH | JCH |
| TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D) | | Actual Attributes | | |
| | | | | |
| 1. | Total malfunctions (5-8) | 6 | | |
| 2. | Malfunctions after EOP entry (1-2) | 2 | | |
| 3. | Abnormal events (2-4) | 3 | | |
| 4. | Major transients (1-2) | 1 | | |
| 5. | EOPs entered/requiring substantive actions (1-2) | 2 | | |
| 6. | EOP contingencies requiring substantive actions (0-2) | 0 | | |
| 7. | Critical tasks (2-3) | 2 | | |

OPERATING TEST NO.: RO-1

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | |
|----------------|--------------------------|----------------|-----------------|-------|---|---|
| | | | 1 | 2 | 3 | 4 |
| RO/PO | Reactivity | 1 | N/A | 1 | | |
| | Normal | 1 | 1 | N/A | | |
| | Instrument/ Component | 4 | 2,3,8 | 2,5,7 | | |
| | Major | 1 | 6 | 6 | | |
| As RO or PO | Reactivity | 1 | | | | |
| | Normal | 0 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 1 | | | | |
| SRO-I | Reactivity | 0 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 1 | | | | |
| As SRO | Reactivity | 0 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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:

T. W. [Signature]

Chief Examiner:

[Signature]

OPERATING TEST NO.: RO-2

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | |
|----------------|--------------------------|----------------|-----------------|-------|---|---|
| | | | 1 | 2 | 3 | 4 |
| RO/PO | Reactivity | 1 | N/A | 1 | | |
| | Normal | 1 | 1 | N/A | | |
| | Instrument/ Component | 4 | 2,3,8 | 2,5,7 | | |
| | Major | 1 | 6 | 6 | | |
| As RO or PO | Reactivity | 1 | | | | |
| | Normal | 0 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 1 | | | | |
| SRO-I | Reactivity | 0 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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:

T. W. Galy

Chief Examiner:

A. B. Smith

OPERATING TEST NO.: RO-3

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | |
|----------------|--------------------------|----------------|-----------------|-------|---|---|
| | | | 1 | 2 | 3 | 4 |
| RO/PO | Reactivity | 1 | N/A | 1 | | |
| | Normal | 1 | 1 | N/A | | |
| | Instrument/ Component | 4 | 2,3,8 | 2,5,7 | | |
| | Major | 1 | 6 | 6 | | |
| As RO or PO | Reactivity | 1 | | | | |
| | Normal | 0 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 1 | | | | |
| SRO-I | Reactivity | 0 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 1 | | | | |
| As SRO | Reactivity | 0 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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:

T. W. [Signature]

Chief Examiner:

[Signature]

OPERATING TEST NO.: RO-4

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | |
|----------------|--------------------------|----------------|-----------------|---|-------|---|
| | | | 1 | 2 | 3 | 4 |
| RO/PO | Reactivity | 1 | N/A | | 1 | |
| | Normal | 1 | 1 | | N/A | |
| | Instrument/ Component | 4 | 2,3,8 | | 2,4,7 | |
| | Major | 1 | 6 | | 5 | |
| As RO or PO | Reactivity | 1 | | | | |
| | Normal | 0 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 1 | | | | |
| SRO-I | Reactivity | 0 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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:

Chief Examiner:

T. W. Wally
M. H. [Signature]

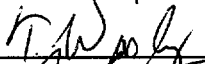

OPERATING TEST NO.: SROI-1

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | |
|----------------|--------------------------|----------------|-----------------|-------------|---|---|
| | | | 1 | 2 | 3 | 4 |
| RO/PO | Reactivity | 1 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 4 | | | | |
| | Major | 1 | | | | |
| As RO or PO | Reactivity | 1 | 1 | | | |
| | Normal | 0 | N/A | | | |
| | Instrument/ Component | 2 | 4,5,7 | | | |
| | Major | 1 | 6 | | | |
| SROI | Reactivity | 0 | | N/A | | |
| | Normal | 1 | | 1 | | |
| | Instrument/ Component | 2 | | 2,3,4, 5 | | |
| | Major | 1 | | 6 | | |
| 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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:

Chief Examiner:

OPERATING TEST NO.: SROI-2

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | |
|----------------|--------------------------|----------------|-----------------|-------------|---|---|
| | | | 1 | 2 | 3 | 4 |
| RO/PO | Reactivity | 1 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 4 | | | | |
| | Major | 1 | | | | |
| As RO or PO | Reactivity | 1 | 1 | | | |
| | Normal | 0 | N/A | | | |
| | Instrument/ Component | 2 | 4,5,7 | | | |
| | Major | 1 | 6 | | | |
| SROI | Reactivity | 0 | | N/A | | |
| | Normal | 1 | | 1 | | |
| | Instrument/ Component | 2 | | 2,3,4, 5 | | |
| | Major | 1 | | 6 | | |
| 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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:

K. W. [Signature]

Chief Examiner:

[Signature]

OPERATING TEST NO.: SROI-3

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | |
|----------------|--------------------------|----------------|-----------------|---|-------|---|
| | | | 1 | 2 | 3 | 4 |
| RO/PO | Reactivity | 1 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 4 | | | | |
| | Major | 1 | | | | |
| As RO or PO | Reactivity | 1 | | | 1 | |
| | Normal | 0 | | | N/A | |
| | Instrument/ Component | 2 | | | 2,4,7 | |
| | Major | 1 | | | 5 | |
| SRO-I | Reactivity | 0 | N/A | | | |
| | Normal | 1 | 1 | | | |
| | Instrument/ Component | 2 | 2,3,4, 5,7,8 | | | |
| | Major | 1 | 6 | | | |
| 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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: T. W. Coyle

Chief Examiner: A. J. Smith

OPERATING TEST NO.: SROI-4

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | |
|----------------|--------------------------|----------------|-----------------|-------------|---|---|
| | | | 1 | 2 | 3 | 4 |
| RO/PO | Reactivity | 1 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 4 | | | | |
| | Major | 1 | | | | |
| As RO or PO | Reactivity | 1 | 1 | | | |
| | Normal | 0 | N/A | | | |
| | Instrument/ Component | 2 | 4,5,7 | | | |
| | Major | 1 | 6 | | | |
| SRO-I | Reactivity | 0 | | N/A | | |
| | Normal | 1 | | 1 | | |
| | Instrument/ Component | 2 | | 2,3,4, 5 | | |
| | Major | 1 | | 6 | | |
| 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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: T. Wally

Chief Examiner: A. Z...

OPERATING TEST NO.: SROU-1

| Applicant Type | Evolution Type | Minimum Number | Scenario Number | | | |
|----------------|--------------------------|----------------|-----------------|---|---|---|
| | | | 1 | 2 | 3 | 4 |
| RO/PO | Reactivity | 1 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 4 | | | | |
| | Major | 1 | | | | |
| As RO or PO | Reactivity | 1 | | | | |
| | Normal | 0 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 1 | | | | |
| SRO-I | Reactivity | 0 | | | | |
| | Normal | 1 | | | | |
| | Instrument/ Component | 2 | | | | |
| | Major | 1 | | | | |
| SRO-U | Reactivity | 0 | N/A | | | |
| | Normal | 1 | 1 | | | |
| | Instrument/ Component | 2 | 2,3,4, 5,7,8 | | | |
| | Major | 1 | 6 | | | |

- 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.4.d) but must be significant per Section C.2.a of Appendix D.
 - (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: T. Walsh

Chief Examiner: [Signature]

| CREW A Competencies | SROU-1 | | | | SROI-1 | | | | RO-1 | | | |
|--|-------------|---|---|---|-----------|-----------|---|---|-----------|-----------|---|---|
| | SCENARIO | | | | SCENARIO | | | | SCENARIO | | | |
| | 1 US | 2 | 3 | 4 | 1 RO | 2 US | 3 | 4 | 1 PO | 2 RO | 3 | 4 |
| Understand and Interpret Annunciators and Alarms | 3,4,5,8 | | | | 4,5,6 | 2,3,4,5 | | | 2,3,8 | 2,5 | | |
| Diagnose Events and Conditions | 2,3,4,5,6,8 | | | | 4,5,6,7 | 2,3,4,5,6 | | | 2,3,8 | 2,5,7 | | |
| Understand Plant and System Response | 2,3,4,5,6 | | | | 4,5,6 | 2,3,4,5,6 | | | 2,3,6,8 | 2,5,6,7 | | |
| Comply With and Use Procedures (1) | 1,3,5,6,7 | | | | 1,4,5,7 | 2,3,5,6 | | | 2,3,6,8 | 2,5,6,7 | | |
| Operate Control Boards (2) | N/A | | | | 1,4,5,6,7 | N/A | | | 1,2,3,6,8 | 5,6,7 | | |
| Communicate and Interact With the Crew | ALL | | | | 1,4,5,6,7 | ALL | | | 1,2,3,6,8 | 1,2,5,6,7 | | |
| Demonstrate Supervisory Ability (3) | ALL | | | | N/A | ALL | | | N/A | N/A | | |
| Comply With and Use Tech. Specs. (3) | 3 | | | | N/A | 2 | | | N/A | N/A | | |

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:

Chief Examiner:

T. W. Donley
J. B. [Signature]

| CREW B Competencies | SROU-2 <i>B</i> | | | | SROI-2 | | | | RO-2 | | | |
|--|----------------------------|---|---|---|-----------|-----------|---|---|-----------|-----------|---|---|
| | SCENARIO | | | | SCENARIO | | | | SCENARIO | | | |
| | 1 US | 2 | 3 | 4 | 1 RO | 2 US | 3 | 4 | 1 PO | 2 RO | 3 | 4 |
| Understand and Interpret Annunciators and Alarms | 3,4,5,8 | | | | 4,5,6 | 2,3,4,5 | | | 2,3,8 | 2,5 | | |
| Diagnose Events and Conditions | 2,3,4,5,6,8 | | | | 4,5,6,7 | 2,3,4,5,6 | | | 2,3,8 | 2,5,7 | | |
| Understand Plant and System Response | 2,3,4,5,6 | | | | 4,5,6 | 2,3,4,5,6 | | | 2,3,6,8 | 2,5,6,7 | | |
| Comply With and Use Procedures (1) | 1,3,5,6,7 | | | | 1,4,5,7 | 2,3,5,6 | | | 2,3,6,8 | 2,5,6,7 | | |
| Operate Control Boards (2) | N/A | | | | 1,4,5,6,7 | N/A | | | 1,2,3,6,8 | 5,6,7 | | |
| Communicate and Interact With the Crew | ALL | | | | 1,4,5,6,7 | ALL | | | 1,2,3,6,8 | 1,2,5,6,7 | | |
| Demonstrate Supervisory Ability (3) | ALL | | | | N/A | ALL | | | N/A | N/A | | |
| Comply With and Use Tech. Specs. (3) | 3 | | | | N/A | 2 | | | N/A | N/A | | |

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:

Chief Examiner:

T. Woolly
[Signature]

| CREW C Competencies | SROI-3 | | | | SROI-4 | | | | RO-3 | | | |
|--|-------------|---|-----------|---|-----------|-----------|---|---|-----------|-----------|---|---|
| | SCENARIO | | | | SCENARIO | | | | SCENARIO | | | |
| | 1 US | 2 | 3 RO | 4 | 1 RO | 2 US | 3 | 4 | 1 PO | 2 RO | 3 | 4 |
| Understand and Interpret Annunciators and Alarms | 3,4,5,8 | | 2,4 | | 4,5,6 | 2,3,4,5 | | | 2,3,8 | 2,5 | | |
| Diagnose Events and Conditions | 2,3,4,5,6,8 | | 2,4,6 | | 4,5,6,7 | 2,3,4,5,6 | | | 2,3,8 | 2,5,7 | | |
| Understand Plant and System Response | 2,3,4,5,6 | | 2,4,6 | | 4,5,6 | 2,3,4,5,6 | | | 2,3,6,8 | 2,5,6,7 | | |
| Comply With and Use Procedures (1) | 1,3,5,6,7 | | 1,2,4,5,6 | | 1,4,5,7 | 2,3,5,6 | | | 2,3,6,8 | 2,5,6,7 | | |
| Operate Control Boards (2) | N/A | | 1,2,4,6 | | 1,4,5,6,7 | N/A | | | 1,2,3,6,8 | 5,6,7 | | |
| Communicate and Interact With the Crew | ALL | | 1,2,4,5,6 | | 1,4,5,6,7 | ALL | | | 1,2,3,6,8 | 1,2,5,6,7 | | |
| Demonstrate Supervisory Ability (3) | ALL | | N/A | | N/A | ALL | | | N/A | N/A | | |
| Comply With and Use Tech. Specs. (3) | 3 | | N/A | | N/A | 2 | | | N/A | N/A | | |

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:

Chief Examiner:

T. W. Woolley
[Signature]

| CREW D Competencies | RO 4 | | | | | | | | | | | |
|--|-----------|---|-----------|---|----------|---|---|---|----------|---|---|---|
| | SCENARIO | | | | SCENARIO | | | | SCENARIO | | | |
| | 1 PO | 2 | 3 RO | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 |
| Understand and Interpret Annunciators and Alarms | 2,3,8 | | 2,4 | | | | | | | | | |
| Diagnose Events and Conditions | 2,3,8 | | 2,4,7 | | | | | | | | | |
| Understand Plant and System Response | 2,3,6,8 | | 2,4,7 | | | | | | | | | |
| Comply With and Use Procedures (1) | 2,3,6,8 | | 1,2,4,5,7 | | | | | | | | | |
| Operate Control Boards (2) | 1,2,3,6,8 | | 1,2,4,7 | | | | | | | | | |
| Communicate and Interact With the Crew | 1,2,3,6,8 | | 1,2,4,5,7 | | | | | | | | | |
| Demonstrate Supervisory Ability (3) | N/A | | N/A | | | | | | | | | |
| Comply With and Use Tech. Specs. (3) | N/A | | N/A | | | | | | | | | |

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:

Chief Examiner:

[Handwritten Signature]

| Facility: FENOC BVPS-2 Date of Exam: 12/16/2002 Exam level: RO | | | |
|--|--|----------|----------------------|
| Item Description | Initial | | |
| | A | B* | C# |
| 1. Questions and answers technically accurate and applicable to the facility | rw | Q | SA/B |
| 2. NRC K/As referenced for all questions Facility learning objectives referenced as available | rw | Q | SA/B |
| 3. RO/SRO Overlap is no more than 75%, and SRO questions are appropriate per Section D.2.d of ES-401 | rw | Q | SA/B |
| 4. Question selection and duplication from the last 2 NRC licensing exams appears to be consistent with a systematic sampling process | rw | Q | SA/B |
| 5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies and appears appropriate): <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The audit exam was systematically and randomly developed; or <input type="checkbox"/> The audit exam was completed before the license exam was started; or <input type="checkbox"/> The examinations were developed independently; or <input type="checkbox"/> The licensee certifies that there is no duplication; or <input type="checkbox"/> Other (explain) | rw | Q | SA/B |
| 6. Bank use meets limits (no more than 75% from the bank and at least 10 new, and the rest modified); enter the actual question distribution at right | Bank | Modified | New |
| | 31 | 12 | 57 |
| 7. Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution on the right | Memory | | C/A |
| | 45 | | 55 |
| 8. References/handouts do not give away answers | rw | Q | SA/B |
| 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 | rw | Q | SA/B |
| 10. Question psychometric quality and format meet ES, Appendix B, guidelines | rw | Q | SA/B |
| 11. The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet | rw | Q | SA/B |
| Printed Name/Signature | | Date | |
| a. Author | T. WOOLEY / T. Wooley | | 11-8-02 |
| b. Facility Reviewer (*) | S. BIEDENBACH / S. Biedenbach | | 11/8/02 |
| c. Chief Examiner (#) | P.H. BISSETT / P.H. Bissett F.J. LAUGHLIN / F. Laughlin | | 11/19/02 11-18-02 |
| d. NRC Regional Supervisor | R.J. Conter / R.J. Conter | | 12/12/02 |
| Note: | * The facility reviewer's initial/signature are not applicable for NRC-developed examinations # Independent NRC reviewer initial items in column 'c', Chief Examiner concurrence required | | |

| Facility: FENOC BVPS-2 Date of Exam: 12/16/2002 Exam level: SRO | | | |
|---|---|----------|----------|
| Item Description | Initial | | |
| | A | B* | C# |
| 1. Questions and answers technically accurate and applicable to the facility | TW | Q | JPL/A |
| 2. NRC K/As referenced for all questions Facility learning objectives referenced as available | TW | Q | JPL/B |
| 3. RO/SRO Overlap is no more than 75%, and SRO questions are appropriate per Section D.2.d of ES-401 | TW | Q | JPL/B |
| 4. Question selection and duplication from the last 2 NRC licensing exams appears to be consistent with a systematic sampling process | TW | Q | JPL/A |
| 5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies and appears appropriate): <ul style="list-style-type: none"> <input checked="" type="checkbox"/> The audit exam was systematically and randomly developed; or <input type="checkbox"/> The audit exam was completed before the license exam was started; or <input type="checkbox"/> The examinations were developed independently; or <input type="checkbox"/> The licensee certifies that there is no duplication; or <input type="checkbox"/> Other (explain) | TW | Q | JPL/B |
| 6. Bank use meets limits (no more than 75% from the bank and at least 10 new, and the rest modified); enter the actual question distribution at right | Bank | Modified | New |
| | 29 | 13 | 58 |
| 7. Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution on the right | Memory | | C/A |
| | 42 | | 58 |
| 8. References/handouts do not give away answers | TW | Q | JPL/A |
| 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 | TW | Q | JPL/A |
| 10. Question psychometric quality and format meet ES, Appendix B, guidelines | TW | Q | JPL/B |
| 11. The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet | TW | Q | JPL/B |
| Printed Name/Signature | | | Date |
| a. Author | T. WOOLEY / T. Wooley | | 11-8-02 |
| b. Facility Reviewer (*) | S. B. DONAHUE / S. Donahue | | 11/8/02 |
| c. Chief Examiner (#) | J.H. BISSETT / J.H. Bissett | | 11/12/02 |
| | F.J. LAUGHLIN / F. J. Laughlin | | 11-18-02 |
| d. NRC Regional Supervisor | R.J. Conte / R. J. Conte | | 12/12/02 |
| Note: | * The facility reviewer's initial/signature are not applicable for NRC-developed examinations | | |
| | # Independent NRC reviewer initial items in column 'c', Chief Examiner concurrence required | | |

| Facility: FENOC BVPS Unit 2 | | Date of Exam: 12/13/02 | | Exam Level: RO/SRO | |
|--|-------------------------------------|-------------------------------|-----------|---------------------------|--|
| Item Description | Initials | | | | |
| | a | b | c | | |
| 1. Clean answer sheets copied before grading | TW | JW | JR | | |
| 2. Answer key changes and question deletions justified and documented | N/A | NA | NA | | |
| 3. Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations) | TW | JW | JR | | |
| 4. Grading for all borderline cases (80% +/- 2%) reviewed in detail | TW | JW N/A | N/A JR | | |
| 5. All other failing examinations checked to ensure that grades are justified | N/A | N/A | N/A JR | | |
| 6. Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants | TW | JW | JR | | |
| Printed Name / Signature | | Date | | | |
| a. Grader | T. Wooley / <i>T. Wooley</i> | 12/26/02 | | | |
| b. Facility Reviewer(*) | J. Wooley PH BISSSETT | 12-26-02 | | | |
| c. NRC Chief Examiner (*) | F.J. LAUGHLIN / <i>F. Laughlin</i> | 12-31-02 | | | |
| d. NRC Supervisor (*) | Richard J. Caste / <i>R. Caste</i> | 1/17/03 | | | |
| (*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required. | | | | | |