ES-301 **Simulator Scenario Quality Checklist** **Form ES-301-4**

Facility: CDSC Date of Exam: 6/1/21 Scenario Numbers: 1, 2, 3 Operating Test No.:

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.			
2. The scenarios consist mostly of related events.			
3. Each event description consists of the following: • the point in the scenario when it is to be initiated • the malfunction(s) or conditions 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)			
4. The events are valid with regard to physics and thermodynamics.			
5. Sequencing and timing of events is reasonable and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			
6. 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.			
7. The simulator modeling is not altered.			
8. The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.			
9. Scenarios are new or significantly modified in accordance with Section D.5 of ES-301.			
10. All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			
11. The scenario set provides the opportunity for each applicant to be evaluated in each of the applicable rating factors. (Competency rating factors as described on Forms ES-303-1 and ES-303-3.)			
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).			
13. Applicants are evaluated on a similar number of preidentified critical tasks across scenarios, when possible.			
14. The level of difficulty is appropriate to support licensing decisions for each crew position.			

Target Quantitative Attributes per Scenario (See Section D.5.d)	Actual Attributes	–	–	–
1. Malfunctions after EOP entry (1–2)	2 / 1 / 1			
2. Abnormal events (2–4)	4 / 4 / 4			
3. Major transients (1–2)	1 / 1 / 1			
4. EOPs entered/requiring substantive actions (1–2)	2 / 2 / 1			
5. Entry into a contingency EOP with substantive actions (≥ 1 per scenario set)	1 2 / 0 / 1			
6. Preidentified critical tasks (≥ 2)	3 / 2 / 4			

* The facility licensee signature is not applicable for NRC-developed tests.
# An independent NRC reviewer initials items in column "c"; chief examiner concurrence is required.

Facility: ODC Date of Exam: 6/14-21 Scenario Numbers: 4 + 5 + Operating Test No.:

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.	✓	DM	RJB
2. The scenarios consist mostly of related events.	✓	DM	RJB
3. Each event description consists of the following: • the point in the scenario when it is to be initiated • the malfunction(s) or conditions 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)	✓	DM	RJB
4. The events are valid with regard to physics and thermodynamics.	✓	DM	RJB
5. Sequencing and timing of events is reasonable and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	✓	DM	RJB
6. 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.	✓	DM	RJB
7. The simulator modeling is not altered.	✓	DM	RJB
8. The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	✓	DM	RJB
9. Scenarios are new or significantly modified in accordance with Section D.5 of ES-301.	✓	DM	RJB
10. All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	✓	DM	RJB
11. The scenario set provides the opportunity for each applicant to be evaluated in each of the applicable rating factors. (Competency rating factors as described on Forms ES-303-1 and ES-303-3.)	✓	DM	RJB
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).	✓	DM	RJB
13. Applicants are evaluated on a similar number of preidentified critical tasks across scenarios, when possible.	✓	DM	RJB
14. The level of difficulty is appropriate to support licensing decisions for each crew position.	✓	DM	RJB

Target Quantitative Attributes per Scenario (See Section D.5.d)	Actual Attributes	–	–	–
1. Malfunctions after EOP entry (1–2)	1 / 1 / –	✓	DM	RJB
2. Abnormal events (2–4)	4 / 4 / –	✓	DM	RJB
3. Major transients (1–2)	1 / 1 / –	✓	DM	RJB
4. EOPs entered/requiring substantive actions (1–2)	2 / 2 / –	✓	DM	RJB
5. Entry into a contingency EOP with substantive actions (≥ 1 per scenario set)	1 / 1 / –	✓	DM	RJB
6. Preidentified critical tasks (≥ 2)	2 / 2 / –	✓	DM	RJB

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# An independent NRC reviewer initials items in column "c"; chief examiner concurrence is required.