

US Nuclear Regulatory Commission, RII
2008 Exam Writers Work Shop
“Communicating Expectations
- Achieving Consistency



Simulator Scenario – Details

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Simulator Scenario Detail References

- Appendix “D,” Simulator Testing Guidelines
- 10 CFR 55.45, Items (2) through (13)
- ES-301, Preparing Initial Operating Tests

Simulator Scenario - Objectives

- “The basic objective of each scenario:
 - ❖ Evaluate an operators’ ability to respond.
 - ❖ Demonstrate an operator’s knowledge of integrated plant operations.
 - ❖ Ability to diagnose abnormal plant conditions, as well as, work together to mitigate plant transients.

Simulator Scenario - Details

- Events Should:
 - ❖ Contribute to an objective.
 - ❖ Contribute to Technical Specification usage.
 - ❖ Ability to respond to a safety-significant event.

Simulator Scenario - Details

- Each event listed on the ES-D-1, should have an associated ES-D-2 form page.
 - ❖ Each event on the top of the ES-D-2, should include: event description XXX-XXX fails UP/DOWN, when it should be and who identifies it to be started.

Simulator Scenario - Details

Scenario Outline

Form ES-D-1

- Facility: _____ Scenario No.: _____ Op-Test No.: _____
- Examiners: _XYZ_____ Operators: _SRO_____
- _____ABC_____ _RO_____
- _____WER_____ _BOP_____
- Initial Conditions:

- _____
- Turnover:

- _____

Event No. | Malf. No. | Event Type* | Event Description

Simulator Scenario - Details

REQUIRED Operator Actions

ES-D-2

- Op-Test No.: ____ Scenario No.: __ Event No.: _____
Page ____ of ____
- Event Description: _____
- _____
- Time | Position | Applicant's Actions or Behavior

Simulator Scenario - Details

- *Every* required operator action should be included on Form ES-D-2; this is particularly /important for the **critical tasks**.
- An applicant **should only** be given credit for those events that require the applicant to **perform verifiable actions** that provide insight to the applicant's competence.

Simulator Scenario - Details

- **Verifiable actions** – actions that an individual must physically take to prevent or mitigate an event. These include:
 - ❖ Run the Main turbine back when a failure of the automatic runback occurs. PWRs
 - ❖ Take manual control of the feed water regulating valve when a level or pressure instrument fails.
 - ❖ Run the Recirc. MG Sets back with a loss of automatic recirc runback. BWRs.

Simulator Scenario - Details

- Thumb rule for simulator scenario details Defined in Appendix “D,” – **the more information provided the better.**
- Statements such as “Performs actions in accordance with Procedure XXXXX” generally do not provide sufficient guidance and are inadequate. **DO NOT USE THIS METHOD.**

Simulator Scenario - Details

- If it is too cumbersome to type, then add additional information by adding the associated procedures pages.
- These **MUST** be on the following page in the scenario.
- Hand print the pages and reference those pages in the script of the scenario.

Simulator Scenario - Details

- Identify all Critical Tasks (CTs) and denote those with special notation. BOLD type, Asterisks, underlines.
- **Identify** the grading criteria that identifies **failure criteria** for the CT.
 - ❖ An example would be tripping the Reactor Coolant Pumps with a loss of Component Cooling water greater than 10 minutes. The grading criteria should be reference in plant or vendor reference material.

Simulator Scenario - Details

- Expected actions should be in Chronological order, and assign those actions to those individuals that we expect to get that failure.
- Use the above information to ensure each individual will get the minimum required malfunctions. On the ES-301-5 form.
- Leave enough room to allow for Examiner Note taking.

Simulator Scenario - Details

QUESTIONS??