

| Facility: <i>Quad Cities Nuclear Station</i>  |   | Date of Examination: <i>4/18/16</i> |          | Operating Test Number: <i>J2T 14-1</i> |  |
|---|---|-------------------------------------|----------|--|--|
| 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).   | <i>RPW</i>                          | <i>B</i> | <i>BP</i>                              |  |
| b.  | There is no day-to-day repetition between this and other operating tests to be administered during this examination.  | <i>RPW</i>                          | <i>B</i> | <i>BP</i>                              |  |
| c.  | The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)   | <i>RPW</i>                          | <i>B</i> | <i>BP</i>                              |  |
| d.  | Overlap with the written examination and between different parts of the operating test is within acceptable limits.   | <i>RPW</i>                          | <i>B</i> | <i>BP</i>                              |  |
| e.  | It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.   | <i>RPW</i>                          | <i>B</i> | <i>BP</i>                              |  |
| 2. Walk-Through Criteria  |   | --                                  | --       | --                                     |  |
| a.  | Each JPM includes the following, as applicable: <ul style="list-style-type: none"> <li>• initial conditions</li> <li>• initiating cues</li> <li>• references and tools, including associated procedures</li> <li>• reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee</li> <li>• operationally important specific performance criteria that include:                         <ul style="list-style-type: none"> <li>– detailed expected actions with exact criteria and nomenclature</li> <li>– system response and other examiner cues</li> <li>– statements describing important observations to be made by the applicant</li> <li>– criteria for successful completion of the task</li> <li>– identification of critical steps and their associated performance standards</li> <li>– restrictions on the sequence of steps, if applicable</li> </ul> </li> </ul> | <i>RPW</i>                          | <i>B</i> | <i>BP</i>                              |  |
| b.  | Ensure that any changes from the previously approved systems and administrative walk-through outlines (Forms ES-301-1 and 2) have not caused the test to deviate from any of the acceptance criteria (e.g., item distribution, bank use, repetition from the last 2 NRC examinations) specified on those forms and Form ES-201-2.   | <i>RPW</i>                          | <i>B</i> | <i>BP</i>                              |  |
| 3. Simulator Criteria   |   | --                                  | --       | --                                     |  |
| The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.                                      |   | <i>RPW</i>                          | <i>B</i> | <i>BP</i>                              |  |
|   | Printed Name / Signature  | Date                                |          |  |  |
| a.  | Author <i>Raymond J. Venci / Raymond J. Venci</i>   | <i>2/5/16</i>                       |          |  |  |
| b.  | Facility Reviewer(*) <i>JASON SWAIN / JAS</i>   | <i>2/5/16</i>                       |          |  |  |
| c.  | NRC Chief Examiner (#) <i>Bruce Palagi / BRUCE PALAGI</i>   | <i>4/12/16</i>                      |          |  |  |
| d.  | NRC Supervisor <i>Robert J. Orlowski / RJO</i>  | <i>4/14/2016</i>                    |          |  |  |
| NOTE: * The facility signature is not applicable for NRC-developed tests.<br># Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. |   |                                     |          |  |  |

Facility: *Quad Cities Nuclear Station* Date of Exam: *4/18/16* Scenario Numbers: *1 2 3* Operating Test No.: *ILT 14-1*

| 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.   | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 2.  | The scenarios consist mostly of related events.  | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 3.  | Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) or conditions that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul> | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 4.  | The events are valid with regard to physics and thermodynamics.  | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 5.  | Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.  | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 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.  | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 7.  | The simulator modeling is not altered.   | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 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.  | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 9.  | 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.  | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 10.   | All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).   | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 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.)  | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 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).  | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| 13.   | The level of difficulty is appropriate to support licensing decisions for each crew position.  | <i>RW</i>                | <i>AS</i> | <i>BP</i> |
| <b>Target Quantitative Attributes (Per Scenario; See Section D.5.d)</b> |  | <b>Actual Attributes</b> |           |           |
| 1.  | Malfunctions after EOP entry (1-2)   | <i>3</i>                 | <i>1</i>  | <i>1</i>  |
| 2.  | Abnormal events (2-4)  | <i>4</i>                 | <i>4</i>  | <i>4</i>  |
| 3.  | Major transients (1-2)   | <i>1</i>                 | <i>1</i>  | <i>1</i>  |
| 4.  | EOPs entered/requiring substantive actions (1-2)   | <i>2</i>                 | <i>2</i>  | <i>3</i>  |
| 5.  | EOP contingencies requiring substantive actions (0-2)  | <i>2</i>                 | <i>1</i>  | <i>1</i>  |
| 6.  | EOP based Critical tasks (2-3)   | <i>3</i>                 | <i>4</i>  | <i>2</i>  |
| NOTE:   | * The facility signature is not applicable for NRC-developed tests.<br># Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.  |                          |           |           |

| Facility: <i>Quad Cities Nuclear Station</i>                     |  | Date of Exam: <i>4/18/16</i> | Scenario Numbers: <i>41 /</i> | Operating Test No.: <i>3LT14-1</i> |
|--|--|------------------------------|-------------------------------|------------------------------------|
| 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.   | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 2.   | The scenarios consist mostly of related events.  | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 3.   | Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) or conditions that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul> | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 4.   | The events are valid with regard to physics and thermodynamics.  | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 5.   | Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.  | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 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.  | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 7.   | The simulator modeling is not altered.   | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 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.  | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 9.   | 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.  | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 10.  | All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).   | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 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.)  | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 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).  | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| 13.  | The level of difficulty is appropriate to support licensing decisions for each crew position.  | <i>AW</i>                    | <i>A</i>                      | <i>BP</i>                          |
| Target Quantitative Attributes (Per Scenario; See Section D.5.d) |  | Actual Attributes            |                               |                                    |
| 1.   | Malfunctions after EOP entry (1-2)   | <i>2</i>                     | <i>1</i>                      | <i>1</i>                           |
| 2.   | Abnormal events (2-4)  | <i>4</i>                     | <i>1</i>                      | <i>1</i>                           |
| 3.   | Major transients (1-2)   | <i>1</i>                     | <i>1</i>                      | <i>1</i>                           |
| 4.   | EOPs entered/requiring substantive actions (1-2)   | <i>2</i>                     | <i>1</i>                      | <i>1</i>                           |
| 5.   | EOP contingencies requiring substantive actions (0-2)  | <i>1</i>                     | <i>1</i>                      | <i>1</i>                           |
| 6.   | EOP based Critical tasks (2-3)   | <i>2</i>                     | <i>1</i>                      | <i>1</i>                           |
| NOTE:  | * The facility signature is not applicable for NRC-developed tests.<br># Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.  |                              |                               |                                    |