**ES-301** **Transient and Event Checklist** **Form ES-301-5**

Crew A: SRO-I: Welt, RO: Mesa, RO: Hazen

Facility: Byron Date of Exam: 9/27/2010 Operating Test No.: 2010 NRC

| APPLICANT | EVENT TYPE | Scenarios | | | | | | | | | | | | TOTAL | MINIMUM(*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 (10-1) | | | 2 (10-3) | | | 3 (10-5) | | | 4 | | | | | | |
| | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | | | | |
| | | SRO Welt | ATC Mesa | BOP Hazen | SRO Welt | ATC Hazen | BOP Mesa | SRO | ATC Welt | BOP Hazen | SRO | ATC | BOP | | R | I | U |
| RO ☐ SRO-I ☒ SRO-U ☐ | RX | **5** | | | | | | | 3 | | | | | 2 | 1 | 1 | 0 |
| | NOR | **1** | | | 1 | | | | | | | | | 2 | 1 | 1 | 1 |
| | I/C | **2-5** | | | 2-5 | | | | 2,6 | | | | | 10 | 4 | 4 | 2 |
| | MAJ | **7** | | | 7 | | | | 7 | | | | | 3 | 2 | 2 | 1 |
| | TS | **4,6** | | | 3,6 | | | | | | | | | 4 | 0 | 2 | 2 |
| RO ☒ SRO-I ☐ SRO-U ☐ | RX | | **6** | | | | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | | | | | | 1 | | | | | | | 1 | 1 | 1 | 1 |
| | I/C | | **2,4** | | | | 2,4 | | | | | | | 4 | 4 | 4 | 2 |
| | MAJ | | **7** | | | | 7 | | | | | | | 2 | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☒ SRO-I ☐ SRO-U ☐ | RX | | | | | 2 | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | | | **1** | | | | | | 1 | | | | 2 | 1 | 1 | 1 |
| | I/C | | | **3,5** | | 3,5 | | | | 4,5 | | | | 6 | 4 | 4 | 2 |
| | MAJ | | | **7** | | 7 | | | | 7 | | | | 3 | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☐ SRO-I ☐ SRO-U ☐ | RX | | | | | | | | | | | | | | 1 | 1 | 0 |
| | NOR | | | | | | | | | | | | | | 1 | 1 | 1 |
| | I/C | | | | | | | | | | | | | | 4 | 4 | 2 |
| | MAJ | | | | | | | | | | | | | | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an Instant SRO *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.

2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.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 1-for-1 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 requirements specified for the applicant's license level in the right-hand columns.

**ES-301** **Transient and Event Checklist** **Form ES-301-5**

Crew B: SRO-I: Kling, RO: Wilson, SRO-I: Beaty

Facility: Byron Date of Exam: 9/27/2010 Operating Test No.: 2010 NRC

| APPLICANT | EVENT TYPE | Scenarios | | | | | | | | | | | | TOTAL | MINIMUM(*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 (10-1) | | | 2 (10-3) | | | 3 (10-5) | | | 4 | | | | | | |
| | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | | | | |
| | | SRO Kling | ATC Wilson | BOP Beaty | SRO Kling | ATC Beaty | BOP Wilson | SRO Beaty | ATC Kling | BOP Wilson | SRO | ATC | BOP | | R | I | U |
| RO ☐ SRO-I ☒ SRO-U ☐ | RX | **5** | | | | | | | 3 | | | | | 2 | 1 | 1 | 0 |
| | NOR | **1** | | | 1 | | | | | | | | | 2 | 1 | 1 | 1 |
| | I/C | **2-5** | | | 2-5 | | | | 2,6 | | | | | 10 | 4 | 4 | 2 |
| | MAJ | **7** | | | 7 | | | | 7 | | | | | 3 | 2 | 2 | 1 |
| | TS | **4,6** | | | 3,6 | | | | | | | | | 4 | 0 | 2 | 2 |
| RO ☒ SRO-I ☐ SRO-U ☐ | RX | | **6** | | | | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | | | | | | 1 | | | 1 | | | | 2 | 1 | 1 | 1 |
| | I/C | | **2,4** | | | | 2,4 | | | 4,5 | | | | 6 | 4 | 4 | 2 |
| | MAJ | | **7** | | | | 7 | | | 7 | | | | 3 | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☐ SRO-I ☒ SRO-U ☐ | RX | | | | | 2 | | 3 | | | | | | 2 | 1 | 1 | 0 |
| | NOR | | | **1** | | | | 1 | | | | | | 2 | 1 | 1 | 1 |
| | I/C | | | **3,5** | | 3,5 | | 2,3-6 | | | | | | 9 | 4 | 4 | 2 |
| | MAJ | | | **7** | | 7 | | 7 | | | | | | 3 | 2 | 2 | 1 |
| | TS | | | | | | | 2-6 | | | | | | 5 | 0 | 2 | 2 |
| RO ☐ SRO-I ☐ SRO-U ☐ | RX | | | | | | | | | | | | | | 1 | 1 | 0 |
| | NOR | | | | | | | | | | | | | | 1 | 1 | 1 |
| | I/C | | | | | | | | | | | | | | 4 | 4 | 2 |
| | MAJ | | | | | | | | | | | | | | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an Instant SRO *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.

2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.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 1-for-1 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 requirements specified for the applicant's license level in the right-hand columns.

**ES-301** **Transient and Event Checklist** **Form ES-301-5**

Crew C: SRO-I: McGuire, RO: Finocchio, RO: Coester

| Facility: Byron | Date of Exam: 9/27/2010 | Operating Test No.: 2010 NRC |
|---|---|---|

| APPLICANT | EVENT TYPE | Scenarios | | | | | | | | | | | | TOTAL | MINIMUM(*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 (10-1) | | | 2 (10-3) | | | 3 (10-5) | | | 4 | | | | | | |
| | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | | | | |
| | | SRO McGuire | ATC Finocchio | BOP Coester | SRO McGuire | ATC Coester | BOP Finocchio | SRO | ATC McGuire | BOP Coester | SRO | ATC | BOP | | R | I | U |
| RO ☐ SRO-I ☒ SRO-U ☐ | RX | **5** | | | | | | | 3 | | | | | 2 | 1 | 1 | 0 |
| | NOR | **1** | | | 1 | | | | | | | | | 2 | 1 | 1 | 1 |
| | I/C | **2-5** | | | 2-5 | | | | 2,6 | | | | | 10 | 4 | 4 | 2 |
| | MAJ | **7** | | | 7 | | | | 7 | | | | | 3 | 2 | 2 | 1 |
| | TS | **4,6** | | | 3,6 | | | | | | | | | 4 | 0 | 2 | 2 |
| RO ☒ SRO-I ☐ SRO-U ☐ | RX | | **6** | | | | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | | | | | | 1 | | | | | | | 1 | 1 | 1 | 1 |
| | I/C | | **2,4** | | | | 2,4 | | | | | | | 4 | 4 | 4 | 2 |
| | MAJ | | **7** | | | | 7 | | | | | | | 2 | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☒ SRO-I ☐ SRO-U ☐ | RX | | | | | 2 | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | | | **1** | | | | | | 1 | | | | 2 | 1 | 1 | 1 |
| | I/C | | | **3,5** | | 3,5 | | | | 4,5 | | | | 6 | 4 | 4 | 2 |
| | MAJ | | | **7** | | 7 | | | | 7 | | | | 3 | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☐ SRO-I ☐ SRO-U ☐ | RX | | | | | | | | | | | | | | 1 | 1 | 0 |
| | NOR | | | | | | | | | | | | | | 1 | 1 | 1 |
| | I/C | | | | | | | | | | | | | | 4 | 4 | 2 |
| | MAJ | | | | | | | | | | | | | | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position. If an Instant SRO *additionally* serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.

2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.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 1-for-1 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 requirements specified for the applicant's license level in the right-hand columns.

**ES-301** **Transient and Event Checklist** **Form ES-301-5**

Crew D: SRO-U: Comerford, SRO-I: McBreen, RO: Houck

Facility: Byron Date of Exam: 9/27/2010 Operating Test No.: 2010 NRC

| APPLICANT | EVENT TYPE | Scenarios | | | | | | | | | | | | TOTAL | MINIMUM(*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 (10-2) | | | 2 (10-4) | | | 3 | | | 4 | | | | | | |
| | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | | | | |
| | | SRO Comerford | ATC McBreen | BOP Houck | SRO McBreen | ATC Houck | BOP Comerford | SRO | ATC | BOP | SRO | ATC | BOP | | R | I | U |
| RO ☐ SRO-I ☐ SRO-U ☒ | RX | **1** | | | | | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | **2** | | | | | 1 | | | | | | | 2 | 1 | 1 | 1 |
| | I/C | **3-6** | | | | | 3,5 | | | | | | | 6 | 4 | 4 | 2 |
| | MAJ | **7** | | | | | 7 | | | | | | | 2 | 2 | 2 | 1 |
| | TS | **4,5** | | | | | | | | | | | | 2 | 0 | 2 | 2 |
| RO ☐ SRO-I ☒ SRO-U ☐ | RX | | **1** | | | | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | | | | 1 | | | | | | | | | 1 | 1 | 1 | 1 |
| | I/C | | **3,5** | | 2-5 | | | | | | | | | 6 | 4 | 4 | 2 |
| | MAJ | | **7** | | 7 | | | | | | | | | 2 | 2 | 2 | 1 |
| | TS | | | | 2,**4** | | | | | | | | | 2 | 0 | 2 | 2 |
| RO ☒ SRO-I ☐ SRO-U ☐ | RX | | | | | 5 | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | | | **2** | | | | | | | | | | 1 | 1 | 1 | 1 |
| | I/C | | | **4,6** | | 2,4 | | | | | | | | 4 | 4 | 4 | 2 |
| | MAJ | | | **7** | | 7 | | | | | | | | 2 | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☐ SRO-I ☐ SRO-U ☐ | RX | | | | | | | | | | | | | | 1 | 1 | 0 |
| | NOR | | | | | | | | | | | | | | 1 | 1 | 1 |
| | I/C | | | | | | | | | | | | | | 4 | 4 | 2 |
| | MAJ | | | | | | | | | | | | | | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |

Instructions:

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**ES-301** **Transient and Event Checklist** **Form ES-301-5**

Crew E: SRO-I: Berger, RO: Moser

| Facility: Byron | | Date of Exam: 9/27/2010 | | | | | | | | | | | | Operating Test No.: 2010 NRC | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| APPLICANT | EVENT TYPE | Scenarios | | | | | | | | | | | | TOTAL | MINIMUM(*) | | |
| | | 1 (10-2) | | | 2 (10-4) | | | 3 | | | 4 | | | | | | |
| | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | | | | |
| | | SRO Berger | ATC Moser | BOP | SRO | ATC Berger | BOP Moser | SRO | ATC | BOP | SRO | ATC | BOP | | R | I | U |
| RO ☐ SRO-I ☒ SRO-U ☐ | RX | **1** | | | | 5 | | | | | | | | 2 | 1 | 1 | 0 |
| | NOR | **2** | | | | | | | | | | | | 1 | 1 | 1 | 1 |
| | I/C | **3-6** | | | | 2,4 | | | | | | | | 6 | 4 | 4 | 2 |
| | MAJ | **7** | | | | 7 | | | | | | | | 2 | 2 | 2 | 1 |
| | TS | **4,5** | | | | | | | | | | | | 2 | 0 | 2 | 2 |
| RO ☒ SRO-I ☐ SRO-U ☐ | RX | | **1** | | | | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | | | | | | 1 | | | | | | | 1 | 1 | 1 | 1 |
| | I/C | | **3,5** | | | | 3,5 | | | | | | | 4 | 4 | 4 | 2 |
| | MAJ | | **7** | | | | 7 | | | | | | | 2 | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☐ SRO-I ☐ SRO-U ☐ | RX | | | | | | | | | | | | | | 1 | 1 | 0 |
| | NOR | | | | | | | | | | | | | | 1 | 1 | 1 |
| | I/C | | | | | | | | | | | | | | 4 | 4 | 2 |
| | MAJ | | | | | | | | | | | | | | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☐ SRO-I ☐ SRO-U ☐ | RX | | | | | | | | | | | | | | 1 | 1 | 0 |
| | NOR | | | | | | | | | | | | | | 1 | 1 | 1 |
| | I/C | | | | | | | | | | | | | | 4 | 4 | 2 |
| | MAJ | | | | | | | | | | | | | | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |

Instructions:

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**ES-301** **Transient and Event Checklist** **Form ES-301-5**

Crew F: SRO-I: Sanford, RO: Moreno

Facility: Byron Date of Exam: 9/27/2010 Operating Test No.: 2010 NRC

| APPLICANT | EVENT TYPE | Scenarios | | | | | | | | | | | | TOTAL | MINIMUM(*) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 (10-2) | | | 2 (10-4) | | | 3 | | | 4 | | | | | | |
| | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | CREW POSITION | | | | | | |
| | | SRO Sanford | ATC Moreno | BOP | SRO | ATC Sanford | BOP Moreno | SRO | ATC | BOP | SRO | ATC | BOP | | R | I | U |
| RO ☐ SRO-I ☒ SRO-U ☐ | RX | **1** | | | | 5 | | | | | | | | 2 | 1 | 1 | 0 |
| | NOR | **2** | | | | | | | | | | | | 1 | 1 | 1 | 1 |
| | I/C | **3-6** | | | | 2,4 | | | | | | | | 6 | 4 | 4 | 2 |
| | MAJ | **7** | | | | 7 | | | | | | | | 2 | 2 | 2 | 1 |
| | TS | **4,5** | | | | | | | | | | | | 2 | 0 | 2 | 2 |
| RO ☒ SRO-I ☐ SRO-U ☐ | RX | | **1** | | | | | | | | | | | 1 | 1 | 1 | 0 |
| | NOR | | | | | | 1 | | | | | | | 1 | 1 | 1 | 1 |
| | I/C | | **3,5** | | | | 3,5 | | | | | | | 4 | 4 | 4 | 2 |
| | MAJ | | **7** | | | | 7 | | | | | | | 2 | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☐ SRO-I ☐ SRO-U ☐ | RX | | | | | | | | | | | | | | 1 | 1 | 0 |
| | NOR | | | | | | | | | | | | | | 1 | 1 | 1 |
| | I/C | | | | | | | | | | | | | | 4 | 4 | 2 |
| | MAJ | | | | | | | | | | | | | | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |
| RO ☐ SRO-I ☐ SRO-U ☐ | RX | | | | | | | | | | | | | | 1 | 1 | 0 |
| | NOR | | | | | | | | | | | | | | 1 | 1 | 1 |
| | I/C | | | | | | | | | | | | | | 4 | 4 | 2 |
| | MAJ | | | | | | | | | | | | | | 2 | 2 | 1 |
| | TS | | | | | | | | | | | | | | 0 | 2 | 2 |

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