

Facility: <u>Byron</u>		Date of Examination: <u>01/23/2012</u>
Exam Level: RO <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>		Operating Test Number: <u>301</u>
Control Room Systems <sup>@</sup> (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a. Moveable Control Assemblies Quarterly surveillance KA 014A4.02                      Imp: 3.4	D,S	1
b. Fill SI accumulator KA 006A1.13                      Imp: 3.5	N, A, S	2
c. Swap to Hot Leg Recirc KA 011EA1.11                      Imp: 4.2	N, A, L, S	3
d. Respond to 1A SX Pump Trip (standby pump doesn't start) KA 076A2.01                      Imp: 3.5	D, A, S	4s
e. Start CS pump KA 026A4.01                      Imp: 4.5	D, A, L, EN, S	5
f. Unload D/G that's paralleled to SAT KA 064A4.06                      Imp: 3.1	D, S	6
g. Align ventilation KA 072A3.01                      Imp: 2.9	D, A, L, S	8
h. Establish RH letdown flow KA 005G2.1.23                      Imp: 4.3	D, L, S	4p
In-Plant Systems <sup>@</sup> (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. Local initiation of FP KA 086A2.04                      Imp: 3.3	A, D,	8
j. Local emergency start of the _B AFW pump KA061G2.1.30                      Imp: 4.4	D, R, E	4s
k. Start-up Inst. inverter KA 057AA1.01                      Imp: 3.7	D	6
<p><sup>@</sup> All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.</p>		
* Type Codes	Criteria for RO / SRO-I / SRO-U	

(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	$\leq 9$ / $\leq 8$ / $\leq 4$
(E)mergency or abnormal in-plant	$\geq 1$ / $\geq 1$ / $\geq 1$
(EN)gineered safety feature	- / - / $\geq 1$ (control room system)
(L)ow-Power / Shutdown	$\geq 1$ / $\geq 1$ / $\geq 1$
(N)ew or (M)odified from bank including 1(A)	$\geq 2$ / $\geq 2$ / $\geq 1$
(P)revious 2 exams	$\leq 3$ / $\leq 3$ / $\leq 2$ (randomly selected)
(R)CA	$\geq 1$ / $\geq 1$ / $\geq 1$
(S)imulator	



(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	$\leq 9$ / $\leq 8$ / $\leq 4$
(E)mergency or abnormal in-plant	$\geq 1$ / $\geq 1$ / $\geq 1$
(EN)gineered safety feature	- / - / $\geq 1$ (control room system)
(L)ow-Power / Shutdown	$\geq 1$ / $\geq 1$ / $\geq 1$
(N)ew or (M)odified from bank including 1(A)	$\geq 2$ / $\geq 2$ / $\geq 1$
(P)revious 2 exams	$\leq 3$ / $\leq 3$ / $\leq 2$ (randomly selected)
(R)CA	$\geq 1$ / $\geq 1$ / $\geq 1$
(S)imulator	

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

Facility: Byron Date of Exam: 01/23/2012 Operating Test Number: 301

A P P L I C A N T	E V E N T  T Y P E	Scenarios												T O T A L	M I N I M U M (*)			
		1			2			3			4							
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N							
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P					
													R	I	U			
RO <input type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>	RX	4a				4			1							3	1	1
	NOR	4a				n/a			1						2	1	1	1
	I/C	2-6				1,6			2-5						11	4	4	2
	MAJ	7				7			7						3	2	2	1
	TS	1,2,5				n/a			2,6						5	0	2	2
RO <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>	RX			n/a					1						1	1	1	0
	NOR			4a					n/a						1	1	1	1
	I/C			3,4,6					2,4						8	4	4	2
	MAJ			7					7						3	2	2	1
	TS			n/a					n/a						0	0	2	2
RO <input type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>	RX		4a			4							n/a		2	1	1	0
	NOR		n/a			1							1		2	1	1	1
	I/C		2,5			1-6							3,5		10	4	4	2
	MAJ		7			7							7		3	2	2	1
	TS		n/a			1,2							n/a		2	0	2	2
RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>	RX															1	1	0
	NOR															1	1	1
	I/C															4	4	2
	MAJ															2	2	1
	TS															0	2	2

Instructions:

- 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.
- 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.
- 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.