

ES-201-2 Attachment 1

One event, a CCW Pump trip, is included on both the Audit Exam and the NRC Exam. This overlap was discussed with the NRC Lead Examiner, Michael Bielby, and determined to not compromise the Exam Quality.

Facility: <u>Clinton</u>		Date of Examination: <u>8/24/09</u>
Examination Level: RO <input checked="" type="checkbox"/> SRO <input type="checkbox"/>		Operating Test Number: <u>08-01</u>
Administrative Topic (See Note)	Type Code*	Describe activity to be performed
Conduct of Operations	S,D	Mode Change - Going to RUN 2.1.23 / 4.3
Conduct of Operations	S,D	Complete a CPS 3006.01C007, Control Rod Withdrawal Checklist – Mode 3 2.1.37 / 4.3
Equipment Control	S,N	Print Reading 2.2.41 / 3.5
Radiation Control		
Emergency Procedures/Plan	S,D	Prepare an ENW Form 2.4.43 / 3.2
<p>NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.</p>		
<p>* Type Codes & Criteria:</p> <p>(C)ontrol room, (S)imulator, or Class(R)oom</p> <p>(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes)</p> <p>(N)ew or (M)odified from bank (≥ 1)</p> <p>(P)revious 2 exams (≤ 1; randomly selected)</p>		

Facility: <u>Clinton</u>		Date of Examination: <u>08/24/09</u>
Examination Level: RO <input type="checkbox"/> SRO <input checked="" type="checkbox"/>		Operating Test Number: <u>08-01</u>
Administrative Topic (See Note)	Type Code*	Describe activity to be performed
Conduct of Operations	R, N	Exceeding Overtime Limits 2.1.5 / 3.9
Conduct of Operations	R, D, P	Verify Conditions are met to enter Mode 2 2.1.23 / 4.4
Equipment Control	R, D	Review Rod Position Surveillance 901101.0101 2.2.12 / 4.1
Radiation Control	R, D	Redirect Worker in a High Radiation Area 2.3.12 / 3.7
Emergency Procedures/Plan	R, D	Determine PARS 2.4.44 / 4.4
<p>NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 5 are required.</p>		
<p>* Type Codes & Criteria:</p> <ul style="list-style-type: none"> (C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1; randomly selected) 		

Facility: <u>Clinton</u>		Date of Examination: <u>08/24/09</u>
Exam Level: RO <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>		Operating Test Number: <u>08-01</u>
Control Room Systems [@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a. Reset a RR FCV Lockup 202002 A4.08 3.3	D,S	1
b. Shutdown HPCS 3309010501 209002 A2.01 3.8	A,D,EN,S	2
c. Blowdown due to high Drywell Temperature 441109SSA01 218000 A4.01 4.4	A,D,EN,L,S	3
d. RCIC Restart with initiation signal present 33100108LSN01 217000 A2.01 3.8	D,EN,L,S	4
e. Place RHR in Containment Spray JPM207 226001 A4.03 3.5	A,D,EN,L,S	5
f. Crosstie 480V Busses O & P with O Supplying 262001 A4.04 3.6	N,S	6
g. Determine Shutdown Criteria Using Alternate Means (OD-7) 214000 A4.02 3.8	A,L,N,S	7
h. Startup CCP, auto fails must start manually 288000 A4.01 3.1	A,D,P,S	9
In-Plant Systems [@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. Manually Valve in ADS Backup Air Bottles During a Station Blackout JPM223 295003 AA1.03 4.4	D,E,L,R	6
j. Vent Cnmt to Fuel Pool JPM022 295024 EA1.18 3.6	D,E,L,R	5
k. Lineup WT for Vacuum Pump operation during an ATWS 295002 AK1.03 3.6	D,E,L,R	3
<p>[@] 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	≤ 9 / ≤ 8 / ≤ 4	
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1	
(EN)gineered safety feature	- / - / ≥ 1 (control room system)	
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1	
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1	
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)	
(R)CA	≥ 1 / ≥ 1 / ≥ 1	
(S)imulator		

Facility: <u>Clinton</u>	Date of Examination: <u>08/24/09</u>
Exam Level: RO <input type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>	Operating Test Number: <u>08-01</u>

Control Room Systems [@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a. Reset a RR FCV Lockup 202002 A4.08 3.3	D,S	1
b. Shutdown HPCS 3309010501 209002 A2.01 3.8	A,D,EN,S	2
c. Blowdown due to high Drywell Temperature 441109SSA01 218000 A4.01 4.4	A,D,EN,L,S	3
d. RCIC Restart with initiation signal present 33100108LSN01 217000 A2.01 3.7	D,EN,L,S	4
e. Place RHR in Containment Spray JPM207 226001 A4.03 3.4	A,D,EN,L,S	5
f. Crosstie 480V Busses O & P with O Supplying 262001 A4.04 3.7	N,S	6
g. Determine Shutdown Criteria Using Alternate Means (OD-7) 214000 A4.02 3.8	A,L,N,S	7
h.		

In-Plant Systems [@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. Manually Valve in ADS Backup Air Bottles During a Station Blackout JPM223 295003 AA1.03 4.4	D,E,L,R	6
j. Vent Cnmt to Fuel Pool JPM022 295024 EA1.18 3.6	D,E,L,R	5
k. Lineup WT for Vacuum Pump operation during an ATWS 295002 AK1.03 3.8	D,E,L,R	3

[@] 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.

* 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	≤ 9 / ≤ 8 / ≤ 4
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1
(EN)gineered safety feature	- / - / ≥ 1 (control room system)
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

Facility: <u>Clinton</u>		Date of Examination: <u>08/24/09</u>
Exam Level: RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input checked="" type="checkbox"/>		Operating Test Number: <u>08-01</u>
Control Room Systems [@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a.		
b. Shutdown HPCS 3309010501 209002 A2.01 3.8	A,D,EN,S	2
c.		
d.		
e.		
f. Crosstie 480V Busses O & P with O Supplying 262001 A4.04 3.7	N,S	6
g. Determine Shutdown Criteria Using Alternate Means (OD-7) 214000 A4.02 3.8	A,L,N,S	7
h.		
In-Plant Systems [@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. Manually Valve in ADS Backup Air Bottles During a Station Blackout JPM223 295003 AA1.03 4.4	D,E,L,R	6
j. Vent Cnmt to Fuel Pool JPM022 295024 EA1.18 3.6	D,E,L,R	5
k.		
<p>[@] 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	≤ 9 / ≤ 8 / ≤ 4	
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1	
(EN)gineered safety feature	- / - / ≥ 1 (control room system)	
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1	
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1	
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)	
(R)CA	≥ 1 / ≥ 1 / ≥ 1	
(S)imulator		

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

Facility: Clinton Date of Exam: 08/24/2009 Operating Test Number: 08-01

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								
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION								
		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"/>	RX	2				2							1			3	1	1	0
SRO-I <input checked="" type="checkbox"/>	NOR	1											5			2	1	1	1
SRO-U <input type="checkbox"/>	I/C	3,4,6,7				3,6							2,3,4,6			10	4	4	2
	MAJ	8,9,10,11				8,9,10							7,8			9	2	2	1
	TS	1,5											3,4			4	0	2	2
RO <input type="checkbox"/>	RX		2		2											2	1	1	0
SRO-I <input checked="" type="checkbox"/>	NOR				1									5		2	1	1	1
SRO-U <input type="checkbox"/>	I/C		3,4		3,4,5,6,7								4,6			9	4	4	2
	MAJ		8,9,10,11		8,9,10								7,8			9	2	2	1
	TS				3,4											2	0	2	2
RO <input checked="" type="checkbox"/>	RX												1			1	1	1	0
SRO-I <input type="checkbox"/>	NOR			1			1									2	1	1	1
SRO-U <input type="checkbox"/>	I/C			6,7			4,5,7						2,3			7	4	4	2
	MAJ			8,9,10,11			8,9,10						7,8			9	2	2	1
	TS															0	0	2	2
RO <input type="checkbox"/>	RX												1			1	1	1	0
SRO-I <input type="checkbox"/>	NOR												5			1	1	1	1
SRO-U <input checked="" type="checkbox"/>	I/C												2,3,4,6			4	4	4	2
	MAJ												7,8			2	2	2	1
	TS												3,4			2	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

Facility: Clinton Date of Exam: 08/24/2009 Operating Test Number: 08-01

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	2				2			3					3	1	1	0
	NOR	1							1					2	1	1	1
	I/C	3,4,6,7				3,6			2,4,5,7					10	4	4	2
	MAJ	8,9,10,11				8,9,10			8,9,10					10	2	2	1
	TS	1,5							2,6					4	0	2	2
RO <input type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>	RX		2			2								2	1	1	0
	NOR					1					1			2	1	1	1
	I/C		3,4			3,4,5,6,7					5,7			9	4	4	2
	MAJ		8,9,10,11			8,9,10					8,9,10			10	2	2	1
	TS					3,4								2	0	2	2
RO <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>	RX								3					1	1	1	0
	NOR			1				1						2	1	1	1
	I/C			6,7				4,5,7		2,4				7	4	4	2
	MAJ			8,9,10,11				8,9,10		8,9,10				10	2	2	1
	TS													0	0	2	2
RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input checked="" type="checkbox"/>	RX												1	1	1	1	0
	NOR												5	1	1	1	1
	I/C												2,3,4,6	4	4	4	2
	MAJ												7,8	2	2	2	1
	TS												3,4	2	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.
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ES-301 Transient and Event Checklist Form ES-301-5

Facility: Clinton Date of Exam: 08/24/2009 Operating Test Number: 08-01

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	RX				2						3				1	1	0	
<input type="checkbox"/>	NOR				1						1				2	1	1	
<input checked="" type="checkbox"/>	I/C				3,4,5,6,7						2,4,5,7				11	4	4	
<input checked="" type="checkbox"/>	MAJ				8,9,10						8,9,10				8	2	2	
<input type="checkbox"/>	TS				3,4						2,6				4	0	2	
RO	RX									3					1	1	0	
<input checked="" type="checkbox"/>	NOR													5	1	1		
<input type="checkbox"/>	I/C									2,4				4,6	4	4		
<input checked="" type="checkbox"/>	MAJ									8,9,10				7,8	5	2		
<input type="checkbox"/>	TS													0	0	2		
RO	RX				2										1	1		
<input checked="" type="checkbox"/>	NOR										1				1	1		
<input type="checkbox"/>	I/C					3,6					5,7				4	4		
<input checked="" type="checkbox"/>	MAJ					8,9,10					8,9,10				6	2		
<input type="checkbox"/>	TS														0	0		
RO	RX														1	1		
<input type="checkbox"/>	NOR														1	1		
<input type="checkbox"/>	I/C														4	4		
<input checked="" type="checkbox"/>	MAJ														2	2		
<input type="checkbox"/>	TS														0	2		

Instructions:

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

Facility: Clinton		Date of Exam: 08/24/2009										Operating Test Number: 08-01						
A P P L I C A N T	E V E N T T Y P E	Scenarios																
		1			2			3			4			T O T A L	M I N I M U M(*)			
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION							
		SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP	R	I	U		
RO <input type="checkbox"/> SRO-I <input checked="" type="checkbox"/> SRO-U <input type="checkbox"/>	RX	2					3				3				3	1	1	0
	NOR	1					1								2	1	1	1
	I/C	3,4,6,7					2,4,5,7					2,4			10	4	4	2
	MAJ	8,9,10,11					8,9,10					8,9,10			10	2	2	1
	TS	1,5					2,6								4	0	2	2
RO <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>	RX		2												1	1	1	0
	NOR												1		1	1	1	1
	I/C		3,4										5,7		4	4	4	2
	MAJ		8,9,10,11										8,9,10		7	2	2	1
	TS														0	0	2	2
RO <input checked="" type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input type="checkbox"/>	RX						3								1	1	1	0
	NOR			1											1	1	1	1
	I/C			6,7				2,4							4	4	4	2
	MAJ			8,9,10,11				8,9,10							7	2	2	1
	TS														0	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.
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- 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.

Facility Name:		Date of Exam:																
Tier	Group	RO K/A Category Points											SRO-Only Points					
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2	G*	Total		
1. Emergency & Abnormal Plant Evolutions	1	4	3	3	N/A			3	4	N/A			3	20	3	4	7	
	2	1	1	1	N/A			1	2	N/A			1	7	1	2	3	
	Tier Totals	5	4	4	N/A			4	6	N/A			4	27	4	6	10	
2. Plant Systems	1	2	3	2	3	2	3	2	2	3	2	2	26	3	2	5		
	2	1	1	1	1	1	1	2	1	1	1	1	12	0	2	3		
	Tier Totals	3	4	3	4	3	4	4	3	4	3	3	38	5	3	8		
3. Generic Knowledge and Abilities Categories					1	2	3	4					10	1	2	3	4	7
					3	2	3	2						2	2	1	2	

Note: 1. Ensure that at least two topics from every applicable K/A category are sampled within each tier of the RO and SRO-only outlines (i.e., except for one category in Tier 3 of the SRO-only outline, the "Tier Totals" in each K/A category shall not be less than two).

2. The point total for each group and tier in the proposed outline must match that specified in the table. The final point total for each group and tier may deviate by ±1 from that specified in the table based on NRC revisions. The final RO exam must total 75 points and the SRO-only exam must total 25 points.

3. Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems that are not included on the outline should be added. Refer to Section D.1.b of ES-401 for guidance regarding the elimination of inappropriate K/A statements.

4. Select topics from as many systems and evolutions as possible; sample every system or evolution in the group before selecting a second topic for any system or evolution.

5. Absent a plant-specific priority, only those K/As having an importance rating (IR) of 2.5 or higher shall be selected. Use the RO and SRO ratings for the RO and SRO-only portions, respectively.

6. Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.

7.* The generic (G) K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system. Refer to Section D.1.b of ES-401 for the applicable K/As.

8. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IRs) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above; if fuel handling equipment is sampled in other than Category A2 or G* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note #1 does not apply). Use duplicate pages for RO and SRO-only exams.

9. For Tier 3, select topics from Section 2 of the K/A catalog, and enter the K/A numbers, descriptions, IRs, and point totals (#) on Form ES-401-3. Limit SRO selections to K/As that are linked to 10 CFR 55.43.

ES-401		BWR Examination Outline						Form ES-401-1		
Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO)										
Q#	E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
	295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4				0 2			RPS	3.3	1
	295003 Partial or Complete Loss of AC / 6	0 5						Failsafe component design	2.6	1
	295004 Partial or Total Loss of DC Pwr / 6					0 3		Battery voltage	2.8	1
	295005 Main Turbine Generator Trip / 3					0 8		Electrical distribution status	3.2	1
	295006 SCRAM / 1						01. 20	Ability to interpret and execute procedure steps.	4.6	1
	295016 Control Room Abandonment / 7				0 8			Reactor pressure	4	1
	295018 Partial or Total Loss of CCW / 8		0 1					System loads	3.3	1
	295019 Partial or Total Loss of Inst. Air / 8		1 0					Fuel pool cooling	2.8	1
	295021 Loss of Shutdown Cooling / 4					0 3		Reactor water level	3.5	1
	295023 Refueling Acc / 8			0 1				Refueling floor evacuation	3.6	1
	295024 High Drywell Pressure / 5						04. 50	Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.	4.2	1
	295025 High Reactor Pressure / 3			0 1				Safety/relief valve opening	4.2	1
	295026 Suppression Pool High Water Temp. / 5			0 1				Emergency/normal depressurization	3.8	1
	295027 High Containment Temperature / 5	0 2						Reactor water level measurement: Mark-III	3	1
	295028 High Drywell Temperature / 5						02. 38	Knowledge of conditions and limitations in the facility license.	3.6	1
	295030 Low Suppression Pool Wtr Lvl / 5	0 3						Heat capacity	3.8	1
	295031 Reactor Low Water Level / 2					0 1		Reactor water level	4.6	1
	295037 SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1	0 5						Cold shutdown boron weight: Plant-Specific	3.4	1
	295038 High Off-site Release Rate / 9				0 6			Plant ventilation	3.5	1
	600000 Plant Fire On Site / 8									0
	700000 Generator Voltage and Electric Grid Disturbances / 6		0 1					Motors	3.1	1
K/A Category Totals:		4	3	3	3	4	3	Group Point Total:		20

ES-401	BWR Examination Outline							Form ES-401-1		
Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO)										
Q#	E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
	295002 Loss of Main Condenser Vac / 3				0 8			Recirculating flow control system	2.6	1
	295007 High Reactor Pressure / 3					0 1		Reactor pressure	4.1	1
	295008 High Reactor Water Level / 2									0
	295009 Low Reactor Water Level / 2									0
	295010 High Drywell Pressure / 5					0 3		Drywell radiation levels	3.3	1
	295011 High Containment Temp / 5						01. 27	Knowledge of system purpose and/or function.	3.9	1
	295012 High Drywell Temperature / 5									0
	295013 High Suppression Pool Temp. / 5									0
	295014 Inadvertent Reactivity Addition / 1									0
	295015 Incomplete SCRAM / 1			0 1				Bypassing rod insertion blocks	3.4	1
	295017 High Off-site Release Rate / 9									0
	295020 Inadvertent Cont. Isolation / 5 & 7									0
	295022 Loss of CRD Pumps / 1		0 1					Recirculation system: Plant-Specific	2.8	1
	295029 High Suppression Pool Wtr Lvl / 5									0
	295032 High Secondary Containment Area Temperature / 5									0
	295033 High Secondary Containment Area Radiation Levels / 9									0
	295034 Secondary Containment Ventilation High Radiation / 9	0 2						Radiation releases	4.1	1
	295035 Secondary Containment High Differential Pressure / 5									0
	295036 Secondary Containment High Sump/Area Water Level / 5									0
	500000 High CTMT Hydrogen Conc. / 5									0
K/A Category Totals:		1	1	1	1	2	1	Group Point Total:		7

ES-401		BWR Examination Outline											Form ES-401-1		
Plant Systems - Tier 2/Group 1 (RO)															
Q#	System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
	203000 RHR/LPCI: Injection Mode	08											A.C. electrical power	3.5	1
	205000 Shutdown Cooling								03				A.C. failure	3.2	1
	206000 HPCI														0
	207000 Isolation (Emergency) Condenser														0
	209001 LPCS		02										Valve power	2.5	1
	209002 HPCS			03									Adequate core cooling: BWR-5, 6	3.9	1
	211000 SLC		01		04								SBLC pumps ; Indication of fault in explosive valve firing circuits	2.9; 3.8	2
	212000 RPS						05		06				RPS sensor inputs ; High reactor power	3.5; 4.1	2
	215003 IRM					01							Detector operation	2.6	1
	215004 Source Range Monitor		01				04						SRM channels/detectors ; Detectors	2.6; 2.9	2
	215005 APRM / LPRM				01								Rod withdrawal blocks	3.7	1
	217000 RCIC									01			Valve operation	3.5	1
	218000 ADS									02			ADS valve tail pipe temperatures	3.6	1
	223002 PCIS/Nuclear Steam Supply Shutoff						01						A.C. electrical distribution	3.1	1
	239002 SRVs							06					Reactor power	3.7	1
	259002 Reactor Water Level Control					01							GEMAC/Foxboro/Bailey controller operation: Plant-Specific	3.1	1
	261000 SGTS										01		Off-site release levels: Plant-Specific	3.2	1
	262001 AC Electrical Distribution				06							01. 20	Redundant power sources to vital buses; Ability to interpret and execute procedure steps.	3.6; 4.6	2
	262002 UPS (AC/DC)			03									RFPT speed: Plant-Specific	3	1
	263000 DC Electrical Distribution									03		04. 11	Battery discharge rate: Plant-Specific; Knowledge of abnormal condition procedures.	2.7; 4	2
	264000 EDGs						03						Operating voltages, currents, and temperatures	2.8	1
	300000 Instrument Air									02			Air temperature	2.9	1
	400000 Component Cooling Water	01											Service water system	3.2	1
															0
K/A Category Totals:		2	3	2	3	2	3	2	2	3	2	2	Group Point Total:	26	

ES-401		BWR Examination Outline											Form ES-401-1		
Plant Systems - Tier 2/Group 2 (RO)															
Q#	System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
	201001 CRD Hydraulic							0					CRD system flow	2.9	1
	201002 RMCS							3							0
	201003 Control Rod and Drive Mechanism														0
	201004 RSCS														0
	201005 RCIS										0		Back panel indicating lights: BWR-6	3.4	1
	201006 RWM										3				0
	202001 Recirculation														0
	202002 Recirculation Flow Control														0
	204000 RWCU														0
	214000 RPIS														0
	215001 Traversing In-core Probe														0
	215002 RBM														0
	216000 Nuclear Boiler Inst.											01.	Ability to identify and interpret diverse indications to validate the response of another indicator.	4.3	1
	219000 RHR/LPCI: Torus/Pool Cooling Mode			0									Pump minimum flow protection	3	1
	223001 Primary CTMT and Aux.				0								Pressure measurement	2.7	1
	226001 RHR/LPCI: CTMT Spray Mode	0											Pumps	2.9	1
	230000 RHR/LPCI: Torus/Pool Spray Mode														0
	233000 Fuel Pool Cooling/Cleanup														0
	234000 Fuel Handling Equipment														0
	239001 Main and Reheat Steam	1											Extraction steam system	2.7	1
	239003 MSIV Leakage Control	0													0
	241000 Reactor/Turbine Pressure Regulator														0
	245000 Main Turbine Gen. / Aux.														0
	256000 Reactor Condensate								0				Valve openings	2.8	1
	259001 Reactor Feedwater						0						Reactor water level control system	3.8	1
	268000 Radwaste														0
	271000 Offgas														0
	272000 Radiation Monitoring			1									Control room ventilation: Plant-Specific	2.9	1
	286000 Fire Protection							0					System pressure	2.9	1
	288000 Plant Ventilation							1							0
	290001 Secondary CTMT														0
	290003 Control Room HVAC									0			Initiation/reconfiguration	3.3	1
	290002 Reactor Vessel Internals									1					0
K/A Category Totals:		1	1	1	1	1	1	2	1	1	1	1	Group Point Total:		12

ES-401		BWR Examination Outline						Form ES-401-1		
Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (SRO)										
Q#	E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
	295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4									0
	295003 Partial or Complete Loss of AC / 6						02.42	Ability to recognize system parameters that are entry-level conditions for Technical Specifications.	4.6	1
	295004 Partial or Total Loss of DC Pwr / 6									0
	295005 Main Turbine Generator Trip / 3					05		Reactor power	3.9	1
	295006 SCRAM / 1									0
	295016 Control Room Abandonment / 7						04.41	Knowledge of the emergency action level thresholds and classifications.	4.6	1
	295018 Partial or Total Loss of CCW / 8									0
	295019 Partial or Total Loss of Inst. Air / 8						04.21	Knowledge of the parameters and logic used to assess the status of safety functions, such as reactivity control, core cooling and heat removal, reactor coolant system integrity, containment conditions, radioactivity release.	4.6	1
	295021 Loss of Shutdown Cooling / 4						01.20	Ability to interpret and execute procedure steps.	4.6	1
	295023 Refueling Acc / 8									0
	295024 High Drywell Pressure / 5									0
	295025 High Reactor Pressure / 3									0
	295026 Suppression Pool High Water Temp. / 5					03		Reactor pressure	4	1
	295027 High Containment Temperature / 5					01		Containment temperature: Mark-III	3.7	1
	295028 High Drywell Temperature / 5									0
	295030 Low Suppression Pool Wtr Lvl / 5									0
	295031 Reactor Low Water Level / 2									0
	295037 SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1									0
	295038 High Off-site Release Rate / 9									0
	600000 Plant Fire On Site / 8									0
	700000 Generator Voltage and Electric Grid Disturbances / 6									0
K/A Category Totals:		0	0	0	0	3	4	Group Point Total:		7

ES-401		BWR Examination Outline						Form ES-401-1		
Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (SRO)										
Q#	E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
	295002 Loss of Main Condenser Vac / 3									0
	295007 High Reactor Pressure / 3									0
	295008 High Reactor Water Level / 2						04. 50	Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.	4	1
	295009 Low Reactor Water Level / 2						04. 41	Knowledge of the emergency action level thresholds and classifications.	4.6	1
	295010 High Drywell Pressure / 5									0
	295011 High Containment Temp / 5									0
	295012 High Drywell Temperature / 5									0
	295013 High Suppression Pool Temp. / 5									0
	295014 Inadvertent Reactivity Addition / 1					0 2		Reactor period	3.9	1
	295015 Incomplete SCRAM / 1									0
	295017 High Off-site Release Rate / 9									0
	295020 Inadvertent Cont. Isolation / 5 & 7									0
	295022 Loss of CRD Pumps / 1									0
	295029 High Suppression Pool Wtr Lvl / 5									0
	295032 High Secondary Containment Area Temperature / 5									0
	295033 High Secondary Containment Area Radiation Levels / 9									0
	295034 Secondary Containment Ventilation High Radiation / 9									0
	295035 Secondary Containment High Differential Pressure / 5									0
	295036 Secondary Containment High Sump/Area Water Level / 5									0
	500000 High CTMT Hydrogen Conc. / 5									0
K/A Category Totals:		0	0	0	0	1	2	Group Point Total:		3

ES-401		BWR Examination Outline											Form ES-401-1		
Plant Systems - Tier 2/Group 1 (SRO)															
Q#	System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
	203000 RHR/LPCI: Injection								1 6				Loss of coolant accident	4.5	1
	205000 Shutdown Cooling Mode														0
	206000 HPCI														0
	207000 Isolation (Emergency) Condenser														0
	209001 LPCS											02. 37	Ability to determine operability and/or availability of safety related equipment.	4.6	1
	209002 HPCS								0 5				D.C. electrical failure: BWR-5, 6	2.9	1
	211000 SLC														0
	212000 RPS														0
	215003 IRM														0
	215004 Source Range Monitor														0
	215005 APRM / LPRM														0
	217000 RCIC														0
	218000 ADS											04. 06	Knowledge of EOP mitigation strategies.	4.7	1
	223002 PCIS/Nuclear Steam Supply Shutoff														0
	239002 SRVs								0 1				Stuck open vacuum breakers	3.3	1
	259002 Reactor Water Level Control														0
	261000 SGTS														0
	262001 AC Electrical Distribution														0
	262002 UPS (AC/DC)														0
	263000 DC Electrical Distribution														0
	264000 EDGs														0
	300000 Instrument Air														0
	400000 Component Cooling Water														0
															0
K/A Category Totals:		0	0	0	0	0	0	0	3	0	0	2	Group Point Total:		5

ES-401		BWR Examination Outline										Form ES-401-1			
Plant Systems - Tier 2/Group 2 (SRO)															
Q#	System # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	IR	#
	201001 CRD Hydraulic														0
	201002 RMCS														0
	201003 Control Rod and Drive Mechanism														0
	201004 RSCS														0
	201005 RCIS														0
	201006 RWM														0
	202001 Recirculation														0
	202002 Recirculation Flow Control														0
	204000 RWCU												04. Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.	4	1
	214000 RPIS														0
	215001 Traversing In-core Probe														0
	215002 RBM														0
	216000 Nuclear Boiler Inst.														0
	219000 RHR/LPCI: Torus/Pool Cooling Mode														0
	223001 Primary CTMT and Aux.														0
	226001 RHR/LPCI: CTMT Spray Mode														0
	230000 RHR/LPCI: Torus/Pool Spray Mode														0
	233000 Fuel Pool Cooling/Cleanup														0
	234000 Fuel Handling Equipment														0
	239001 Main and Reheat Steam														0
	239003 MSIV Leakage Control														0
	241000 Reactor/Turbine Pressure Regulator														0
	245000 Main Turbine Gen. / Aux.								0 2				Loss of lube oil	3.5	1
	256000 Reactor Condensate														0
	259001 Reactor Feedwater														0
	268000 Radwaste														0
	271000 Offgas														0
	272000 Radiation Monitoring														0
	286000 Fire Protection														0
	288000 Plant Ventilation								0 2				Low reactor water level: Plant-Specific	3.6	1
	290001 Secondary CTMT														0
	290003 Control Room HVAC														0
	290002 Reactor Vessel Internals														0
K/A Category Totals:		0	0	0	0	0	0	0	2	0	0	1	Group Point Total:		3

Facility Name:		Date of Exam:					
Q#	Category	K/A #	Topic	RO		SRO-Only	
				IR	#	IR	#
	1. Conduct of Operations	2.1. 05	Ability to use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc.	2.9	1		
		2.1. 30	Ability to locate and operate components, including local controls.	4.4	1		
		2.1. 34	Knowledge of primary and secondary plant chemistry limits.	2.7	1		
		2.1.					
		2.1. 36	Knowledge of procedures and limitations involved in core alterations.			4.1	1
		2.1. 45	Ability to identify and interpret diverse indications to validate the response of another indicator.			4.3	1
		Subtotal				3	
	2. Equipment Control	2.2. 38	Knowledge of conditions and limitations in the facility license.	3.6	1		
		2.2. 43	Knowledge of the process used to track inoperable alarms.	3	1		
		2.2.					
		2.2. 20	Knowledge of the process for managing troubleshooting activities.			3.8	1
		2.2. 35	Ability to determine Technical Specification Mode of Operation.			4.5	1
		2.2.					
	Subtotal				2		2
	3. Radiation Control	2.3. 12	Knowledge of radiological safety principles pertaining to licensed operator duties, such as containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc.	3.2	1		
		2.3. 14	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities.	3.4	1		
		2.3. 15	Knowledge of radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc.	2.9	1		
		2.3.					
		2.3. 04	Knowledge of radiation exposure limits under normal or emergency conditions.			3.7	1
		2.3.					
	Subtotal				3		1
	4. Emergency Procedures / Plan	2.4. 18	Knowledge of the specific bases for EOPs.	3.3	1		
		2.4. 37	Knowledge of the lines of authority during implementation of the emergency plan.	3	1		
		2.4.					
		2.4. 16	Knowledge of EOP implementation hierarchy and coordination with other support procedures or guidelines such as, operating procedures, abnormal operating procedures, and severe accident management guidelines.			4.4	1
		2.4. 41	Knowledge of the emergency action level thresholds and classifications.			4.6	1
		2.4.					
	Subtotal				2		2
Tier 3 Point Total					10		7

Facility: <u>Clinton Power Station</u>		Scenario No.: <u>One</u>		Operating Test No.: <u>08-01</u>	
Examiners: _____			Operators: _____		
_____			_____		
_____			_____		
Initial Conditions:					
65% power, Drywell pressure is high. Thunderstorm storms are expected in the area within the next hour.					
Turnover:					
1. Run 'B' mixer to reduce DW pressure – First Priority					
2. Power needs lowered to 50% power to remove the 'A' RFPT from service for a scheduled outage due to problems.					
Event No.	Malf. No.	Event Type*	Event Description		
1	HVAC_SP ARE_L3 1	N-BOP TS-CRS	Reduce DW pressure, 'B' mixer trips, entry into ITS.		
2	NA	R-ATC	Power reduction to support removal of 'A' TDRFP		
3	Override	C-ATC	'A' TDRFP trouble alarm		
4	Override	C-ATC	'B' RWCU pump seal plate temperature high		
5	YP_XMFT B_4912 1	TS-CRS	'A' APRM fails downscale.		
6	YFFWPPS S_13 1	C-BOP	'B' MC pump coupling fails		
7	YPXMALS E_1	C-BOP	Fuel failure		
8	YP_XMFT B_4068, 69, 70, 71	M-ALL	Debris in the Condenser causes all CD pumps to trip		
9	RR03	M-ALL	A small RR leak occurs in the Drywell		
10	YFRIPPSS	M-ALL	The RCIC shaft breaks		
11	YP_XMFT B_4103	M-ALL	HPCS Injects and then trips		

*(N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Scenario No.: OneOperating Test No.: 08-01**Narrative Summary****Event #****Description**

1. Drywell pressure is high requiring the BOP to run 'B' mixing compressor to reduce Drywell pressure. Operational Requirement Manual action 3.5.2 for the test Prep switch entered. The mixing compressor trips and the CRS enters ITS 3.6.3.3.
2. Power is reduced with recirculation flow to allow removal of the RFPT.
3. 'A' TDRFP experiences a trouble alarm on a thrust bearing wear condition requiring tripping of the 'A' TDRFP. This will require verification that the running 'B' TDRFP is adequately maintaining level. A RR FCV runback will require entry to CPS 4008.01, Abnormal Coolant Flow and CPS 4100.02 Core Stability Control to verify no core instabilities along with entry into CPS 4002.01, Abnormal RPV Level/Loss of Feedwater At Power
4. RWCU pump B develops a seal leak requiring its removal from service.
5. 'A' APRM fails down scale entry into ITS 3.3.1.1 and OPRM ITS 3.3.1.3.
6. 'B' MC pump coupling fails results in the loss of makeup condensate. This requires the startup of the standby pump.
7. Fuel clad failure will require entry to the CPS 4010.01. Subsequent activities will require the BOP to shut valves RE021&22, RF021&22, along with other activities.
- 8, 9, 10 & 11. Debris breaks loose in the condenser causing a loss of suction and trip of all CD pumps. A small RR loop leak occurs and the RCIC shaft breaks and HPCS injects and then trips. A Blowdown is performed at TAF and level is recovered with Low Pressure ECCS.

EOPS

1,3,6

Critical tasks:

- Emergency Depressurize when less than TAF.
- Recover level to above TAF.

Facility: <u>Clinton Power Station</u>	Scenario No.: <u>Two</u>	Operating Test No.: <u>08-01</u>	
Examiners: _____ _____	Operators: _____ _____		
Initial Conditions:			
27% power RR Pumps on LFMG, Pulling rods to 30% power for Recirculation pump upshift. Thunderstorms are expected in the area within the next hour.			
Turnover:			
1. Shift Main EHC pump to support maintenance – First Priority.			
2. Pull rods to raise power to 30% and await instructions to shift Reactor Recirc pumps to Fast Speed.			
	Malf. No.	Event Type*	Event Description
1	NA	N-BOP	Main EHC pump swap.
2	NA	R-ATC	Pull rods to raise power.
3	4025I_Acti on3ROD40 25I_ACTIO N3 I	C-ATC TS-CRS	Rod drifts outward.
4	HP01HP_1 E22C003_ MTFSHEA R 1	C-BOP TS-CRS	HPCS WLP Shaft shears.
5	YAFWPPL B_5 30.000	C-ATC	“A” CB pump clogged oil filter/bearing oil deficiency.
6	YP_XMFT B_3918 1	C-BOP	Trip of ‘B’ CCW pump.
7	YAMSAVF P_15 0.0	I-BOP	SSE level control failure.
8	YP_XMFT B_5082 1	M-ALL	RPV Instrument line failure in the secondary containment.
9	YP_XMFT B_4963 1	M-ALL	Auto and Manual scram failure.
10	YP_XMFT B_5107_1	M-ALL	One SLC Pump fails to start

*(N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Scenario No.: Two
Narrative Summary

Operating Test No.: 08-01

Event #	Description
1.	Swap the running Main EHC pumps, the 'A' Main EHC pump will be started and the 'B' Main EHC pump shutdown.
2.	Allow rod withdrawal to raise power.
3.	During rod withdrawal a rod continues to move outward, Off-Normal CPS 4007.02 requires operator action to stop its outward movement. Once the rod is scrammed the rod will no longer withdraw. LCO 3.1.3 action C.1&2 is entered.
4.	HPCS WLP shaft shear. Stop the WLP, pull C/P fuses and CRS enters ITS 3.5.1 B.1 and B.2.
5.	"A" CB pump will experience a Clogged oil filter with a bearing oil deficiency requiring the startup of the standby pump and shutdown of the "A" pump.
6.	Trip of 'B' CCW pump. Start up 'A' CCW pump.
7.	SSE level control fails causing level to go low requiring the manual level control to restore level on the SSE.
8.	The RPV instrument line will break resulting in a partial lost of RPV instrumentation, a steam leak in the secondary containment and EOP-8 entry. Two areas in secondary containment will exceed Maximum Safe temperature requiring blowdown.
9.	When scrammed, rods will not move resulting in reactor remaining at power and entry to EOP-1A. This will require insertion of rods and the initiation of SLC to shutdown the reactor.
10.	When SLC is started the B SLC pump fails to start.

EOPS
8,1A,3

Critical tasks:

- Insert control rods and/or start SLC to shutdown the reactor
- Terminate and Prevent Injection prior to emergency depressurization
- Initiate emergency depressurization once two Max Safe temperatures are exceeded.
- Commence RPV feed to Restore level to the prescribed band when RPV pressure is below figure J.

Facility: <u>Clinton Power Station</u>		Scenario No.: <u>Three</u>		Operating Test No.: <u>08-01</u>	
Examiners: _____			Operators: _____		
_____			_____		
_____			_____		
Initial Conditions:					
Subcritical ~600 psig, Steam seals and Auxiliary Steam is provided by the electrode boiler, hot restart.					
Thunderstorm storms are expected in the area within the next hour.					
Turnover:					
1. Test the Generator Emergency Seal Oil Pump per 3109.01 section 8.1.2.3 – First Priority.					
2. Pull Rods to criticality.					
Event No.	Malf. No.	Event Type*	Event Description		
1	NA	N-BOP	Test the Generator Emergency Seal Oil Pump		
2	Rod 3209I_ACTIONA -Rod uncoupled	C-ATC TS-CRS	Continue with startup, discovers Uncoupled rod		
3	NA	R-ATC	Pull rods for criticality		
4	SRM_BI_ACTIO N2 and 1	I-ATC	B SRM fails		
5	IO's	I-BOP	Vacuum Pump Trip		
6	SRM_CI_ACTIO N2 and 1	TS-CRS	A SRM fails		
7	Override	C-BOP	RCIC drain trap level high		
8	YARITPLA_1 Override	M-ALL	RCIC unisolable steam leak		
9	YP_XMFTB_500 2	M-ALL	Reactor scrams on initiation of RPT/ARI		
10	CAM1PR006AT V_VALUE1 CAM1PR006CT V_VALUE1 CAM1PR006DT V_VALUE1 CAM1PR006BT V_VALUE1 VGCEFUSE_V 677503CC VGBZFUSE_V 421691CC	M-ALL	Radiation monitor fails to initiate an isolation		

*(N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Scenario No.: Three
Narrative Summary

Operating Test No.: 08-01

Event #	Description
1.	Test the Generator Emergency Seal Oil Pump per 3109.01 section 8.1.2.3.
2.	Rod 32-09 is uncoupled and goes to overtravel. This will require action to recouple and entry into Technical Specification 3.1.3.
3.	Withdrawal rods for criticality.
4.	'B' SRM fails causing a rod block requiring bypassing to proceed with startup. Requiring a review of Technical Specification 3.3.1.4 action A.1 and ORM 2.2.2 Action 3.2.2.a
5.	The A Mechanical Vacuum Pump trips requiring starting the B Pump.
6.	'A' SRM fails causing a rod block and requiring entry into Technical Specification 3.3.1.4 action A.1 and ORM 2.2.2 Action 3.2.2.a
7.	The RCIC drain trap level high will require manually opening the drain trap bypass valve to drain the steam pot.
8.	The RCIC steam supply line develops a leak causing the RCIC room temperature to rise resulting in an EOP-8 entry. A scram is required prior exceeding the Maximum safe temperature.
9.	The mode switch and manual scram pushbutton will not cause a scram requiring entry into EOP-1A. Manual initiation of ARI/RPT will insert the rods for a scram. EOP-1A will be exited and EOP-1 will be entered.
10.	The VF exhaust radiation monitor trends up to the trip isolation but fails to actuate VF isolation and start of VG requiring BOP to manually perform.

EOP
8,1A,1

Critical tasks:

- Manual insertion of ARI prior to exceeding Maximum safe temperature
- Manually shutdown and isolate VF and startup VG

Facility: <u>Clinton Power Station</u>	Scenario No.: <u>Four</u>	Operating Test No.: <u>08-01</u>	
Examiners: _____ _____	Operators: _____ _____		
Initial Conditions: 96% power, steady state. MDRFP is CO for coupling replacement.			
Turnover:			
<ul style="list-style-type: none"> • VC running for 9070.01, Control Room Hvac Air Filter Package Operability Test Run. • Reduce power with Flow to 90% per dispatch request first thing on shift. • Perform 9012.01, Scram Discharge Volume Vent and Drain Valve Operability Test 			
Event No.	Malf. No.	Event Type*	Event Description
1	None	R-ATC	Reduce power with flow
2	IO	C-ATC	A RR FCV Drifts shut
3	IO	C-ATC TS-CRS	Perform SDV Vent and Drain Valve test one valve fails
4	VC01VC_VC0 6YA_MTVFA ILSP	C-BOP TS-CRS	VC Makeup Train A Outlet DMPR fails shut during surveillance run.
5	None	N-BOP	Shift to the B VC train.
6	F041LTVFAI LSP	C-BOP	SRV 41L Fails open, closes on first attempt to close
7	YPXMAISE_ 527	M-ALL	Small break LOCA requiring an Emergency Depressurization.
8	YP_XMFTB_ 4106	M-ALL	LPCS Pump fails to start on High Drywell Pressure

*(N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Scenario No.: Four**Operating Test No.: 08-01****Narrative Summary****Event #****Description**

1. After shift turnover the Control Room staff will receive a phone call to reduce power for grid stability concerns.
2. The A Flow control valve will continue to drift shut slowly requiring the ATC to manually lock out the RR FCV. This may require the ATC to match flows after the transient.
3. When the plant is stabilized the ATC will perform the SDV vent and drain valve test and one of the valves will indicate intermediate requiring TS entry
- 4,5 The ongoing VC train surveillance will have a damper failure causing TS entry and start of the opposite VC train
6. SRV 41L will inadvertently open this valve is NON-ADS and NON-LLS requiring the BOP to take it to off and will not be available for the B/D.
7. Small break LOCA will get the crew into EOP-1 and EOP-6 the Reactor will require a blow down on Figure N PSP.
8. Manually start LPCS

EOP

1,3,6

Critical tasks:

- Starting Containment Sprays
- Blow Down when Figure N is exceeded.