

**EXAMINATION OUTLINE SUBMITTAL FOR THE
QUAD CITIES NUCLEAR POWER STATION INITIAL EXAMINATION
JUNE 2007**

Facility: <u>QUAD CITIES Nuclear Plant U1/U2</u>		Date of Examination: <u>JUNE 2007</u>		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	<u>N/A</u>	<u>N/A</u>	<u>BP</u>
2. S I M U L A T O R	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity, and ensure that each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s), and that scenarios will not be repeated on subsequent days.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	<u>PLM</u>		<u>BP</u>
3. W / T	a. Verify that the systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks distributed among the safety functions as specified on the form (2) task repetition from the last two NRC examinations is within the limits specified on the form (3) no tasks are duplicated from the applicants' audit test(s) (4) the number of new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: (1) the tasks are distributed among the topics as specified on the form (2) at least one task is new or significantly modified (3) no more than one task is repeated from the last two NRC licensing examinations	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	c. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	d. Check for duplication and overlap among exam sections.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	e. Check the entire exam for balance of coverage.	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	<u>PLM</u>	<u>N/A</u>	<u>BP</u>
a. Author	<u>CARL MOORE</u> / <u>Carl Moore</u>	Date: <u>4/11/07</u>		
b. Facility Reviewer (*)	<u>N/A</u>	Date: <u>N/A</u>		
c. NRC Chief Examiner (#)	<u>R Keith Walton / R Keith Walton</u>	Date: <u>4/13/07</u>		
d. NRC Supervisor	<u>Armon Peterson / Armon Peterson</u>	Date: <u>4/13/07</u>		
Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.				

(Note: Outline developed in Feb 07 - outline checklist was not filed earlier)
 AD 4/13/07

Facility: Quad Cities Units 1 & 2
 Examination Level (circle one): **RO**

Date of Examination: June 2007
 Operating Test Number: 2007-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations K/A 2.1.19	P	Review Printout of Thermal Limits
Conduct of Operations K/A 2.1.31	N	Electrical Distribution Surveillance
Equipment Control K/A 2.2.13	M	Determine Isolation Points for a Clearance Order for the Safe Shutdown Makeup Pump
Radiation Control K/A 2.3.2	M	Select Personnel for radiation work for surveillance testing
Emergency Plan		N/A

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

* Type Codes & Criteria:
 (C)ontrol room
 (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)
 (S)imulator

Facility: <u>Quad Cities Units 1 & 2</u> Examination Level (circle one): SRO	Date of Examination: <u>June 2007</u> Operating Test Number: <u>2007-301</u>
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Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations K/A 2.1.33	M	Electrical Distribution Surveillance Test
Conduct of Operations K/A 2.1.1	M	Authorization of Overtime
Equipment Control K/A 2.2.13	M	Determine Isolation Points for a Clearance Order for the Safe Shutdown Makeup Pump
Radiation Control K/A 2.3.2	M	Select Personnel for radiation work for surveillance testing
Emergency Plan K/A 2.4.46 & K/A 2.4.4	N, S	EAL Determination for OPRM/RPS Trip Failure during Power Oscillation Event & Complete NARS form.

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

* Type Codes & Criteria:

- (C)ontrol room
- (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)
- (S)imulator

Facility: <u>Quad Cities Units 1 & 2</u>		Date of Examination: <u>June 2007</u>
Exam Level (circle one): RO		Operating Test No.: <u>2007-301</u>
Control Room Systems [@] (8 for RO; 7 for SRO-I)		
System / JPM Title	Type Code*	Safety Function
a. Perform the MSIV Closure Timing Test	S, M	5
b. Roll The Turbine	S, N, L	3
c. Perform the SGBT Monthly Operability Test with Heater Failure	S, D, A, E, P	9
d. Start RCIC (Failure of Auto Start) and Control Reactor Water Level	S, N, A, P	4
e. Bypass the Rod Worth Minimizer	S, D	7
f. Shutdown the U-1 Diesel Generator with Early Trip	S, D, A, E	6
g. Change-Over Reactor Feed Pumps with Failure of Auxiliary Oil Pump to Trip	S, D, A	2
h. Transfer Recirculation Flow Control from Manual to Master	S, N, A	1
In-Plant Systems [@] (3 for RO; 3 for SRO-I)		
i. Locally Start-up the HPCI System to Control RPV Level	N, E	2
j. Transfer Power from Reserve Power to MG Set	N	7
k. Place RBCCW Heat Exchanger in Service	N, R	8
<p>@ All control room (and in-plant) systems must be different and 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	
(L)ow-Power	≥ 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>Quad Cities Units 1 & 2</u>		Date of Examination: <u>June 2007</u>
Exam Level (circle one): SRO		Operating Test No.: <u>2007-301</u>
Control Room Systems [@] (8 for RO; 7 for SRO-I)		
System / JPM Title	Type Code*	Safety Function
a. Perform the MSIV Closure Timing Test	S, M	5
b. Roll The Turbine	S, N, L	4
c. Perform the SGBT Monthly Operability Test with Heater Failure	S, D, A, E, P	9
d. Quarterly Testing - Turbine Stop Valve Testing	S, N	3
e. Bypass MSIV Group I Isolation Signal	S, D	7
f. Shutdown the U-1 Diesel Generator with Early Trip	S, D, A, E	6
g. Change-Over Reactor Feed Pumps with Failure of Auxiliary Oil Pump to Trip	S, D, A	2
h. Transfer Recirculation Flow Control from Manual to Master	S, N, A	1
In-Plant Systems [@] (3 for RO; 3 for SRO-I)		
i. Perform 10-Minute Operator Actions per QCARP 0050-01	N, E	2
j. Transfer Power from Reserve Power to MG Set	N	7
k. Place RBCCW Heat Exchanger in Service	N, R	8
<p>@ All control room (and in-plant) systems must be different and 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	
(L)ow-Power	≥ 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		

Need to delete one of the above Simulator JPM's for SRO!!

Facility:		Date of Exam:											June 11, 2007				
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	2	3	5	N/A			4	3	N/A			3	20	3	4	7
	2	1	1	2	N/A			1	1	N/A			1	7	2	1	3
	Tier Totals	3	4	7	N/A			5	4	N/A			4	27	5	5	10
2. Plant Systems	1	2	2	2	2	2	2	3	3	3	3	2	26	3	2	5	
	2	1	1	1	2	1	1	1	1	1	1	1	12	1	2	3	
	Tier Totals	3	3	3	4	3	3	4	4	4	4	3	38	4	4	8	
3. Generic Knowledge and Abilities Categories				1	2	3	4	10	1	2	3	4	7				
				3	3	2	2		2	1	2	2					

Note:

- 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).
- 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.
- 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 ES-401, Attachment 2, for guidance regarding the elimination of inappropriate K/A statements.
- 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.
- 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.
- Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.
- * 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.
- 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. Use duplicate pages for RO and SRO-only exams.
- 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 Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO / SRO)						Form ES-401-1		
E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	IR	#
295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4		01				2.4.4 (SRO)	AK2.01 Recirculation System 2.4.4 (SRO) Recognizing abnormal indications as entry-level conditions for EOPs and AOPs	3.6 4.3	1 76
295003 Partial or Complete Loss of AC / 6				02	01 (SRO)		AA1.02 Emergency Generators AA2.01 (SRO) Cause of partial or complete loss of AC power	4.2 3.7	2 77
295004 Partial or Total Loss of DC Pwr / 6			02				DC Electrical Ground Isolation	2.9	3
295005 Main Turbine Generator Trip / 3					08	2.1.20 (SRO)	AA2.08 Electrical Distribution Status 2.1.20 (SRO) Ability to execute procedural steps	3.2 3.0	4 78
295006 SCRAM / 1						2.4.1	Knowledge of EOP entry conditions and immediate action steps.	4.6	5
295016 Control Room Abandonment / 7		03					AK2.03 Control Room HVAC	2.9	6
295018 Partial or Total Loss of CCW / 8	01				04 (SRO)		Effects on component/system operations AA2.04 Cooling Water System Flow	3.5 2.9	7 79
295019 Partial or Total Loss of Inst. Air / 8			01				AK3.01 Backup air supply	3.3	8
295021 Loss of Shutdown Cooling / 4				05			Reactor Recirculation	3.0	9
295023 Refueling Acc / 8					04	2.4.30 (SRO)	Occurrence of fuel handling accident 2.4.30, Knowledge of which plant conditions need to be reported	3.4 3.6	10 80
295024 High Drywell Pressure / 5						2.1.7	Evaluate plant performance and make operational judgements based on operating characteristics	3.7	11
295025 High Reactor Pressure / 3	02						Reactor vessel integrity	4.1	12
295026 Suppression Pool High Water Temp. / 5			05		02 (SRO)		EK3.05 Reactor Scram EA2.02 (SRO) Suppression pool level	3.9 4.1	13 81
295027 High Containment Temperature / 5									
295028 High Drywell Temperature / 5		04	03			2.4.41 (SRO)	EK2.04 Drywell ventilation EK3.02 RPV Flooding 2.4.41 (SRO) Knowledge of the emergency action level thresholds and classifications	3.6 3.5 4.1	14 15 82
295030 Low Suppression Pool Wtr Lvl / 5			02				HPCI operation	3.5	16
295031 Reactor Low Water Level / 2				05			Reactor Core Isolation Cooling	4.3	17

295037 SCRAM Condition Present and Power Above APRM Downscale or Unknown / 1					07		Containment conditions/isolations	4.0	18
295038 High Off-site Release Rate / 9						23.11	Ability to control radiation releases	2.7	19
600000 Plant Fire On Site / 8				05			Plant ventilation	3.0	20
K/A Category Totals:	2	3	5	4	3 3 (SRO)	3 4 (SRO)	Group Point Total:		20/7

ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO / SRO)						Form ES-401-1	
E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	IR	#
295002 Loss of Main Condenser Vac / 3			04				Main steam bypass valve closure	3.4	21
295007 High Reactor Pressure / 3				02	01 (SRO)		AA1.02 HPCI AA2.01 (SRO) Reactor pressure	3.5 4.1	22 83
295008 High Reactor Water Level / 2					05		Swell	2.9	23
295009 Low Reactor Water Level / 2			01			2.1.31	AK3.01 Recirculation pump run back 2.1.31 Ability to determine that controls and indications correctly reflect plant lineup.	3.2 4.2	24 25
295010 High Drywell Pressure / 5									
295011 High Containment Temp / 5									
295012 High Drywell Temperature / 5									
295013 High Suppression Pool Temp. / 5									
295014 Inadvertent Reactivity Addition / 1					04 (SRO)		Violation of Thermal Limits	4.4	84
295015 Incomplete SCRAM / 1									
295017 High Off-site Release Rate / 9									
295020 Inadvertent Cont. Isolation / 5 & 7									
295022 Loss of CRD Pumps / 1									
295029 High Suppression Pool Wtr Lvl / 5									
295032 High Secondary Containment Area Temperature / 5						2.4.7 (SRO)	Knowledge of event-based EOP mitigation strategies	3.8	85
295033 High Secondary Containment Area Radiation Levels / 9									
295034 Secondary Containment Ventilation High Radiation / 9									
295035 Secondary Containment High Differential Pressure / 5									
295036 Secondary Containment High Sump/Area Water Level / 5	01						Radiation releases	2.9	26
500000 High CTMT Hydrogen Conc. / 5		08					Wet Well vent system	3.2	27

K/A Category Point Totals:	1	1	2	1	1 2 (SRO)	1 1 (SRO)	Group Point Total:	7/3

ES-401	BWR Examination Outline Plant Systems - Tier 2/Group 1 (RO / SRO)											Form ES-401-1		
System # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	IR	#
203000 RHR/LPCI: Injection Mode							09	03				A1.09 Component Cooling Water systems A2.03 Emergency generator failure	2.9 3.2	28 29
205000 Shutdown Cooling								02	03			A2.02 Low shutdown cooling suction pressure A3.03 Lights and alarms	2.6 3.5	30 31
206000 HPCI									04	10	2.1.32 (SRO)	A3.04 Reactor pressure A4.10 System Pumps 2.4.2 (SRO) Apply system limits and precautions	4.2 3.7 3.8	32 33 86
207000 Isolation (Emergency) Condenser														
209001 LPCS										03		Injection valves	3.7	34
Safe Shutdown Makeup Pump											2.4.25	Knowledge of fire protection procedures	2.9	35
211000 SLC	02							05 (SRO)				K1.02 Core plate differential pressure indication A2.05 (SRO) Loss of SBLC tank heaters	2.7 3.4	36 87
212000 RPS		01						12 (SRO)				K2.02 Power supply to RPS MG sets A2.12 (SRO) Main turbine stop control valve closure	3.2 4.1	37 88
215003 IRM			04									Reactor power indication	3.6	38
215004 Source Range Monitor				05								Alarm seal-in	2.5	39
215005 APRM / LPRM					05							Core flow effects on APRM trip setpoints	3.6	40
217000 RCIC							01					Electrical power	3.4	41
218000 ADS							01					ADS valve tail pipe temperatures	3.4	42
223002 PCIS/Nuclear Steam Supply Shutoff								04				Radiation monitor failure	2.9	43
239002 SRVs								02 (SRO)	01			A2.02 (SRO) Leaky SRV A3.01 SRV operation after ADS actuation	3.2 3.8	89 44
259002 Reactor Water Level Control										04		FWRV Lockup reset	3.7	45
261000 SGTS											2.1.27	Knowledge of system purpose and or function	2.8	46

262001 AC Electrical Distribution	03											2.1.12 (SRO)	K1.03 Offsite Power Sources 2.1.24 (SRO) Ability to apply Technical Specifications for a system	3.4 4.0	47 90	
262002 UPS (AC/DC)			01										Water level control	3.1	48	
263000 DC Electrical Distribution		01					01						K2.01 Major DC loads A1.01 Battery Charging	3.1 2.5	49 53	
264000 EDGs				07									Local operation and control	3.3	50	
300000 Instrument Air					13								Filters	2.9	51	
400000 Component Cooling Water							01						Valves	2.7	52	
K/A Category Point Totals:	2	2	2	2	2	2	3	3	3 (SRO)	3	3	2	2 (SRO)	Group Point Total:		26/ 5

258000 Reactor Condensate																
259001 Reactor Feedwater																
268000 Radwaste																
271000 Offgas																
272000 Radiation Monitoring																
286000 Fire Protection																
288000 Plant Ventilation																
290001 Secondary CTMT																
290003 Control Room HVAC																
290002 Reactor Vessel Internals								04 (SRO)							Excessive heatup/cool-down rate	4.1 93
K/A Category Point Totals:	1	1	1	2	1	1	1	1 1 (SRO)	1	1	1 2 (SRO)	Group Point Total:				12/ 3

Facility:		Date of Exam:				
Category	K/A #	Topic	RO		SRO-Only	
			IR	#	IR	#
1. Conduct of Operations	2.1.3	Shift turnover practices	3.0	66		
	2.1.18	Ability to make accurate/clear and concise logs/records/status boards and reports	2.9	67		
	2.1.23	Ability to obtain and interpret station reference materials such as graphs which contain performance data.	2.8	68		
	2.1.1	Conduct of operations requirements			3.8	94
	2.1.19	Ability to use plant computer to obtain and evaluate parametric information on system or component status			4.2	95
	2.1.					
	Subtotal			3		2
2. Equipment Control	2.2.24	Ability to analyze the effect of maintenance activities on LCO status	2.6	69		
	2.2.13	Knowledge of tagging and clearance procedures	3.6	70		
	2.2.28	New and spent fuel movement procedures	2.6	71		
	2.2.26	Refueling administrative requirements			3.7	96
	2.2.					
	2.2.					
Subtotal			3		1	
3. Radiation Control	2.3.4	Radiation exposure limits and contamination control / including permissible levels in excess of those authorized	2.5	72		
	2.3.9	Process for performing a containment purge	2.5	73		
	2.3.2	Knowledge of Facility ALARA program			2.9	97
	2.3.6	Requirements for reviewing and approving release permits			3.1	98
	2.3.					
	2.3.					
Subtotal			2		2	
4. Emergency Procedures / Plan	2.4.12	General operating crew responsibilities during emergency operations	3.4	74		
	2.4.49	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.	4.0	75		
	2.4.28	Procedures relating to emergency response to sabotage			3.3	99
	2.4.46	Ability to verify that the alarms are consistent with the plant conditions			3.6	100
	2.4.					
	2.4.					
Subtotal			2		2	
Tier 3 Point Total			10	10	7	7

Facility: Quad Cities Unit 1 & 2 Scenario No.: 1 Time Start: _____

Examiners: _____ Operators: (SRO) _____
 _____ (ATC) _____
 _____ (BOP) _____

Initial Conditions: Reactor Power is at 84% and 100% rod line. Torus Cooling is running with 1D RHR pump and 1B and 1C RHRSW pumps running to the 1B RHR Heat exchanger. APRM 2 is Inoperable and bypassed due to a failed power supply. Maintenance repair is complete. I&C is presently reviewing closeout paperwork. Outboard Drywell Isolation Spray Valve, MO1-1001-23A, is OOS because the motor tripped on overcurrent during valve testing. Inboard Drywell Isolation Spray Valve, MO1-1001-26A, is closed as per TS LCO 3.6.1.3, Condition A. Because Drywell Spray Subsystem A is Inoperable, TRM 3.6.a, Condition A, has been entered.

Turnover: Raise reactor power to 100% using recirculation flow. Secure RHR Torus Cooling.

Event No.	Malf. No.	Event Type*	Event Description
1	N/A	R (ATC)	Raise recirculation flow to achieve 100% power IAW QCOP 0202-03 and QCGP 3-1.
2	N/A	N (BOP)	Shut down RHR Torus Cooling
3	nm1413249d	I/C (ATC) TS (SRO)	Fail LPRM 32-49-D Downscale. TS 3.3.1.1
4	rr19A	I/C (BOP) TS (SRO)	ATWS/ECCS/RFP/HPCI/RCIC/TURB transmitter 1-0263-23A slowly fails downscale. TS 3.3.2.2, 3.3.4.1, 3.3.5.1, 3.3.5.2
5	ms04c	M (all)	Rising Containment pressure and temperature due to a LOCA. Initiate an Emergency Depressurization when torus pressure cannot be maintained or when drywell temperature cannot be restored. Includes a failure of Drywell Spray.

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

Facility: Quad Cities Unit 1 & 2 Scenario No.: 2 Time Start: _____

Examiners: _____ Operators: (SRO) _____
 _____ (ATC) _____
 _____ (BOP) _____

Initial Conditions: Unit 1 is shutting down. The shift is ready to begin step F.3 of QCGP 2-1 and 4-1. RHRSW "B" is OOS. 1A Core Spray is Inoperable due to replacement of its motor. In TS LCO 3.5.1, Condition B, day 2 of 7. De-inerting of the Drywell is complete and de-inerting of the Torus through the Reactor Building vents is in progress. In the 10th hour of a 24 hour LCO for both TS LCO 3.6.2.5, Condition A, and 3.6.3.1, Condition A.

Turnover: QCGP 2-1 has been completed up to and including Step F.2.

Event No.	Mal. No.	Event Type*	Event Description
1	N/A	R (ATC)	Continue plant shutdown by inserting rods IAW step F.4 of QCGP 2-1 and 4-1.
2 & 3	Imf NM08B 100	I/C (ATC) TS (SRO)	APRM channel #2 fails upscale with a failure to ½ scram. TS 3.3.1.1
4	N/A	TS (SRO)	Large Lube Oil Leak from Unit 1 EDG. Unit 1 EDG to be declared INOPERABLE. TS 3.8.1, 3.5.1, 3.0.3
5	ano9013b13	I/C (BOP) TS (SRO)	ADS Timer initiation. Invalid signal. TS 3.3.5.1, 3.5.1
6	rr10a	M (all)	Recirculation Suction line break.
7	e02	I/C (BOP) I/C (ATC)	Station Blackout occurs. Take actions to monitor plant parameters and restore electrical power IAW QCOA 6100-04, QCOA 6100-03 and/or QCOP 6500-08.

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

Facility: Quad Cities Unit 1 & 2 Scenario No.: 3 Time Start: _____

Examiners: _____ Operators: (SRO) _____
 _____ (ATC) _____
 _____ (BOP) _____

Initial Conditions: Reactor power is at 47%.

Turnover: The shift will start the B SGBT system top perform its monthly Operability Surveillance.

Event No.	Malf. No.	Event Type*	Event Description
1	N/A	N (BOP)	Start Standby Gas Treatment System.
2	N/A	TS (SRO)	1C RHRSW Inoperable (All oil has leaked out of bearing.) TS 3.7.1
3	rd07a	I/C (ATC)	Control Rod Drive Pump Failure.
4	rd04r3023	I/C (ATC)	Rod drift from 00 to 02 on CRD pump start.
5		I/C (BOP) TS (SRO)	Loss of Power to Bus 13-1 with a failure of the EDG to start. TS 3.8.1.A, 3.8.1.B, 3.8.1.D, and 3.8.1.B (Unit 2)
6	eg07a	I/C (BOP) R (ATC)	Turbine Generator slowly loses stator water cooling. Both ATC and BOP need to take actions IAW QCOA 5300-01. Emergency down power by inserting control rods.
7	ms09d	M (all) I/C (all)	MSL break with a failure to receive a Group 1 isolation on low steam pressure, close the MSIVs to limit plant cooldown to less than 100 degrees, and recognize that a TS Safety Limit has been violated if pressure drops below 785 psig with power above 25%.

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

Facility: Quad Cities Unit 1 & 2 Scenario No.: 4 Time Start: _____

Examiners: _____ Operators: (SRO) _____
 _____ (ATC) _____
 _____ (BOP) _____

Initial Conditions: 1B Recirculation Pump is tripped, but it is ready to be started.

Turnover: Unit Supervisor has directed the restart of 1B Recirculation Pump.

Event No.	Malf. No.	Event Type*	Event Description
1	N/A	R (ATC)	Lower 1A recirculation pump speed.
2	N/A	N (BOP)	Start 1B recirculation pump and monitor parameters IAW QCOP 0202-02.
3	N/A	TS (SRO)	OPRM Part 21 Inoperability. TS 3.3.1.3.A and 3.3.1.3.B
4	imf rd03r22 27	I/C (ATC) TS (SRO)	Rod drifts from position 48 to 46. Upon return to 48, rod is found uncoupled and over-travels to position 49. Rod F-7 (22-27). TS 3.1.3
5	sw01c	I/C (BOP)	Trip of 1/2 Service Water Pump. Start 1B fails to start. Manual Start 1A or 2A Service Water Pump.
6	imf fw17c	I/C (ATC)	"C" Condensate/Booster pump trip with a failure of the standby pump to start.
7	mc08	M (all) I/C (all)	Loss of condenser vacuum leads to ATWS. Bypass valves eventually close due to lowering vacuum. SRVs used for pressure control.

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