

Knowledge and Ability Record Form
 ref: NUREG - 1021 rev 8
BWR RO EXAM OUTLINE ES-401-2

COUNT MATRIX

Summarizing Counts by K/A Group
 for
 BWR - Reactor Operator

	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	SG	Total
E/APE # - T1 Gp 1	3	2	2				3	2			1	13
E/APE # - T1 Gp 2	3	4	3				3	4			2	19
E/APE # - T1 Gp 3	1	1	1				1	0			0	4
Tier Totals	7	7	6				7	6			3	36
Plant Systems / T2 Gp 1	3	3	3	2	3	3	2	3	2	3	1	28
Plant Systems / T2 Gp 2	2	2	2	2	1	2	2	2	2	1	1	19
Plant Systems / T2 Gp 3	1	0	0	1	0	0	1	1	0	0	0	4
Tier Totals	6	5	5	5	4	5	5	6	4	4	2	51
Generic K/As / T3	CAT 1 - 4 CAT 2 - 3 CAT 3 - 3 CAT 4 - 3											13
Model Total												100

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EMERGENCY & ABNORMAL PLANT EVOLUTIONS - TIER 1 GROUP I

BWR - Reactor Operator

Target: 13%

Actual: 13%

	E/APE # - NAME/SAFETY FUNCTION	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A TOPICS	IMP	POINTS
1	295005 - Main Turbine Generator Trip - 3		X										AK2.02 – Knowledge of the interrelations between MAIN TURBINE GENERATOR TRIP and the following: Feedwater Temperature	2.9	1
2	295005 - Main Turbine Generator Trip - 3	X											AK1.01 – Knowledge of the operational implications of the following concepts as they apply to MAIN TURBINE GENERATOR TRIP: Pressure effects on reactor power	4.0	1
3	295006 - SCRAM - 1							X					AA1.03 – Ability to operate and/or monitor the following as they apply to SCRAM: Reactor Turbine pressure regulating system	3.7	1
4	295009 - Low Reactor Water Level - 2		X										AK2.04 – Knowledge of the interrelations between LOW REACTOR WATER LEVEL and the following: Reactor Water Cleanup	2.6	1
5	295009 - Low Reactor Water Level - 2								X				AA2.02 – Ability to determine and/or interpret the following as they apply to LOW REACTOR WATER LEVEL: Steam flow/feedflow mismatch	3.6	1
6	295015 - Incomplete SCRAM - 1	X											AK1.03 – Knowledge of the operational implications of the following concepts as they apply to INCOMPLETE SCRAM: Reactivity effects	3.8	1
7	295015 - Incomplete SCRAM - 1								X				AA2.02 – Ability to determine and/or interpret the following as they apply to INCOMPLETE SCRAM: Control Rod Position	4.1	1
8	295024 - High Drywell Pressure - 5	X											EK1.01 – Knowledge of the operational implications of the following concepts as they apply to HIGH DRYWELL PRESSURE: Drywell integrity: Plant specific	4.1	1
9	295025 - High Reactor Pressure - 3			X									EK3.02 – Knowledge of the reasons for the following responses as they apply to HIGH REACTOR PRESSURE: Recirculation pump trip: Plant Specific	3.9	1

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	E/APE # - NAME/SAFETY FUNCTION	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A TOPICS	IMP	POINTS
10	295031 - Reactor Low Water Level - 2							X					EA1.13 – Ability to operate and/or monitor the following as they apply to REACTOR LOW WATER LEVEL: Reactor Water level control	4.3	1
11	295031 - Reactor Low Water Level - 2											X	2.4.10 – Knowledge of annunciator response procedures	3.0	1
12	295037 - SCRAM Condition Present and reactor power above APRM downscale or unknown - 1							X					EA1.02 – Ability to operate and/or monitor the following as they apply to SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN: RRCS: Plant Specific	3.8	1
13	500000 - High Containment Hydrogen Concentration - 5			X									EK3.02 – Knowledge of the reasons for the following responses as they apply to HIGH PRIMARY CONTAINMENT HYDROGEN CONCENTRATIONS: Operation of drywell recirculation fans	2.8	1
Category Point Totals:		3	2	2				3	2			1	Group Point Totals: 13		13

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EMERGENCY & ABNORMAL PLANT EVOLUTIONS - TIER 1 GROUP II

BWR - Reactor Operator

Target: 19%

Actual: 19%

	E/APE # - NAME/SAFETY FUNCTION	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A TOPICS	IMP	POINTS
1	295001 - Partial or Complete Loss of Forced Core Flow Circulation - 1								X				AA2.04 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION: Individual Jet Pump Flows	3.0	1
2	295003 - Partial or Complete Loss of A.C. Power - 6											X	2.4.48 – Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions.	3.5	1
3	295008 - High Reactor Water Level - 2		X										AK2.09 - Knowledge of the interrelations between HIGH REACTOR WATER LEVEL and the following: Reactor Water Cleanup System	3.1	1
4	295012 - High Drywell Temperature - 5	X											AK1.02 - Knowledge of the operational implications of the following concepts as they apply to HIGH DRYWELL TEMPERATURE: Reactor Power Level Control	3.1	1
5	295012 - High Drywell Temperature - 5		X										AK2.02 - Knowledge of the interrelations between HIGH DRYWELL TEMPERATURE and the following: Drywell Cooling	3.6	1
6	295019 - Partial or Complete Loss of Instrument Air - 8								X				AA2.02 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR: Status of safety related instrument air system loads	3.6	1
7	295022 - Loss of CRD Pumps - 1							X					AA1.04 – Ability to operate and or monitor the following as they apply to LOSS OF CRD PUMPS: Reactor water cleanup system	2.5	1
8	295026 - Suppression Pool High Water Temperature - 5								X				EA2.01 - Ability to determine and/or interpret the following as they apply to SUPPRESSION POOL HIGH WATER TEMPERATURE: Suppression Pool Water temperature	4.1	1

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	E/APE # - NAME/SAFETY FUNCTION	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A TOPICS	IMP	POINTS
9	295028 - High Drywell Temperature - 5	X											EK1.02 - Knowledge of the operational implications of the following concepts as they apply to HIGH DRYWELL TEMPERATURE: Equipment environmental qualification	2.9	1
10	295028 - High Drywell Temperature - 5							X					EA1.02 - Ability to operate and/or monitor the following as they apply to HIGH DRYWELL TEMPERATURE: Drywell Ventilation system	3.9	1
11	295029 - High Suppression Pool Water Level - 5			X									EK3.02 - Knowledge of the reasons for the following responses as they apply to HIGH SUPPRESSION POOL WATER LEVEL: Lowering Suppression Pool level	3.6	1
12	295030 - Low Suppression Pool Water Level - 5	X											EK1.01 - Knowledge of the operational implications of the following concepts as they apply to LOW SUPPRESSION POOL WATER LEVEL: Steam Condensation	3.8	1
13	295030 - Low Suppression Pool Water Level - 5		X										EK2.08 - Knowledge of the interrelations between LOW SUPPRESSION POOL WATER LEVEL and the following: SRV discharge submergence	3.5	1
14	295033 - High Secondary Containment Area Radiation Levels - 9		X										EK2.03 - Knowledge of the interrelations between HIGH SECONDARY CONTAINMENT AREA RADIATION LEVELS and the following: Secondary Containment Ventilation	3.7	1
15	295033 - High Secondary Containment Area Radiation Levels - 9											X	2.4.1 – Knowledge of EOP entry conditions and immediate action steps	4.3	1
16	295034 - Secondary Containment Ventilation High Radiation - 9			X									EK3.01 - Knowledge of the reasons for the following responses as they apply to SECONDARY CONTAINMENT VENTILATION HIGH RADIATION: Isolating secondary containment ventilation	3.8	1

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	E/APE # - NAME/SAFETY FUNCTION	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A TOPICS	IMP	POINTS
17	295038 - High Off-Site Release Rate - 9							X					EA1.01 - Ability to operate and/or monitor the following as they apply to HIGH OFF-SITE RELEASE RATE: Stack gas monitoring system	3.9	1
18	600000 - Plant Fire On Site - 8			X									AK3.04 - Knowledge of the reasons for the following responses as they apply to PLANT FIRE ON SITE: Actions contained in the abnormal procedure for plnat fire on site	2.8	1
19	600000 - Plant Fire On Site - 8								X				AA2.17 - Ability to determine and interpret the following as they apply to PLANT FIRE ON SITE: Systems that may be affected by the fire	3.1	1
Category Point Totals:		3	4	3				3	4			2	Group point totals: 19		19

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PLANT SYSTEMS - TIER 1 GROUP III

BWR - Reactor Operator

Target: 4%

Actual: 4%

	E/APE # - NAME/SAFETY FUNCTION	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A TOPICS	IMP	POINTS
1	295021 - Loss of Shutdown Cooling - 4		X										AK2.05 - Knowledge of the interrelations between LOSS OF SHUTDOWN COOLING and the following: Fuel Pool Cooling and Cleanup system	2.7	1
2	295032 - High Secondary Containment Area Temperature - 5			X									EK3.02 - Knowledge of the reasons for the following responses as they apply to HIGH SECONDARY CONTAINMENT AREA TEMPERATURE: Reactor SCRAM	3.6	1
3	295035 - Secondary Containment High Differential Pressure - 5							X					EA1.01 - Ability to operate and/or monitor the following as they apply to SECONDARY CONTAINMENT HIGH DIFFERENTIAL PRESSURE: Secondary containment ventilation system	3.6	1
4	295035 - Secondary Containment High Differential Pressure - 5	X											EK1.01 - Knowledge of the operational implications of the following concepts as they apply to SECONDARY CONTAINMENT HIGH DIFFERENTIAL PRESSURE: Secondary containment integrity.	3.9	1
Category Point Totals:		1	1	1				1	0			4	Group Point Totals: 4		4

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PLANT SYSTEMS - TIER 2 GROUP I

BWR - Reactor Operator

Target: 28%

Actual: 28%

	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 TOPICS	IMP	POINTS
1	201001 - Control Rod Drive Hydraulic System		X										K2.04 - Knowledge of electrical power supplies to the following: Scram discharge volume vent and drain valve solenoids	3.2	1
2	201001 - Control Rod Drive Hydraulic System						X						K6.03 - Knowledge of the effect that a loss or malfunction of the following will have on the CONTROL ROD DRIVE HYDRAULIC System: Plant air systems	3.0	1
3	202002 - Recirculation Flow Control System						X						K6.04 - Knowledge of the effect that a loss or malfunction of the following will have on the RECIRCULATION FLOW CONTROL SYSTEM: Feedwater flow inputs	3.5	1
4	202002 - Recirculation Flow Control System									X			A3.02 - Ability to monitor automatic operations of the RECIRCULATION FLOW CONTROL SYSTEM including: Lights and alarms	3.4	1
5	209002 - High Pressure Core Spray System (HPCS)										X		A4.14 - Ability to manually operate and/or monitor in the control room: Test Return Valve3.0	3.0	1
6	211000 - Standby Liquid Control System			X									K3.01 - Knowledge of the effect that a loss or malfunction of the STANDBY LIQUID CONTROL SYSTEM will have on following: Ability to shutdown the reactor under certain conditions.	4.3	1
7	212000 - Reactor Protection System					X							K5.02 - Knowledge of the operational implications of the following concepts as they apply to REACTOR PROTECTION SYSTEM: Specific logic arrangements.	3.3	1

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	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 TOPICS	IMP	POINTS
8	215003 - Intermediate Range Monitor (IRM) System								X				A2.06 - Ability to (a) predict the impacts of the following on the INTERMEDIATE RANGE MONITOR (IRM) SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Faulty Range Switch	3.0	1
9	215003 - Intermediate Range Monitor (IRM) System	X											K1.04 - Knowledge of the physical connections and/or cause- effect relationships between INTERMEDIATE RANGE MONITOR (IRM) SYSTEM and the following: Process computer/ performance monitoring system (SPDS/ERIS/CRIDS/GDS): Plant-Specific	2.5	1
10	215004 - Source Range Monitor (SRM) System								X				A2.02 - Ability to (a) predict the impacts of the following on the SOURCE RANGE MONITOR (SRM) SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: SRM Inop condition.	3.4	1
11	215004 - Source Range Monitor (SRM) System		X										K2.01 - Knowledge of electrical power supplies to the following: SRM channels/detectors	2.6	1
12	215005 - Average Power Range Monitor/Local Power Range Monitor System	X											K1.01 - Knowledge of the physical connections and/or cause- effect relationships between APRM/LPRM and the following: RPS	4.0	1
13	215005 - Average Power Range Monitor/Local Power Range Monitor System					X							K5.06 - Knowledge of the operational implications of the following concepts as they apply to APRM/LPRM: Assignment of LPRM's to specific APRM channels	2.5	1
14	216000 - Nuclear Boiler Instrumentation									X			A3.01 - Ability to monitor automatic operations of the NUCLEAR BOILER Instrumentation including: Relationship between meter/recorder readings and actual parameter values: Plant-Specific	3.4	1
	SYSTEM #/ NAME	K	K	K	K	K	K	A	A	A	A	G	K/A TOPICS	IMP	POINTS

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		1	2	3	4	5	6	1	2	3	4				
15	217000 - Reactor Core Isolation Cooling System (RCIC)	X											K1.08 - Knowledge of the physical connections and/or cause- effect relationships between REACTOR CORE ISOLATION COOLING SYSTEM (RCIC) and the following: Line fill pump: Plant-Specific	3.3	1
16	217000 - Reactor Core Isolation Cooling System (RCIC)							X					A1.06 - Ability to predict and/or monitor changes in parameters associated with operating the REACTOR CORE ISOLATION COOLING SYSTEM (RCIC) controls including: Condensate Storage tank level	3.2	1
17	218000 - Automatic Depressurization System				X								K4.02 - Knowledge of AUTOMATIC DEPRESSURIZATION SYSTEM design feature(s) and/or interlocks which provide for the following: Allows manual initiation of ADS logic.	3.8	1
18	218000 - Automatic Depressurization System											X	A4.12 - Ability to manually operate and/or monitor in the control room: Reactor vessel water level.	4.2	1
19	223001 - Primary Containment System and Auxiliaries		X										K2.08 - Knowledge of electrical power supplies to the following: Containment cooling air handling units: Plant-Specific	2.7	1
20	223001 - Primary Containment System and Auxiliaries				X								K4.04 - Knowledge of PRIMARY CONTAINMENT SYSTEM AND AUXILIARIES design feature(s) and/or interlocks which provide for the following: Prevents hydrogen from reaching an explosive mixture	3.5	1
21	239002 - Relief/Safety Valves						X						K6.03 - Knowledge of the effect that a loss or malfunction of the following will have on the RELIEF/SAFETY VALVES: AC power.	2.7	1
22	239002 - Relief/Safety Valves											X	A4.06 - Ability to manually operate and/or monitor in the control room: Reactor Water level.	3.9	1
23	241000 - Reactor/Turbine Pressure Regulating System			X									K3.03 – Knowledge of the effect that a loss or malfunction of the REACTOR/TURBINE PRESSURE REGULATING SYSTEM will have on following: Reactor Water level	3.7	1
	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 TOPICS	IMP	POINTS
24	259002 - Reactor Water							X					A1.03 - Ability to predict and/or monitor changes in parameters associated with operating the REACTOR WATER LEVEL	3.8	1

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	Level Control System													CONTROL SYSTEM controls including: Reactor Power		
25	259002 - Reactor Water Level Control System												X	2.1.8 - Ability to coordinate personnel activities outside the control room.	3.8	1
26	261000 - Standby Gas Treatment System			X										K3.06 - Knowledge of the physical connections and/or cause- effect relationships between STANDBY GAS TREATMENT SYSTEM and the following: Primary containment oxygen content: Mark-I&II	3.0	1
27	261000 - Standby Gas Treatment System									X				A2.06 - Ability to (a) predict the impacts of the following on the STANDBY GAS TREATMENT SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Valve closures.	2.9	1
28	264000 - Emergency Generators (Diesel/Jet)					X								K5.06 - Knowledge of the operational implications of the following concepts as they apply to EMERGENCY GENERATORS (DIESEL/JET): Load sequencing	3.4	1
Category Point Totals:		3	3	3	2	3	3	2	3	2	3	1	Group Point Total: 28			28

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PLANT SYSTEMS - TIER 2 GROUP II

BWR - Reactor Operator

Target: 19%

Actual: 19%

	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 TOPICS	IMP	POINTS
1	201004 - Rod Sequence Control System (Plant Specific)				X								K4.06 - knowledge of ROD SEQUENCE CONTROL SYSTEM design feature(s) and/or interlocks which provide for the following: Group notch control	3.3	1
2	201006 - Rod Worth Minimizer System (RWM) (Plant Specific)				X								K4.01 - Knowledge of ROD WORTH MINIMIZER SYSTEM (RWM) design feature(s) and/or interlocks which provide for the following: Insert blocks/errors: P-Spec	3.4	1
3	205000 - Shutdown Cooling System (RHR Shutdown Cooling Mode)	X											K1.14 - Knowledge of the physical connections and/or cause- effect relationships between SHUTDOWN COOLING SYSTEM (RHR SHUTDOWN COOLING MODE) and the following: Reactor temperatures (moderator, vessel, flange)	3.6	1
4	205000 - Shutdown Cooling System (RHR Shutdown Cooling Mode)						X						K6.03 - Knowledge of the effect that a loss or malfunction of the following will have on the SHUTDOWN COOLING SYSTEM/MODE: Recirculation system	3.1	1
5	215002 - Rod Block Monitor System		X										K2.03 - Knowledge of electrical power supplies to the following: APRM Channels	2.8	1
6	219000 - RHR/LPCI: Torus/Suppression Pool Cooling Mode	X											K1.09 - Knowledge of the physical connections and/or cause- effect relationships between RHR/LPCI: TORUS/SUPPRESSION POOL COOLING MODE and the following: Nuclear boiler instrumentation	3.3	1
7	219000 - RHR/LPCI: Torus/Suppression Pool Cooling Mode		X										K2.02 - Knowledge of electrical power supplies to the following: Pumps	3.1	1
8	230000 - RHR/LPCI: Torus/Suppression Pool Spray Mode							X					A1.06 - Ability to predict and/or monitor changes in parameters associated with operating the RHR/LPCI: TORUS/SUPPRESSION POOL SPRAY MODE controls including: Suppression pool level	3.3	1

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	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 TOPICS	IMP	POINTS
9	239001 - Main and Reheat Steam System								X				A2.09 - Ability to (a) predict the impacts of the following on the MAIN AND REHEAT STEAM SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Opening of head vent to drywell equipment sump with pressure in the reactor vessel	3.4	1
10	245000 - Main Turbine Generator and Auxiliary Systems			X									K3.02 - Knowledge of the effect that a loss or malfunction of the MAIN TURBINE GENERATOR AND AUXILIARY SYSTEMS will have on following: Reactor pressure	3.9	1
11	262001 - A.C. Electrical Distribution					X							K5.01 - Knowledge of the operational implications of the following concepts as they apply to A.C. ELECTRICAL DISTRIBUTION: Principle involved with paralleling two A.C. sources	3.1	1
12	262001 - A.C. Electrical Distribution							X					A1.04 - Ability to predict and/or monitor changes in parameters associated with operating the A.C. ELECTRICAL DISTRIBUTION controls including: Load currents	2.7	1
13	262002 - Uninterruptable Power Supply (A.C./D.C.)										X		A4.01 - Ability to manually operate and/or monitor in the control room: Transfer from alternative source to preferred source	2.8	1
14	286000 - Fire Protection System			X									K3.01 - Knowledge of the effect that a loss or malfunction of the FIRE PROTECTION SYSTEM will have on following: The ability to detect fires	3.2	1
15	290001 - Secondary Containment								X				A2.05 - Ability to (a) predict the impacts of the following on the SECONDARY CONTAINMENT; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: High area temperature	3.1	1
16	290001 - Secondary Containment											X	2.1.16 - Ability to operate plant phone, paging system, and two-way radio.	2.9	1

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17	290003 - Control Room HVAC									X			A3.01 - Ability to monitor automatic operations of the CONTROL ROOM HVAC including: Initiation/reconfiguration.	3.3	1
18	300000 - Instrument Air System (IAS)						X						K6.12 - Knowledge of the effect that a loss or malfunction of the following will have on the INSTRUMENT AIR SYSTEM: Breakers, relays, and disconnects.	2.9	1
19	400000 - Component Cooling Water System (CCWS)									X			A3.01 - Ability to monitor automatic operations of the CCWS including: Setpoints on instrument signal levels for normal operations, warnings, and trips that are applicable to the CCWS	3.0	1
Category Point Totals:		2	2	2	2	1	2	2	2	2	1	1	Group point totals: 19		19

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PLANT SYSTEMS - TIER 2 GROUP III

BWR - Reactor Operator

Target: 4%

Actual: 4%

	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 TOPICS	IMP	POINTS
1	215001 - Traversing In-Core Probe				X								K4.01 - Knowledge of TRAVERSING IN-CORE PROBE design feature(s) and/or interlocks which provide for the following: Primary containment isolation: Mark-I&II(Not-BWR1)	3.4	1
2	268000 – Radwaste							X					A1.02 - Ability to predict and/or monitor changes in parameters associated with operating the RADWASTE controls including: Offsite release	2.6	1
3	288000 - Plant Ventilation Systems	X											K1.03 - Knowledge of the physical connections and/or cause- effect relationships between PLANT VENTILATION SYSTEMS and the following: Standby gas treatment	3.7	1
4	288000 - Plant Ventilation Systems								X				A2.03 - Ability to (a) predict the impacts of the following on the PLANT VENTILATION SYSTEMS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of coolant accident: Plant specific	3.5	1
	Category Point Totals:	1	0	0	1	0	0	1	1	0	0	0	Group point totals: 4		4

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PLANT-WIDE GENERIC RESPONSIBILITIES TIER 3

BWR - Reactor Operator

Target: 13%

Actual: 13%

	Category	K/A	TOPICS	IMP	POINTS
1	Conduct of Operations	2.1.25	Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data.	2.8	1
2		2.1.17	Ability to make accurate, clear and concise verbal reports.	3.5	1
3		2.1.14	Knowledge of system status criteria which require the notification of plant personnel.	2.5	1
4		2.1.1	Knowledge of conduct of operations requirements.	3.7	1
5	Equipment	2.2.30	Knowledge of RO duties in the control room during fuel handling such as alarms from fuel handling area / communication with fuel storage facility / systems operated from the control room in support of fueling operations / and supporting instrumentation.	3.5	1
6	Control	2.2.13	Knowledge of tagging and clearance procedures.	3.6	1
7		2.2.22	Knowledge of limiting conditions for operations and safety limits.	3.4	1
8	Radiation	2.3.11	Ability to control radiation releases	2.7	1
9	Control	2.3.4	Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized.	2.5	1
10		2.3.1	Knowledge of 10 CFR 20 and related facility radiation control requirements.	2.6	1
11	Emergency Proc.	2.4.18	Knowledge of the specific bases for EOPs.	2.7	1
12	Plan	2.4.4	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.0	1
13		2.4.24	Knowledge of loss of cooling water procedures.	3.3	1
			Group point totals: 13		13