Facility: BRAIDW	OOD STATIO	N UI	NITS	1 ar	nd 2				Date	e of E	xam	n: MAY	′ 29 – Jur	ne 8, 1	2018			
						RO I	K/A (	Cate	gory	Poin	ts				SRC	)-Onl	y Point	S
Tier	Group	K1	K2	K3	K4	K5	K6	A1	A2	А3	A4	G*	Total		A2	(	G*	Total
1.	1	3	3	3				3	3			3	18		3		3	6
Emergency and Abnormal Plant	2	1	2	1		N/A		1	2	N/	/Α	2	9		2		2	4
Evolutions	Tier Totals	4	5	4				4	5			5	27		5		5	10
	1	3	2	3	3	2	2	3	3	2	2	3	28		3		2	5
2. Plant	2	1	1	1	1	0	1	1	1	1	1	1	10	0	2		1	3
Systems	Tier Totals	4	3	4	4	2	3	4	4	3	3	4	38		5		3	8
	(nowledge and	l Abil	lities		,	1	2	2	;	3		4	10	1	2	3	4	7
	Categories				3	3	2	2	(	3		2		2	1	2	2	

Form ES-401-2

- 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 outline sections (i.e., except for one category in Tier 3 of the SRO-only section, the "Tier Totals" in each K/A category shall not be less than two). (One Tier 3 radiation control K/A is allowed if it is replaced by a K/A from another Tier 3 category.)
  - 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 outline. Systems or evolutions that do not apply at the facility should be deleted with justification. Operationally important, site-specific systems/evolutions 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' 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 a category 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.

## G\* Generic K/As

- \* These systems/evolutions must be included as part of the sample (as applicable to the facility) when Revision 3 of the K/A catalog is used to develop the sample plan. They are not required to be included when using earlier revisions of the K/A catalog.
- \*\* These systems/evolutions may be eliminated from the sample (as applicable to the facility) when Revision 3 of the K/A catalog is used to develop the sample plan.

ES-401	w on	.d						ES-40	01-2
							ons—Tier 1/Group 1 (RO/SRO)		
E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G*	K/A Topic(s)  EK2.03 – Knowledge of the interrelations between a	IR	#
000007 (EPE 7; BW E02&E10 CE E02) Reactor Trip, Stabilization, Recovery / 1		Х					Reactor Trip and the following: Reactor trip status panel. (CFR 41.7 / 45.7)	3.5	39
000008 (APE 8) Pressurizer Vapor Space Accident / 3		Х					AK2.01 – Knowledge of the interrelations between the Pressurizer Vapor Space Accident and the following: Valves	2.7*	40
000009 (EPE 9) Small Break LOCA / 3	Х						EK1.01 –Knowledge of the operational implications of the following concepts as they apply to the Small Break LOCA- Natural circulation and cooling, including reflux boiling.	4.2	41
000011 (EPE 11) Large Break LOCA / 3				Х			EA1.05 Ability to operate and monitor the following as they apply to a Large Break LOCA: Containment isolation valves.	4.4	42
000011 (EPE 11) Large Break LOCA / 3 SRO-Only Question						х	2.4.20 – Knowledge of operational implications of EOP warnings, cautions, and notes. (CFR: 41.10 / 43.5 / 45.13)	4.3	84
000015 (APE 15) Reactor Coolant Pump Malfunctions / 4				Х			AA1.13 – Ability to operate and/or monitor the following as they apply to Reactor Coolant Pump Malfunctions (Loss of RC Flow): Reactor power level indicators.	3.4*	43
000022 (APE 22) Loss of Reactor Coolant Makeup / 2					х		AA2.01 – Ability to determine or interpret the following as they apply to the Loss of Reactor Coolant Makeup: Whether charging line leak exists. (CFR 43.5/ 45.13)	3.2	44
000025 (APE 25) Loss of Residual Heat Removal System / 4	X						AK1.01 – Knowledge of the operational implications of the following concepts as they apply to the Residual Heat Removal system: Loss of RHRS during all modes of operation. (CFR 41.8 / 41.10 / 45.3)	3.9	45
000026 (APE 26) Loss of Component Cooling Water / 8			Х				AK3.02 – Knowledge of the reasons for the following responses as the apply to the Loss of Component Cooling Water: The automatic actions (alignments) within the CCWS resulting from the actuation of the ESFAS	3.6	46
000027 (APE 27) Pressurizer Pressure Control System Malfunction / 3 SRO-Only Question					x		AA2.06 – Ability to determine and interpret the following as they apply to the Pressurizer Pressure Control Malfunctions: Conditions requiring plant shutdown. (CFR: 43.5 / 45.13)	3.9	85
000029 (EPE 29) Anticipated Transient Without Scram / 1 SRO-Only Question						Х	2.4.22 – Knowledge of the bases for prioritizing safety functions during abnormal/emergency operations. (CFR: 41.7 / 41.10 / 43.5 / 45.12)	4.4	86
000038 (EPE 38) Steam Generator Tube Rupture / 3			Х				EK3.09 – Knowledge of the reasons for the following responses as the apply to the SGTR: Criteria for securing/throttling ECCS.	4.1	47
000040 (APE 40; BW E05; CE E05; W E12) Steam Line Rupture—Excessive Heat Transfer / 4	Х						AK1.04 – Knowledge of the operational implications of the following concepts as they apply to Steam Line Rupture: Nil ductility temperature.	3.2	48
000054 (APE 54; CE E06) Loss of Main Feedwater /4						х	2.4.9 – Knowledge of low power/shutdown implications in accident (e.g., loss of coolant accident or loss of residual heat removal) mitigation strategies.	3.8	49
000055 (EPE 55) Station Blackout / 6					Х		EA2.02 – Ability to determine or interpret the following as they apply to a Station Blackout: RCS core cooling through natural circulation cooling to S/G cooling.	4.4	50
000056 (APE 56) Loss of Offsite Power / 6					Х		AA2.76 – Ability to determine or interpret the following as they apply to the Loss of Offsite Power: Reactor makeup water pump (running).	2.6	51

000057 (APE 57) Loss of Vital AC Instrument Bus / 6 SRO-Only Question					х		AA2.14 – Ability to determine and interpret the following as they apply to the Loss of Vital AC Instrument Bus: That substitute power sources have come on line on a loss of initial AC. (CFR: 43.5 / 45.13)	3.6	87
000058 (APE 58) Loss of DC Power / 6				Х			AA1.03 – Ability to operate and/or monitor the following as they apply to Loss of DC Power: Vital and battery bus components.	3.1	52
000062 (APE 62) Loss of Nuclear Service Water / 4			х				AK3.02 – Knowledge of the reasons for the following responses as the apply to the Loss of Nuclear Service Water: The automatic actions (alignments) within the nuclear service water resulting from the actuation of the ESFAS.	3.6	53
000065 (APE 65) Loss of Instrument Air / 8						Х	2.4.35 – Knowledge of local auxiliary operator tasks during an emergency plan and the resultant operational effects.	3.8	54
000077 (APE 77) Generator Voltage and Electric Grid Disturbances / 6		Х					AK2.07 – Knowledge of the interrelations between Generator Voltage and Electric Grid Disturbances and the following: Turbine / Generator control.	3.6	55
(W E04) LOCA Outside Containment / 3						Х	2.1.32 – Ability to explain and apply system limits and precautions.	3.8	56
(W E11) Loss of Emergency Coolant Recirculation / 4 SRO-Only Question						Х	2.1.31 – Ability to locate control room switches, controls, and indications, and to determine that they correctly reflect the desired plant lineup. (CFR: 41.10 / 45.12)	4.3	88
(BW E04; W E05) Inadequate Heat Transfer—Loss of Secondary Heat Sink / 4 SRO-Only Question					х		EA2.05 – Ability to determine and interpret the following as they apply to the (Loss of Secondary Heat Sink): Facility conditions and selection of appropriate procedures during abnormal and emergency operations. (CFR: 43.5 / 45.13)	4.4	89
K/A Category Totals:	3	3	3	3	3/3	3/3	Group Point Total:		18/6

ES-401 PWR Emergency and Abnormal						Group		n ES-4	01-2
E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G*	K/A Topic(s)	IR	#
000001 (APE 1) Continuous Rod Withdrawal / 1									
000003 (APE 3) Dropped Control Rod / 1						Х	2.1.27 – Knowledge of system purpose and/or function.	3.9	57
000005 (APE 5) Inoperable/Stuck Control Rod / 1					X		AA2.01 – Ability to determine and interpret the following as they apply to the Inoperable/Stuck Control Rod: Stuck or inoperable rod from in-core and ex-core NIS, in-core or loop temperature measurements.	3.3	58
000024 (APE 24) Emergency Boration / 1									
000028 (APE 28) Pressurizer (PZR) Level Control Malfunction / 2									
000032 (APE 32) Loss of Source Range Nuclear Instrumentation / 7		X					AK2.01 – Knowledge of the interrelations between the Loss of Source Range Nuclear Instrumentation and the following: Power supplies, including proper switch positions.	2.7*	59
000033 (APE 33) Loss of Intermediate Range Nuclear Instrumentation / 7 SRO-Only Question						X	2.4.45 – Ability to prioritize and interpret the significance of each annunciator or alarm. (CFR: 41.10 / 43.5 / 45.3 / 45.12)	4.3	90
000036 (APE 36; BW/A08) Fuel-Handling Incidents / 8			Х				K3.02 Knowledge of the reasons for the following responses as they apply to Fuel Handling Incidents: Interlocks associated with fuel handling equipment. (CFR 41.5,41.10 / 45.6 / 45.13)	2.9	60
000037 (APE 37) Steam Generator Tube Leak / 3	X						AK1.01 – Knowledge of the operational implications of the following concepts as they apply to Steam Generator Tube Leak: Use of steam tables. (CFR 41.8 / 41.10 / 45.3)	2.9*	61
000051 (APE 51) Loss of Condenser Vacuum / 4							(01111)		
000059 (APE 59) Accidental Liquid Radwaste Release / 9									
000060 (APE 60) Accidental Gaseous Radwaste Release / 9									
000061 (APE 61) Area Radiation Monitoring System Alarms / 7						X	2.2.44 – Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions.  (CFR: 41.5 / 43.5 / 45.12)	4.2	62
000067 (APE 67) Plant Fire On Site / 8 SRO-Only Question					Х		AA2.15 – Ability to determine and interpret the following as they apply to the Plant Fire on Site: Fire Watch Requirements. (CFR: 43.5 / 45.13)	3.9	91
000068 (APE 68; BW A06) Control Room Evacuation / 8									
000069 (APE 69; W E14) Loss of Containment Integrity / 5 SRO-Only Question						X	2.4.30 – Knowledge of events related to system operation/status that must be reported to internal organizations or external agencies, such as the State, the NRC, or the transmission system operator.  (CFR: 41.10 / 43.5 / 45.11)	4.1	92

000074 (EPE 74; W E06 & E07) Inadequate Core Cooling / 4 SRO-Only Question					Х		EA2.1 – Ability to determine and interpret the following as they apply to the (Saturated Core Cooling): Facility conditions and selection of appropriate procedures during abnormal and emergency operations. (CFR: 43.5 / 45.13)	4.0	93
000076 (APE 76) High Reactor Coolant Activity / 9									
000078 (APE 78*) RCS Leak / 3									
(W E01 & E02) Rediagnosis & SI Termination / 3									
(W E13) Steam Generator Overpressure / 4									
(W E15) Containment Flooding / 5					X		EA2.2 – Ability to determine or interpret the following as they apply to the (Containment Flooding): Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments. (CFR: 43.5 / 45.13)	2.9	63
(W E16) High Containment Radiation /9		X					EK2.1 – Knowledge of the interrelations between the (High Containment Radiation) and the following: Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features. (CFR: 41.7 / 45.7)	3.0	64
(BW A01) Plant Runback / 1							(6.1.1.1.1.1.1.1.1)		
(BW A02 & A03) Loss of NNI-X/Y/7									
(BW A04) Turbine Trip / 4									
(BW A05) Emergency Diesel Actuation / 6									
(BW A07) Flooding / 8									
(BW E03) Inadequate Subcooling Margin / 4									
(BW E08; W E03) LOCA Cooldown—Depressurization / 4				X			EA1.1 – Ability to operate and / or monitor the following as they apply to the (LOCA Cooldown and Depressurization): Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features. (CFR: 41.7 / 45.5 / 45.6)	4.0	65
(BW E09; CE A13**; W E09 & E10) Natural Circulation/4									
(BW E13 & E14) EOP Rules and Enclosures									
(CE A11**; W E08) RCS Overcooling—Pressurized Thermal Shock / 4									
(CE A16) Excess RCS Leakage / 2									
(CE E09) Functional Recovery									
(CE E13*) Loss of Forced Circulation/LOOP/Blackout / 4									
K/A Category Point Totals:	1	2	1	1	2/2	2/2	Group Point Total:		9/4

ES-401				Plar						on ( Gro		ne Form I (RO/SRO)	1 ES-40	01-2
System # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	K/A Topic(s)	IR	#
003 (SF4P RCP) Reactor Coolant Pump	х											K1.01 – Knowledge of the physical connections and/or cause-effect relationships between the RCPS and the following systems: RCP lube oil.	2.6	1
003 (SF4P RCP) Reactor Coolant Pump										Х		A4.03 – Ability to manually operate and/or monitor in the control room: RCP lube oil and lift pump motor controls.	2.8	2
004 (SF1; SF2 CVCS) Chemical and Volume Control				Х								K4.12 – Knowledge of CVCS design feature(s) and/or interlock(s) which provide for the following: Minimum level of VCT.	3.1	3
004 (SF1; SF2 CVCS) Chemical and Volume Control SRO-Only Question								х				A2.10 – Ability to (a) predict the impacts of the following malfunctions or operations on the CVCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Inadvertent boration/dilution. (CFR: 41.5/ 43/5 / 45/3 / 45/5)	4.2	76
005 (SF4P RHR) Residual Heat Removal					Х							K5.05 – Knowledge of the operational implications of the following concepts as they apply the RHRS: Plant response during "solid plant": pressure change due to the relative incompressibility of water.	2.7*	4
005 (SF4P RHR) Residual Heat Removal SRO-Only Question											X	2.1.23 – Ability to perform specific system and integrated plant procedures during all modes of plant operation. (CFR: 41.10 / 43.5 / 45.2 / 45.6)	4.4	77
006 (SF2; SF3 ECCS) Emergency Core Cooling				Х								K4.26 – Knowledge of ECCS design feature(s) and/or interlock(s) which provide for the following: Parallel redundant systems.	3.3	5
007 (SF5 PRTS) Pressurizer Relief/Quench Tank	х											K1.01 – Knowledge of the physical connections and/or cause-effect relationships between the PRTS and the following systems: Containment system.	2.9	6
008 (SF8 CCW) Component Cooling Water			Х									K3.01 – Knowledge of the effect that a loss or malfunction of the CCWS will have on the following: Loads cooled by CCWS.	3.4	7
008 (SF8 CCW) Component Cooling Water											Х	2.4.21 – 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 control, etc.	4.0	8
010 (SF3 PZR PCS) Pressurizer Pressure Control									х			A3.01 – Ability to monitor automatic operation of the PZR PCS, including: PRT temperature and pressure during PORV testing.	3.0	9
010 (SF3 PZR PCS) Pressurizer Pressure Control					Х							K5.01 – Knowledge of the operational implications of the following concepts as they apply to the PZR PCS: Determination of condition of fluid in PZR, using steam tables.	3.5	10
012 (SF7 RPS) Reactor Protection										Х		A4.01 – Ability to manually operate and/or monitor in the control room: Manual trip button.	4.5	11
012 (SF7 RPS) Reactor Protection	х											K1.02 – Knowledge of the physical connections and/or cause-effect relationships between the RPS and the following systems: 125VDC system.	3.4	12
013 (SF2 ESFAS) Engineered Safety Features Actuation						х						K6.01 – Knowledge of the effect of a loss or malfunction on the following will have on the ESFAS: Sensors and detectors	2.7*	13

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022 (SF5 CCS) Containment Cooling							X				A2.03 – Ability to (a) predict the impacts of the following malfunctions or operations on the CCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Fan motor thermal overload/highspeed operation.	2.6	14
022 (SF5 CCS) Containment Cooling SRO-Only Question							Х				A2.06 – Ability to (a) predict the impacts of the following malfunctions or operations on the CCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Loss of CCS pump. (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.2*	78
025 (SF5 ICE) Ice Condenser													
026 (SF5 CSS) Containment Spray						X					A1.01 – Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the CSS controls including: Containment pressure.	3.9	15
039 (SF4S MSS) Main and Reheat Steam						X					A1.10 – Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the MRSS controls including: Air ejector PRM.	2.9*	16
039 (SF4S MSS) Main and Reheat Steam								X			A3.02 – Ability to monitor automatic operation of the MRSS, including: Isolation of the MRSS.	3.1	17
059 (SF4S MFW) Main Feedwater							X				A2.05 – Ability to (a) predict the impacts of the following malfunctions or operations on the MFW; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Rupture in MFW suction or discharge line.	3.1*	18
061 (SF4S AFW) Auxiliary/Emergency Feedwater	х										K2.03 – Knowledge of bus power supplies to the following: AFW diesel driven pump.	4.0*	19
062 (SF6 ED AC) AC Electrical Distribution						X					A1.03 – Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the AC distribution system controls including: Effect on instrumentation and controls of switching power supplies.	2.5	20
062 (SF6 ED AC) AC Electrical Distribution SRO-Only Question							X				A2.06 – Ability to (a) predict the impacts of the following malfunctions or operations on the ac distribution system; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Keeping the safeguards buses electrically separate. (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.9	79
063 (SF6 ED DC) DC Electrical Distribution							Х				A2.01 – Ability to (a) predict the impacts of the following malfunctions or operations on the DC electrical systems; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Grounds.	2.5	21
063 (SF6 ED DC) DC Electrical Distribution SRO-Only Question										x	2.4.49 – Ability to perform without reference to procedures those actions that require immediate operation of system components and controls. (CFR: 41.10 / 43.2 / 45.6)	4.4	80
064 (SF6 EDG) Emergency Diesel Generator					Х			_			K6.07 – Knowledge of the effect of a loss or malfunction of the following will have on the EDG system: Air receivers.	2.7	22
073 (SF7 PRM) Process Radiation Monitoring			х								K4.01 – Knowledge of PRM system design feature(s) and/or interlock(s) which provide for the following: Release termination when radiation exceeds setpoint.	4.0	23

073 (SF7 PRM) Process Radiation											Х	2.4.47 – Ability to diagnose and recognize trends in an accurate and timely manner	4.2	24
Monitoring												utilizing the appropriate control room reference material. (CFR: 41.10 / 43.5 / 45.12)		
076 (SF4S SW) Service Water		Х										K2.08 – Knowledge of bus power supplies to the following: ESF-actuated MOVs.	3.1*	25
076 (SF4S SW) Service Water											Х	2.2.39 – Knowledge of less than or equal to one hour Technical Specification action statements for systems.	3.9	26
078 (SF8 IAS) Instrument Air			х									K3.03 – Knowledge of the effect that a loss or malfunction of the IAS will have on the following: Cross-tied units. (CFR: 41.7 / 45.6)	3.0	27
103 (SF5 CNT) Containment			Х									K3.03 – Knowledge of the effect that a loss or malfunction of the containment system will have on the following: Loss of containment integrity under refueling operations.	3.7	28
053 (SF1; SF4P ICS*) Integrated Control														
K/A Category Point Totals:	3	2	3	3	2	2	3	3/3	2	2	3/2	Group Point Total:		28/5

ES-401										ion (			1 ES-40	01-2
2 / ///	1.,,	1.0										2 (RO/SRO)	l	
System # / Name 001 (SF1 CRDS) Control Rod Drive	K1	K2 X	К3	K4	K5	K6	A1	A2	A3	A4	G*	K/A Topic(s)  K2.02 – Knowledge of bus power supplies to the following: One-line diagram of power supply to trip breakers.	3.6	29
002 (SF2; SF4P RCS) Reactor Coolant								X				A2.01 Ability to (a) predict the impacts of the following malfunctions or operations on the RCS; and (b) based on those predictions, use Procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Loss of coolant inventory. (CFR: 41.5 / 43.5 / 45.3 / 45.5)	4.3	32
011 (SF2 PZR LCS) Pressurizer Level Control									Х			A3.01 – Ability to monitor automatic operation of the PZR LCS, including: Boration/dilution.	2.8*	30
014 (SF1 RPI) Rod Position Indication														
015 (SF7 NI) Nuclear Instrumentation			Х									K3.03 – Knowledge of the effect that a loss or malfunction of the NIS will have on the following: Fuel handling system.	2.7	31
016 (SF7 NNI) Nonnuclear Instrumentation														
017 (SF7 ITM) In-Core Temperature Monitor														
027 (SF5 CIRS) Containment Iodine Removal														
028 (SF5 HRPS) Hydrogen Recombiner and Purge Control														
029 (SF8 CPS) Containment Purge SRO-Only Question								X				A2.01 – Ability to (a) predict the impacts of the following malfunctions or operations on the Containment Purge System; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Maintenance or other activity taking place inside containment. (CFR: 41.5 / 43.5 / 45.3 / 45.13)	3.6	81
033 (SF8 SFPCS) Spent Fuel Pool Cooling SRO-Only Question											Х	2.4.41 – Knowledge of the emergency action level thresholds and classifications. (CFR: 41.10 / 43.5 / 45.11)	4.6	82
034 (SF8 FHS) Fuel-Handling Equipment														
035 (SF 4P SG) Steam Generator						Х						K6.02 – Knowledge of the effect of a loss or malfunction on the following will have on the S/GS: Secondary PORV.	3.1	34
041 (SF4S SDS) Steam Dump/Turbine Bypass Control										Х		A4.05 – Ability to manually operate and/or monitor in the control room: Main steam header pressure.	3.1	35
045 (SF 4S MTG) Main Turbine Generator											Х	2.4.1 – Knowledge of EOP entry conditions and immediate action steps. (CFR: 41.10 / 43.5 / 45.13)	4.6	33
055 (SF4S CARS) Condenser Air Removal														
056 (SF4S CDS) Condensate SRO-Only Question								X				A2.05 – Ability to (a) predict the impacts of the following malfunctions or operations on the Condensate System; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Condenser tube leakage. (CFR: 41.5 / 43.5 / 45.3 / 45.13)	2.5*	83

071 (SF9 WGS) Waste Gas Disposal							х					A1.06 – Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with Waste Gas Disposal System operating the controls including: Ventilation system.	2.5	36
072 (SF7 ARM) Area Radiation Monitoring				Х								K4.01 – Knowledge of ARM system design feature(s) and/or interlock(s) which provide for the following: Containment ventilation isolation.	3.3*	37
075 (SF8 CW) Circulating Water	Х											K1.08 – Knowledge of the physical connections and/or cause-effect relationships between the circulating water system and the following systems: Emergency/essential SWS.	3.2*	38
079 (SF8 SAS**) Station Air														
086 Fire Protection														
050 (SF 9 CRV*) Control Room Ventilation														
K/A Category Point Totals:	1	1	1	1	0	1	1	1/2	1	1	1/1	Group Point Total:		10/3

Category	K/A #	Topic	R	iO	SRC	only
		·	IR	#	IR	#
	2.1.5	Ability to use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc. (CFR: 41.10 / 43.5 / 45.12)			3.9	94
	2.1.18	Ability to make accurate, clear, and concise logs, records, status boards, and reports. (CFR: 41.10 / 45.12 / 45.13)	3.6	66		
1. Conduct of	2.1.25	Ability to interpret reference materials, such as graphs, curves, tables, etc. (CFR: 41.10 / 43.5 / 45.12)	3.9	67		
Operations	2.1.43	Ability to use procedures to determine the effects on reactivity of plant changes, such as reactor coolant system temperature, secondary plant, fuel depletion, etc. (CFR: 41.10 / 43.6 / 45.6)	4.1	68		
	2.1.45	Ability to identify and interpret diverse indications to validate the response of another indication. (CFR: 41.7 / 43.5 / 45.4)			4.3	95
	Subtotal		3		2	
	2.2.14	Knowledge of the process for controlling equipment configuration or status. (CFR: 41.10 / 43.3 / 45.13)	3.9	69		
2. Equipment	2.2.22	Knowledge of limiting conditions for operations and safety limits. (CFR: 41.5 / 43.2 / 45.2)			4.7	96
Control	2.2.42	Ability to recognize system parameters that are entry-level conditions for Technical Specifications. (CFR: 41.7 / 41.10 / 43.2 / 43.3 / 45.3)	3.9	70		
	Subtotal		2		1	
	2.3.4	Knowledge of radiation exposure limits under normal or emergency conditions. (CFR: 41.12 / 43.4 / 45.10)	3.2	71		
	2.3.11	Ability to control radiation releases. (CFR: 41.11 / 43.4 / 45.10)	3.8	72		
3. Radiation	2.3.13	Knowledge of radiological safety procedures pertaining to licensed operator duties, such as response to radiation monitor alarms, containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc. (CFR: 41.12 / 43.4 / 45.9 / 45.10)			3.8	97
Control	2.3.14	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities. (CFR: 41.12 / 43.4 / 45.10)	3.4	73		
	2.3.15	Knowledge of radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc. (CFR: 41.12 / 43.4 / 45.9)			3.1	98
	Subtotal		3		2	
	2.4.3	Ability to identify post-accident instrumentation. (CFR: 41.6 / 45.4)	3.7	74		
4. Emergency	2.4.9	Knowledge of low power /shutdown implications in accident (e.g. LOCA or loss of RHR) mitigation strategies. (CFR: 41.10 / 43.5 / 45.13)			4.2	99
Procedures/Plan	2.4.20	Knowledge of operational implications of EOP warnings, cautions, and notes. (CFR: 41.10 / 43.5 / 45.13)			4.3	100
	2.4.46	Ability to verify that the alarms are consistent with the plant conditions. (CFR: 41.10 / 43.5 / 45.3 / 45.12)	4.2	75		
	Subtota	al	2		2	
Tier 3 Point Total			10		7	