ES-401	S-401 BWR Examination Outline FORM ES-401-1																	
Facility Name [.] I	Crown Crown K/A Category Points Tior Crown K/A K/A K/A A A A A A A A A A A A A A A																	
					D	RO	K/A	Ca	teac	orv P	oint	s			S	R0-0	nlv Pc	oints
Tier	Group	K 1	K 2	K 3	K 4	K 5	K	A 1	A 2	A	A 4	G *	Total	ļ	42	G)*	Total
1.	1	3	3	4			Ŭ	3	4			3	20		5		2	7
Abnormal	2	2	1	1		N/A		1	1	N	/A	1	7		1	2	2	3
Plant Evolutions	Tier Totals	5	4	5				4	5			4	27		6	4	4	10
2	1	3	3	3	3	2	2	2	2	2	2	2	26		3		2	5
Plant	2	1	1	1	1	1	1	1	1	2	1	1	12	0	2		1	3
Systems	Tier Totals	4	4	4	4	3	3	3	3	4	3	3	38		5		3	8
3. Generic K	3. Generic Knowledge and Abilities 1 2 3 4 1 2 3 4 Categories																	
(Categories 3 2 2 3 10 2 2 1 2																	
Note: 1. 2. 3. 4. 5. 6. 7.* 8.	Categories32232212Ensure 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 Section D.1.b of ES-401 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 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. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IRs)																	
9.	SRO-only exam pages for RO ar For Tier 3, selec and point totals	, entend nd SF ct top (#) o	er it c RO-o ics fr n Foi	on the nly e rom S rm E	e left xams Sectio S-40	side 5. on 2 c 1-3. L	of Co of the .imit	olumr e K/A SRO	n A2 cata sele	for Ti log, a ction:	ier 2, and e s to k	Grou enter f K/As	up 2 (Note #1 do the K/A numbers that are linked to	s, desc o 10 C	apply). criptions FR 55.4	Use du , IRs, 3.	iplicate	

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Form ES-401-1

ES-401 BWR Examination Outline Form ES-40 Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO)													
Eme	ergen	icy ar	d Abi	norma	al Pla	nt Ev	volutions - Tier 1/Group 1 (RO)						
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				Knowledge of the reasons for the following responses as they apply to Partial or Complete Loss of Forced Core Flow Circulation: Reactor power response	3.7	1				
295003 Partial or Complete Loss of AC / 6				0 2			Ability to operate and/or monitor the following as they apply to Partial or Complete Loss of AC: Emergency generators	4.2	1				
295004 Partial or Total Loss of DC Pwr / 6					0 3		Ability to determine and/or interpret the following as they apply to Partial or Total Loss of DC Pwr: Battery voltage	2.8	1				
295005 Main Turbine Generator Trip / 3						02. 38	Knowledge of conditions and limitations in the facility license.	3.6	1				
295006 SCRAM / 1	0 1						Knowledge of the operational implications of the following concepts as they apply to SCRAM: Decay heat generation and removal.	3.7	1				
295016 Control Room Abandonment / 7		0 2					Knowledge of the interrelations between Control Room Abandonment and the following: Local control stations: Plant-Specific	4.0	1				
295018 Partial or Total Loss of CCW / 8			0 6				Knowledge of the reasons for the following responses as they apply to Partial or Total Loss of CCW: Increasing cooling water flow to heat exchangers	3.3	1				
295019 Partial or Total Loss of Inst. Air / 8				0 4			Ability to operate and/or monitor the following as they apply to Partial or Total Loss of Inst. Air: Service air isolations valves: Plant-Specific	3.3	1				
295021 Loss of Shutdown Cooling / 4					0 3		Ability to determine and/or interpret the following as they apply to Loss of Shutdown Cooling: Reactor water level	3.5	1				
295023 Refueling Acc / 8						02. 39	Knowledge of less than or equal to one hour Technical Specification action statements for systems.	3.9	1				
295024 High Drywell Pressure / 5	0 1						Knowledge of the operational implications of the following concepts as they apply to High Drywell Pressure: Drywell integrity: Plant-Specific	4.1	1				
295025 High Reactor Pressure / 3		09					Knowledge of the interrelations between High Reactor Pressure and the following: Reactor power	3.9	1				
295026 Suppression Pool High Water Temp. / 5			0 1				Knowledge of the reasons for the following responses as they apply to Suppression Pool High Water Temp.: Emergency/normal depressurization	3.8	1				
295027 High Containment Temperature / 5									0				
295028 High Drywell Temperature / 5					02		Ability to determine and/or interpret the following as they apply to High Drywell Temperature: Reactor pressure	3.8	1				
295030 Low Suppression Pool Wtr Lvl / 5						04. 18	Knowledge of the specific bases for EOPs.	3.3	1				
295031 Reactor Low Water Level / 2	01						Knowledge of the operational implications of the following concepts as they apply to Reactor Low Water Level: Adequate core cooling.	4.6	1				
295037 SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1		0 5					Knowledge of the interrelations between SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown and the following: CRD hydraulic system	4.0	1				
295038 High Off-site Release Rate / 9			02				Knowledge of the reasons for the following responses as they apply to High Off-site Release Rate: System isolations	3.9	1				
600000 Plant Fire On Site / 8				05			Ability to operate and/or monitor the following as they apply to Plant Fire On Site: Plant and control room ventilation systems	3.0	1				
700000 Generator Voltage and Electric Grid Disturbances / 6					0 9		Ability to determine and/or interpret the following as they apply to Generator Voltage and Electric Grid Disturbances: Operational status of emergency diesel generators	3.9	1				
K/A Category Totals:	3	3	4	3	4	3	Group Point Total:		20				

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Form ES-401-1

ES-401 BWR Examination Outline Form ES-401 Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO)												
Eme	ergen	cy an	d Abı	norma	al Pla	nt Ev	volutions - Tier 1/Group 2 (RO)					
E/APE # / Name / Safety Function	K 1	К 2	К 3	A 1	A 2	G	K/A Topic(s)	IR	#			
295002 Loss of Main Condenser Vac / 3					0 1		Ability to determine and/or interpret the following as they apply to Loss of Main Condenser Vac: Condenser vacuum/absolute pressure	2.9	1			
295007 High Reactor Pressure / 3						02. 22	Knowledge of limiting conditions for operations and safety limits.	4.0	1			
295008 High Reactor Water Level / 2									0			
295009 Low Reactor Water Level / 2									0			
295010 High Drywell Pressure / 5			0 2				Knowledge of the reasons for the following responses as they apply to High Drywell Pressure: Increased drywell cooling	3.4	1			
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 3			Ability to operate and/or monitor the following as they apply to Inadvertent Reactivity Addition: RMCS: Plant-Specific	3.5	1			
295015 Incomplete SCRAM / 1		0 4					Knowledge of the interrelations between Incomplete SCRAM and the following: RPS	4.0	1			
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 2						Knowledge of the operational implications of the following concepts as they apply to High Secondary Containment Area Radiation Levels: Personnel protection	3.9	1			
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 1						Knowledge of the operational implications of the following concepts as they apply to High CTMT Hydrogen Conc.: Containment integrity	3.3	1			
K/A Category Totals:	2	1	1	1	1	1	Group Point Total:		7			

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ES-401 BWR Examination Outline Form ES-401- Plant Systems - Tier 2/Group 1 (RO) System # / Name K K K K A A A G K/A Topic(s) IR #														S-401-1
System # / Name	Plant Systems - Tier 2/Group 1 (RO) k / Name K K K K K A <td>#</td>										#			
203000 RHR/LPCI: Injection Mode				0 7								Knowledge of RHR/LPCI: Injection Mode design feature(s) and/or interlocks which provide for the following: Emergency generator load sequencing	3.7	1
205000 Shutdown Cooling					0 3							Knowledge of the operational implications of the following concepts as they apply to Shutdown Cooling: Heat removal mechanisms	2.8	1
206000 HPCI						0 9						Knowledge of the effect that a loss or malfunction of the following will have on the HPCI: Condensate storage and transfer system: BWR-2, 3, 4	3.5	1
207000 Isolation (Emergency) Condenser														0
209001 LPCS							0 8					Ability to predict and/or monitor changes in parameters associated with operating the LPCS controls including: System lineup	3.3	1
209002 HPCS														0
211000 SLC								0 6				Ability to (a) predict the impacts of the following on the SLC; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Valve openings	3.1	1
212000 RPS									0 5			Ability to monitor automatic operations of the RPS including: SCRAM instrument volume level	3.9	1
215003 IRM	0 2									0 3		Knowledge of the physical connections and/or cause-effect relationships between IRM and the following: Reactor manual control; Ability to manually operate and/or monitor in the control room: IRM range switches	3.6; 3.6	2
215004 Source Range Monitor		0 1									01. 32	Knowledge of electrical power supplies to the following: SRM channels/detectors; Ability to explain and apply system limits and precautions.	2.6; 3.8	2
215005 APRM / LPRM	1 0		0 7									Knowledge of the physical connections and/or cause-effect relationships between APRM / LPRM and the following: Reactor manual control system: Plant- Specific; Knowledge of the effect that a loss or malfunction of the APRM / LPRM will have on following: Rod block monitor: Plant-Specific	3.3; 3.2	2
217000 RCIC				0 4								Knowledge of RCIC design feature(s) and/or interlocks which provide for the following: Prevents turbine damage: Plant-Specific	3.0	1
218000 ADS		0 1			0 1							Knowledge of electrical power supplies to the following: ADS logic; Knowledge of the operational implications of the following concepts as they apply to ADS: ADS logic operation	3.1; 3.8	2
223002 PCIS/Nuclear Steam Supply Shutoff						0 4						Knowledge of the effect that a loss or malfunction of the following will have on the PCIS/Nuclear Steam Supply Shutoff: Nuclear boiler instrumentation	3.3	1
239002 SRVs				0 3			0 5					Knowledge of SRVs design feature(s) and/or interlocks which provide for the following: Prevents siphoning of water into SRV discharge piping and limits loads on subsequent actuation of SRV's; Ability to predict and/or monitor changes in parameters associated with operating the SRVs controls including: Reactor water level	3.1; 3.7	2
259002 Reactor Water Level Control								0 6				Ability to (a) predict the impacts of the following on the Reactor Water Level Control; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of controller signal output	3.3	1
261000 SGTS									0 3			Ability to monitor automatic operations of the SGTS including: Valve operation	3.0	1
262001 AC Electrical Distribution										0 5		Ability to manually operate and/or monitor in the control room: Voltage, current, power, and frequency on A.C. buses	3.3	1
262002 UPS (AC/DC)											02. 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.	4.2	1
263000 DC Electrical Distribution	0 4											Knowledge of the physical connections and/or cause-effect relationships between DC Electrical Distribution and the following: Ground detection	2.6	1
264000 EDGs			0 1									Knowledge of the effect that a loss or malfunction of the EDGs will have on following: Emergency core cooling systems	4.2	1
300000 Instrument Air		0 1										Knowledge of electrical power supplies to the following: Instrument air compressor	2.8	1
400000 Component Cooling Water			0 1									Knowledge of the effect that a loss or malfunction of the Component Cooling Water will have on following: Loads cooled by CCWS	2.9	1
K/A Cotogon / Totolo	_		_		_		^	-	<u>^</u>	_	-			00
K/A Category Totals:	3	3	3	3	2	2	2	2	2	2	2	Group Point Total:		26

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ES-401 BWR Examination Outline Form ES-40 Plant Systems - Tier 2/Group 2 (RO)														S-401-1
						Ρ	lant	Sy	ster	ns -	Tie	r 2/Group 2 (RO)		
System # / Name	S 1	S 2	К 3	K 4	K 5	K 6	A 1	A 2	А 3	A 4	G	K/A Topic(s)	IR	#
201001 CRD Hydraulic														0
201002 RMCSÁ							0					Ability to predict and/or monitor changes in parameters associated with operating the RMCS controls including: CRD drive water flow	2.8	1
201003 Control Rod and Drive Mechanism			0									Knowledge of the effect that a loss or malfunction of the Control Rod and Drive	3.2	1
201004 RSCS	-													0
201005 RCIS														0
201006 RWM	1			0 3								Knowledge of RWM design feature(s) and/or interlocks which provide for the following: Select blocks/errors: P-Spec(Not-BWR6)	3.3	1
202001 Recirculation		0 3										Knowledge of electrical power supplies to the following: Recirculation system valves	2.7	1
202002 Recirculation Flow Control														0
204000 RWCU									0 3			Ability to monitor automatic operations of the RWCU including: Response to system isolations	3.6	1
214000 RPIS														0
215001 Traversing In-core Probe														0
215002 RBM	┢													0
216000 Nuclear Boiler Inst.					4							apply to Nuclear Boiler Inst.: Density	2.6	1
219000 RHR/LPCI: Torus/Pool Cooling														0
223001 Primary CTMT and Aux.														0
226001 RHR/LPCI: CTMT Spray Mode														0
230000 RHR/LPCI: Torus/Pool Spray Mode	0 1											knowledge of the physical connections and/or cause-effect relationships between RHR/LPCI: Torus/Pool Spray Mode and the following: Suppression pool	3.6	1
233000 Fuel Pool Cooling/Cleanup														0
234000 Fuel Handling Equipment														0
239001 Main and Reheat Steam	┡													0
239003 MSIV Leakage Control	┢		-			1			-			Knowledge of the effect that a loss or malfunction of the following will have on		0
241000 Reactor/Turbine Pressure Regulator						2						the Reactor/Turbine Pressure Regulator: Control/governor valves	3.3	1
245000 Main Turbine Gen. / Aux.	⊢													0
256000 Reactor Condensate	┢								<u> </u>					0
259001 Reactor Feedwater 268000 Radwaste Á	-									0		Ability to manually operate and/or monitor in the control room: Sump	34	1
271000 Offgas	┢								0	1		Integrators Ability to monitor automatic operations of the Offgas including: System	2.8	1
272000 Radiation Monitoring	┢──								3			temperatures		0
286000 Fire Protection	┢													0
288000 Plant Ventilation											01. 27	Knowledge of system purpose and/or function.	3.9	1
290001 Secondary CTMT								0 4				Ability to (a) predict the impacts of the following on the Secondary CTMT; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: High airborne radiation	3.4	1
290003 Control Room HVAC														0
290002 Reactor Vessel Internals	\vdash					<u> </u>								0
	╘	<u> </u>		<u> </u>	<u> </u>			<u> </u>						
K/A Category Totals:	1	1	1	1	1	1	1	1	2	1	1	Group Point Total:		12

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Form ES-401-1

ES-401 BWR Examination Outline Form ES-401-1													
Eme	rgeno	cy and	d Abn	orma	l Plar	nt Evo	olutions - Tier 1/Group 1 (SRO)	=					
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					0 1		Ability to determine and/or interpret the following as they apply to Partial or Complete Loss of AC: Cause of partial or complete loss of A.C. power	3.7	1				
295004 Partial or Total Loss of DC Pwr / 6						02. 40	Ability to apply Technical Specifications for a system.	4.7	1				
295005 Main Turbine Generator Trip / 3									0				
295006 SCRAM / 1									0				
295016 Control Room Abandonment / 7					0 6		Ability to determine and/or interpret the following as they apply to Control Room Abandonment: Cooldown rate	3.5	1				
295018 Partial or Total Loss of CCW / 8						04. 45	Ability to prioritize and interpret the significance of each annunciator or alarm.	4.3	1				
295019 Partial or Total Loss of Inst. Air / 8									0				
295021 Loss of Shutdown Cooling / 4									0				
295023 Refueling Acc / 8					0 1		Ability to determine and/or interpret the following as they apply to Refueling Accidents: Area radiation levels	4.0	1				
295024 High Drywell Pressure / 5					0 1		Ability to determine and/or interpret the following as they apply to High Drywell Pressure: Drywell pressure	4.4	1				
295025 High Reactor Pressure / 3									0				
295026 Suppression Pool High Water Temp. / 5									0				
295027 High Containment Temperature / 5									0				
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					0 3		Ability to determine and/or interpret the following as they apply to SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown: SBLC tank level	4.4	1				
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	5	2	Group Point Total:		7				

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Form ES-401-1

ES-401 BWR Examination Outline Form ES-40													
Eme	rgenc	cy and	d Abn	orma	l Plar	nt Evo	olutions - Tier 1/Group 2 (SRO)						
E/APE # / Name / Safety Function	К 1	K 2	К 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									0				
295009 Low Reactor Water Level / 2									0				
295010 High Drywell Pressure / 5									0				
295011 High Containment Temp / 5									0				
295012 High Drywell Temperature / 5 0 0 0 0													
295013 High Suppression Pool Temp. / 5						01. 25	Ability to interpret reference materials, such as graphs, curves, tables, etc.	4.2	1				
295014 Inadvertent Reactivity Addition / 1									0				
295015 Incomplete SCRAM / 1									0				
295017 High Off-site Release Rate / 9									0				
295020 Inadvertent Cont. Isolation / 5 & 7					0 6		Ability to determine and/or interpret the following as they apply to Inadvertent Cont. Isolation: Cause of isolation	3.8	1				
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						04. 04	Ability to recognize abnormal indications for system operating parameters that are entry-level conditions for emergency and abnormal operating procedures.	4.7	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:	0	0	0	0	1	2	Group Point Total:		3				

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ES-401 BWR Examination Outline Form ES-													S-401-1	
						Pl	lant	Sys	stem	ıs -	Tier	2/Group 1 (SRO)		
System # / Name	К 1	K 2	К 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								0 8				Ability to (a) predict the impacts of the following on the RHR/LPCI: Injection Mode; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Inadecuate room cooling	3.0	1
205000 Shutdown Cooling Mode			F			F	F							0
206000 HPCI											04. 49	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.	4.4	1
207000 Isolation (Emergency) Condenser													_	0
209001 LPCS							Γ				04. 20	Knowledge of the operational implications of EOP warnings, cautions, and notes.	4.3	1
209002 HPCS														0
211000 SLC														0
212000 RPS														0
215003 IRM														0
215004 Source Range Monitor														0
215005 APRM / LPRM														0
217000 RCIC			L			L	⊢							0
218000 ADS			<u> </u>		_	<u> </u>	┢							0
223002 PCIS/Nuclear Steam Supply														0
	-	-	┢─	\vdash	⊢	┢─	┢──	-						0
259002 Reactor Water Level Control														0
261000 SGTS								0 2				Ability to (a) predict the impacts of the following on the SGTS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: High system flow	3.1	1
262001 AC Electrical Distribution														0
262002 UPS (AC/DC)														0
263000 DC Electrical Distribution														0
264000 EDGs														0
300000 Instrument Air								0 1				Ability to (a) predict the impacts of the following on the Instrument Air; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Air dryer and filter malfunctions	2.8	1
400000 Component Cooling Water														0
K/A Category Totals:	0	0	0	0	0	0	0	3	0	0	2	Group Point Total:		5

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Form ES-401-1

ES-401 BWR Examination Outline Form ES-													S-401-1		
	_	_	_	_	_	PI	ant	Sy	/ste	ems	s - 1	Tier	2/Group 2 (SRO)		
System # / Name	K 1	K 2	К 3	K 4	K 5	K 6	A 1	A 2	2	A 3	A 4	G	K/A Topic(s)	IR	#
201001 CRD Hydraulic								C g)				Ability to (a) predict the impacts of the following on the CRU Hydrauic system; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of applicable plant air systems	3.1	1
201002 RMCS	┡	┡	\vdash	┡	Ļ	┢	\vdash		4	4					0
201003 Control Rod and Drive Mechanism	⊢	┢	┢	┢	┢	┢	┡	+	+	-	_				0
201004 RSUS	⊢	┢	⊢	┢	┝	┢	┡	+	+	+	_				0
201005 RUIS	┢	╟	\vdash	┢	┝	╋	┢	+	+	+	_				0
202001 Recirculation	┢──	┢──	\vdash	┢	┢	╈	\vdash	╈	t	+					0
202001 Recirculation Flow Control	┢─	┢─	┢	┢	┢	┢	\vdash	t	t	+	-				0
204000 RWCU			┢	┢	┢	┢	┢	┨	t	┫					0
214000 RPIS			┢	┢	F	\uparrow	┢	T	t	1					0
215001 Traversing In-core Probe			Γ	Γ	Γ	Γ	Γ		T	T					0
215002 RBM	\square	\square	\square	\vdash	┢	\vdash	\vdash	T	T	ヿ					0
216000 Nuclear Boiler Inst.				1_		<u>†</u> _		t	t	T					0
219000 RHR/LPCI: Torus/Pool Cooling Mode												04. 41	Knowledge of the emergency action level thresholds and classifications.	4.6	1
223001 Primary CTMT and Aux.			L												0
226001 RHR/LPCI: CTMT Spray Mode			L	L			L								0
230000 RHR/LPCI: Torus/Pool Spray Mode	L		L		L		L			\downarrow					0
233000 Fuel Pool Cooling/Cleanup			L	L	L	L	L								0
234000 Fuel Handling Equipment															0
239001 Main and Reheat Steam	L			L	L		L								0
239003 MSIV Leakage Control	L	L	L	L	L	\bot	L	╞		\downarrow					0
241000 Reactor/Turbine Pressure Regulator															0
245000 Main Turbine Gen. / Aux.	L			L			L								0
256000 Reactor Condensate	L			L		\bot	L								0
259001 Reactor Feedwater	L	L	L	L	L	\bot	L			$ \downarrow$					0
268000 Radwaste	L		L	L	L		L			$ \downarrow$					0
271000 Offgas	L	L	L	L	L	\bot	L	╞		\downarrow					0
272000 Radiation Monitoring	L	L	L	L	L	\bot	L	╞		\downarrow					0
286000 Fire Protection	L	L	L	L	L	\bot	L		╇	\downarrow					0
288000 Plant Ventilation	L	L	L	L	L	\bot	L		╇	\downarrow					0
290001 Secondary CTMT				L	L		L		╇						0
290003 Control Room HVAC								0) 1				Ability to (a) predict the impacts of the following on the Control Room HVAC; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Initiation/reconfiguration	3.2	1
290002 Reactor Vessel Internals							L								0
K/A Category Totals:	0	0	0	0	0	0	0	2	2	0	0	1	Group Point Total:		3

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ES-401		Generic Knowledge and Abilities Outline (Tier 3)		Fo	orm ES	-401-3
Facility Nam	ne:Fermi	2 Date of Exam:8/24/2015				
Category	K/A #	Торіс	R	0 #	SRO	-Only
<u> </u>	2.1.41	Knowledge of the refueling process.	IK	#	1K 3.7	# 1
	2.1. 04	Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status,	3.3	1		
1	2.1. 34	Knowledge of primary and secondary plant chemistry limits.	2.7	1		
Conduct of	2.1. 07	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.	4.4	1		
Operations	2.1. 42	Knowledge of new and spent fuel movement procedures.			3.4	1
	2.1.					
	Subtota			3		2
	2.2. 23	Ability to track Technical Specification limiting conditions for operations.			4.6	1
	2.2. 25	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.			4.2	1
2.	2.2. 36	Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions for operations.	3.1	1		
Equipment Control	2.2. 14	Knowledge of the process for controlling equipment configuration or status.	3.9	1		
-	2.2.					
	2.2.					
	Subtota			2		2
	2.3. 04	Knowledge of radiation exposure limits under normal or emergency conditions.	3.2	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		
3.	2.3. 05	Ability to use radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc.			2.9	1
Radiation Control	2.3.					
	2.3.					
	2.3.					
	Subtota			2		1
	2.4. 11	Knowledge of abnormal condition procedures.			4.2	1
	2.4. 01	Knowledge of EOP entry conditions and immediate action steps.	4.6	1		
4. Emergency	2.4. 43	Knowledge of emergency communications systems and techniques.	3.2	1		
Procedures	2.4. 46	Ability to verify that the alarms are consistent with the plant conditions.	4.2	1		
/ Pian	2.4. 27	Knowledge of "fire in the plant" procedures.			3.9	1
	2.4.					
	Subtota			3		2
Ther 3 Point	lotal		(10		

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