

Facility: <u>Vermont Yankee U1</u>														Date of Exam: <u>02/14/2014</u>				
Tier	Group	RO K/A Category Points											SRO-Only Points					
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2	G*	Total		
1. Emergency & Abnormal Plant Evolutions	1	4	3	5	N/A			3	2	N/A			4	21	4	2	6	
	2	1	1	1				1	1				1	6	1	3	4	
	Tier Totals	5	4	6				4	3				5	27	5	5	10	
2. Plant Systems	1	3	2	2	3	2	2	3	2	3	3	1	26	3	2	5		
	2	1	1	1	1	2	1	1	1	1	1	1	12	0	2	3		
	Tier Totals	4	3	3	4	4	3	4	3	4	4	4	38	5	3	8		
3. Generic Knowledge and Abilities Categories				1		2		3		4		10		1	2	3	4	7
				3		2		3		2				1	2	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/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.
- 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. 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) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above; if fuel handling equipment is sampled in other than Category A2 or G* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note #1 does not apply). Use duplicate pages for RO and SRO-only exams.
- 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

Form ES-401-1

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				R			AA1.07 - Ability to operate and/or monitor the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION : Nuclear boiler instrumentation system	3.1	50
295003 Partial or Complete Loss of AC / 6	R						AK1.05 - Knowledge of the operational implications of the following concepts as they apply to PARTIAL OR COMPLETE LOSS OF A.C. POWER : Failsafe component design	2.6	40
295004 Partial or Total Loss of DC Pwr / 6						R	2.1.27 - Conduct of Operations: Knowledge of system purpose and / or function.	3.9	54
295005 Main Turbine Generator Trip / 3			R				AK3.04 - Knowledge of the reasons for the following responses as they apply to MAIN TURBINE GENERATOR TRIP : Main Generator Trip	3.2	52
295006 SCRAM / 1			R				AK3.01 - Knowledge of the reasons for the following responses as they apply to SCRAM : Reactor water level response	3.8	45
295016 Control Room Abandonment / 7			R				AK3.02 - Knowledge of the reasons for the following responses as they apply to CONTROL ROOM ABANDONMENT : Turbine trip	3.7	47
295018 Partial or Total Loss of CCW / 8				R	S		AA1.02 - Ability to operate and/or monitor the following as they apply to PARTIAL OR COMPLETE LOSS OF COMPONENT COOLING WATER : System loads AA2.05 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF COMPONENT COOLING WATER : System pressure	3.3 2.9	48 77
295019 Partial or Total Loss of Inst. Air / 8					R		AA2.01 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR : Instrument air system pressure	3.5	53
295021 Loss of Shutdown Cooling / 4	R						AK1.01 - Knowledge of the operational implications of the following concepts as they apply to LOSS OF SHUTDOWN COOLING : Decay heat	3.6	39
295023 Refueling Acc / 8					S	R	2.4.45 - Emergency Procedures / Plan: Ability to prioritize and interpret the significance of each annunciator or alarm AA2.03 - Ability to determine and/or interpret the following as they apply to REFUELING ACCIDENTS : Airborne contamination levels	4.1 3.8	58 76
295024 High Drywell Pressure / 5		R				R / S	EK1.01 - Knowledge of the operational implications of the following concepts as they apply to HIGH DRYWELL PRESSURE : Drywell integrity: Plant-Specific 2.4.34 - Emergency Procedures / Plan: Knowledge of RO tasks performed outside the main control room during an emergency and the resultant operational effects. 2.4.4 - Emergency Procedures / Plan: Ability to recognize abnormal indications for system operating parameters that are entry-level conditions for emergency and abnormal operating procedures.	4.1 4.2 4.7	57 64 79
295025 High Reactor Pressure / 3			R				EK3.02 - Knowledge of the reasons for the following responses as they apply to HIGH REACTOR PRESSURE : Recirculation pump trip: Plant-Specific	3.9	43

E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	?#
295026 Suppression Pool High Water Temp. / 5	R						EK1.02 - Knowledge of the operational implications of the following concepts as they apply to SUPPRESSION POOL HIGH WATER TEMPERATURE : Steam condensation	3.5	41
295028 High Drywell Temperature / 5			R			S	EK3.01 - Knowledge of the reasons for the following responses as they apply to HIGH DRYWELL TEMPERATURE : Emergency depressurization 2.4.31 - Emergency Procedures / Plan: Knowledge of annunciator alarms, indications, or response procedures.	3.6 4.1	46 81
295030 Low Suppression Pool Wtr Lvl / 5					R		EA2.02 - Ability to determine and/or interpret the following as they apply to LOW SUPPRESSION POOL WATER LEVEL : Suppression pool temperature	3.9	51
295031 Reactor Low Water Level / 2				R			EA1.13 - Ability to operate and/or monitor the following as they apply to REACTOR LOW WATER LEVEL : Reactor water level control	4.3	49
295037 SCRAM Condition Present and Reactor Power Above APRM Downscale or Unknown / 1		R				S	EK2.04 - Knowledge of the interrelations between SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN and the following: SBLC system EA2.01 - Ability to determine and/or interpret the following as they apply to SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN : Reactor power	4.4 4.3	42 82
295038 High Off-site Release Rate / 9						R	2.1.30 - Conduct of Operations: Ability to locate and operate components, including local controls.	4.4	55
600000 Plant Fire On Site / 8		R				S	AK2.04 - Knowledge of the interrelations between PLANT FIRE ON SITE and the following: Breakers, relays, and disconnects AA2.03 - Ability to determine and interpret the following as they apply to PLANT FIRE ON SITE: Fire alarm	2.5 3.2	56 78
700000 Generator Voltage and Electric Grid Disturbances / 6		R					AK2.07 - Knowledge of the interrelations between GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES and the following: Turbine/generator control.	3.6	44
K/A Category Totals:	4	3	5	3	2 / 4	4 / 2	Group Point Total:		21/ 6

E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	?#
295007 High Reactor Pressure / 3				R			AA1.03 - Ability to operate and/or monitor the following as they apply to HIGH REACTOR PRESSURE : RCIC: Plant-Specific	3.4	62
295012 High Drywell Temperature / 5					S		AA2.01 - Ability to determine and/or interpret the following as they apply to HIGH DRYWELL TEMPERATURE : Drywell temperature	3.9	83
295013 High Suppression Pool Temp. / 5			R				AK3.01 - Knowledge of the reasons for the following responses as they apply to HIGH SUPPRESSION POOL TEMPERATURE : Suppression pool cooling operation	3.6	61
295017 High Off-site Release Rate / 9	R					S	AK1.02 - Knowledge of the operational implications of the following concepts as they apply to HIGH OFF-SITE RELEASE RATE : Protection of the general public 2.4.31 - Emergency Procedures / Plan: Knowledge of annunciator alarms, indications, or response procedures.	3.8 4.1	59 80
295020 Inadvertent Cont. Isolation / 5 & 7						R / S	2.4.1 - Emergency Procedures / Plan: Knowledge of EOP entry conditions and immediate action steps 2.2.37 - Equipment Control: Ability to determine operability and / or availability of safety related equipment.	4.6 4.6	65 85
295032 High Secondary Containment Area Temperature / 5		R					EK2.02 - Knowledge of the interrelations between HIGH SECONDARY CONTAINMENT AREA TEMPERATURE and the following: Secondary containment ventilation	3.6	60
295033 High Secondary Containment Area Radiation Levels / 9					R		EA2.02 - Ability to determine and/or interpret the following as they apply to HIGH SECONDARY CONTAINMENT AREA RADIATION LEVELS : Equipment operability	3.1	63
295035 Secondary Containment High Differential Pressure / 5						S	2.4.21 - Emergency Procedures / Plan: 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.	4.6	84
K/A Category Point Totals:	1	1	1	1	1 / 1	2 / 3	Group Point Total:		7/4

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 Topic(s)	IR	?#
203000 RHR/LPCI: Injection Mode								R				A2.11 - Ability to (a) predict the impacts of the following on the RHR/LPCI: INJECTION MODE (PLANT SPECIFIC) ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Motor operated valve failures	3.4	15
205000 Shutdown Cooling								R			S	A1.06 - Ability to predict and/or monitor changes in parameters associated with operating the SHUTDOWN COOLING SYSTEM (RHR SHUTDOWN COOLING MODE) controls including: Reactor temperatures (moderator, vessel, flange) 2.1.27 - Conduct of Operations: Knowledge of system purpose and / or function.	3.7 4.0	14 88
206000 HPCI		R									S	K1.06 - Knowledge of the physical connections and/or cause- effect relationships between HIGH PRESSURE COOLANT INJECTION SYSTEM and the following: Suppression chamber: BWR-2,3,4 2.4.2 - Emergency Procedures / Plan: Knowledge of system set points, interlocks and automatic actions associated with EOP entry conditions.	3.7 4.6	2 89
209001 LPCS									R			A3.05 - Ability to monitor automatic operations of the LOW PRESSURE CORE SPRAY SYSTEM including: Reactor water level	3.9	21
211000 SLC						R		R				K5.06 - Knowledge of the operational implications of the following concepts as they apply to STANDBY LIQUID CONTROL SYSTEM : Tank level measurement A1.02 - Ability to predict and/or monitor changes in parameters associated with operating the STANDBY LIQUID CONTROL SYSTEM controls including: Explosive valve indication	3.0 3.8	10 23
212000 RPS		R										K2.02 - Knowledge of electrical power supplies to the following: Analog trip system logic cabinets	2.7	4
215003 IRM											R	A4.06 - Ability to manually operate and/or monitor in the control room: Detector drives	3.0	19
215004 Source Range Monitor											R	A4.07 - Ability to manually operate and/or monitor in the control room: Verification of proper functioning/ operability	3.4	20
215005 APRM / LPRM					R							K4.08 - Knowledge of AVERAGE POWER RANGE MONITOR/LOCAL POWER RANGE MONITOR SYSTEM design feature(s) and/or interlocks which provide for the following: Sampling of overall core power in each APRM (accomplished through LPRM assignments and symmetrical rod patterns)	2.7	8
217000 RCIC				R								K4.06 - Knowledge of REACTOR CORE ISOLATION COOLING SYSTEM (RCIC) design feature(s) and/or interlocks which provide for the following: Manual initiation	3.5	7

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	?#
218000 ADS									R			A3.05 - Ability to monitor automatic operations of the AUTOMATIC DEPRESSURIZATION SYSTEM including: Suppression pool level	3.6	17
223002 PCIS/Nuclear Steam Supply Shutoff									R / S		R	K3.21 - Knowledge of the effect that a loss or malfunction of the PRIMARY CONTAINMENT ISOLATION SYSTEM/NUCLEAR STEAM SUPPLY SHUT-OFF will have on following: Traversing in-core probe system A2.01 - Ability to (a) predict the impacts of the following on the PRIMARY CONTAINMENT ISOLATION SYSTEM/NUCLEAR STEAM SUPPLY SHUT-OFF ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: A.C. electrical distribution failures 2.4.11 - Emergency Procedures / Plan: Knowledge of abnormal condition procedures.	2.6 3.5 4.0	6 86 22
239002 SRVs							R					K6.02 - Knowledge of the effect that a loss or malfunction of the following will have on the RELIEF/SAFETY VALVES : Air (Nitrogen) supply: Plant-Specific	3.4	12
259002 Reactor Water Level Control							R					K6.05 - Knowledge of the effect that a loss or malfunction of the following will have on the REACTOR WATER LEVEL CONTROL SYSTEM : Reactor water level input	3.5	11
261000 SGTS	R											K1.07 - Knowledge of the physical connections and/or cause- effect relationships between STANDBY GAS TREATMENT SYSTEM and the following: Elevated release stack	3.1	1
262001 AC Electrical Distribution	R								R / S			K1.02 - Knowledge of the physical connections and/or cause- effect relationships between A.C. ELECTRICAL DISTRIBUTION and the following: D.C. electrical distribution A2.09 - Ability to (a) predict the impacts of the following on the A.C. ELECTRICAL DISTRIBUTION ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Exceeding voltage limitations A2.10 - 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: Low reactor water level: Plant-Specific	3.3 3.1 3.2	25 16 87
262002 UPS (AC/DC)			R								R	K3.02 - Knowledge of the effect that a loss or malfunction of the UNINTERRUPTABLE POWER SUPPLY (A.C./D.C.) will have on following: Recirculation pump speed: Plant-Specific A4.01 - Ability to manually operate and/or monitor in the control room: Transfer from alternative source to preferred source	2.9 2.8	5 26

ES-401

BWR Examination Outline
Plant Systems - Tier 2/Group 1

Form ES-401-1

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 Topic(s)	IR	?#
263000 DC Electrical Distribution				R					R			K4.02 - Knowledge of D.C. ELECTRICAL DISTRIBUTION design feature(s) and/or interlocks which provide for the following: Breaker interlocks, permissives, bypasses and cross ties: Plant-Specific A3.01 - Ability to monitor automatic operations of the D.C. ELECTRICAL DISTRIBUTION including: Meters, dials, recorders, alarms, and indicating lights	3.1 3.2	24 18
264000 EDGs							R					A1.09 - Ability to predict and/or monitor changes in parameters associated with operating the EMERGENCY GENERATORS (DIESEL/JET) controls including: Maintaining minimum load on emergency generator (to prevent reverse power)	3.0	13
300000 Instrument Air					R			S				K5.13 - Knowledge of the operational implications of the following concepts as they apply to the INSTRUMENT AIR SYSTEM: Filters A2.04 - Ability to (a) predict the impacts of the following on the CCWS and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: Radiation monitoring system alarm	2.9 3.0	9 90
400000 Component Cooling Water		R										K2.01 - Knowledge of electrical power supplies to the following: CCW pumps	2.9	3
K/A Category Point Totals:	3	2	2	3	2	2	3	2 / 3	3	3	1 / 2	Group Point Total:		26/5

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	??
201001 CRD Hydraulic					R							K5.02 - Knowledge of the operational implications of the following concepts as they apply to CONTROL ROD DRIVE HYDRAULIC SYSTEM : Flow indication	2.6	38
201002 RMCS			R					S				K3.02 - Knowledge of the effect that a loss or malfunction of the REACTOR MANUAL CONTROL SYSTEM will have on following: Rod block monitor: Plant-Specific A2.01 - Ability to (a) predict the impacts of the following on the REACTOR MANUAL CONTROL SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Rod movement sequence timer malfunctions	2.9 2.8	29 91
204000 RWCU				R								K4.03 - Knowledge of REACTOR WATER CLEANUP SYSTEM design feature(s) and/or interlocks which provide for the following: Over temperature protection for system components	2.9	30
215002 RBM									R			A3.04 - Ability to monitor automatic operations of the ROD BLOCK MONITOR SYSTEM including: Verification or proper functioning/ operability: BWR-3,4,5	3.6	35
219000 RHR/LPCI: Torus/Pool Cooling Mode								S				A2.06 - Ability to (a) predict the impacts of the following on the RHR/LPCI: TORUS/SUPPRESSION POOL COOLING MODE ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: D.C. electrical failures	2.9	93
226001 RHR/LPCI: CTMT Spray Mode	R											K1.12 - Knowledge of the physical connections and/or cause- effect relationships between RHR/LPCI: CONTAINMENT SPRAY SYSTEM MODE and the following: Suppression pool (spray penetration): Plant-Specific.	3.0	27
230000 RHR/LPCI: Torus/Pool Spray Mode								R				A2.12 - Ability to (a) predict the impacts of the following on the RHR/LPCI: TORUS/SUPPRESSION POOL SPRAY MODE ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Valve logic failure	3.2	34
234000 Fuel Handling Equipment							R					A1.03 - Ability to predict and/or monitor changes in parameters associated with operating the FUEL HANDLING EQUIPMENT controls including: core reactivity level	3.4	33
239001 Main and Reheat Steam											S	2.1.23 - Conduct of Operations: Ability to perform specific system and integrated plant procedures during all modes of plant operation.	4.4	92

System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	?#
239003 MSIV Leakage Control														
241000 Reactor/Turbine Pressure Regulator														
245000 Main Turbine Gen. / Aux.														
256000 Reactor Condensate														
259001 Reactor Feedwater		R										K2.01 - Knowledge of electrical power supplies to the following: Reactor Feedwater Pumps – Motor drive only	3.3	28
268000 Radwaste					R							K5.02 - Knowledge of the operational implications of the following concepts as they apply to RADWASTE : Radiation hazards and ALARA concept	3.1	31
271000 Offgas														
272000 Radiation Monitoring														
286000 Fire Protection														
288000 Plant Ventilation						R						K6.02 - Knowledge of the effect that a loss or malfunction of the following will have on the PLANT VENTILATION SYSTEMS : Applicable component cooling water system: Plant-Specific	2.5	32
290001 Secondary CTMT											R	2.2.44 - Equipment Control: Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives effect plant and system conditions.	4.2	37
290003 Control Room HVAC										R		A4.01 - Ability to manually operate and/or monitor in the control room: Initiate/reset system	3.2	36
290002 Reactor Vessel Internals														
K/A Category Point Totals:	1	1	1	1	2	1	1	1	1	1	1	Group Point Total:		12
								1	1	1	1			3

Facility: <u>Vermont Yankee</u>			Date of Exam: <u>02/14/2014</u>			
Category	K/A #	Topic	RO		SRO-Only	
			IR	?#	IR	#
1. Conduct of Operations	2.1.1	Knowledge of conduct of operations requirements.	3.8	66		
	2.1.25	Ability to interpret reference materials, such as graphs, curves, tables, etc.	3.9	67		
	2.1.45	Ability to identify and interpret diverse indications to validate the response of another indicator.	4.3	75		
	2.1.6	Ability to manage the control room crew during plant transients			4.8	94
	Subtotal				3	
2. Equipment Control	2.2.1	Ability to perform pre-startup procedures for the facility, including operating those controls associated with plant equipment that could affect reactivity.	4.5	68		
	2.2.39	Knowledge of less than or equal to one hour technical specification action statements for systems.	3.9	69		
	2.2.23	Ability to track Technical Specification limiting conditions for operations.			4.6	95
	2.2.19	Knowledge of maintenance work order requirements			3.3	97
	Subtotal				2	
3. Radiation Control	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.	3.4	70		
	2.3.7	Ability to comply with radiation work permit requirements during normal or abnormal conditions.	3.5	71		
	2.3.11	Ability to control radiation releases.	3.8	74		
	2.3.5	Ability to use radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc.			2.9	96
	2.3.12	Knowledge of Radiological Safety Principles pertaining to licensed operator duties, such as containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc.			3.7	100
	Subtotal				3	
4. Emergency Procedures / Plan	2.4.2	Knowledge of system set points, interlocks and automatic actions associated with EOP entry conditions.	4.5	72		
	2.4.13	Knowledge of crew roles and responsibilities during EOP usage.	4.0	73		
	2.4.18	Knowledge of the specific bases for EOPs.			4.0	97
	2.4.46	Ability to verify that the alarms are consistent with the plant conditions.			4.2	98
	Subtotal				2	
Tier 3 Point Total				10		7

Facility: Vermont Yankee		Date of Examination: 02/10/2014
Exam Level: RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U X		Operating Test No.: 2014301
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	N, S	Perform a system walkdown following a RCIC pump and valve operability tests.
Conduct of Operations	M, R	Review Daily SRM Response Check prior to Conducting Core Alteration
Equipment Control	M, R	Review Completed Surveillance and Take Action for Out of Spec Data
Radiation Control	M, R	Determine the Radiological Protection Requirements for Entering a Locked High Radiation Area
Emergency Procedures/Plan	N, R	Classify a loss of all offsite and onsite AC event while in mode 5
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, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1 ; randomly selected)		

Facility: <u>Vermont Yankee</u>		Date of Examination: <u>02/11/2014</u>
Exam Level: RO <input type="checkbox"/> SRO-I <input type="checkbox"/> SRO-U <input checked="" type="checkbox"/>		Operating Test No.: <u>2014301</u>
Control Room Systems [@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a. MTG Startup the Turbine to Rated Speed	S, N, A, L	4
b. MSR Open MSIVs After a Group I Isolation	S, EN	3
c. HPCI Manually Start HPCI and Inject to the Vessel	S, D, EN, A	2
d. n/a	n/a	
e. n/a	n/a	
f. n/a	n/a	
g. n/a	n/a	
h. n/a	n/a	
In-Plant Systems [@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. SLC Perform Local Firing of squib Valves	D, A, E, R	1
j. RPS Startup the "A" RPS MG set	D	7
k. n/a		
<p>[@] All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.</p>		
* Type Codes	Criteria for RO / SRO-I / SRO-U	
(A)lternate path	4-6 / 4-6 / 2-3	
(C)ontrol room		
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4	
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1	
(EN)gineered safety feature	- / - / - ≥1 (control room system)	
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1	
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1	
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)	
(R)CA	≥ 1 / ≥ 1 / ≥ 1	
(S)imulator		