Facility: Vogtle 1 & 2		Date of Examination: 08/31/2015
Examination Level: RO ☑ SRO		Operating Test Number: 2015-301
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	R, D	**a. V-NRC-JP-19200-HL20: Evaluate Critical Safety Function Status Trees (CSFSTs) with an Inoperable Integrated Plant Computer (IPC)** **Description:** Unit 1 reactor tripped from full power, and the crew transitioned from 19000-C, "Reactor Trip or Safety Injection." The applicant will be directed to monitor and evaluate all CSFSTs, identify the highest priority critical safety function, and determine any required procedure transition using 19200-C, "Critical Safety Function Status Trees." With the IPC not available, the applicant will be given data for multiple parameters to be used in the evaluation. G2.1.7 RO 4.4
Conduct of Operations	R, D	**b. V-NRC-JP-14005-HL20: Determine k_{eff} for All Shutdown Rod Banks Withdrawn in Preparation for Reactor Startup** **Description:** Unit 2 is performing a reactor startup following a trip from steady state, 100% reactor power. Prior to commencing shutdown rod bank withdrawal, the applicant will be required to calculate k_{eff} for the given conditions using 14005-2, "Shutdown Margin and K_{eff} Calculations," and determine if k_{eff} will remain less than 0.99 with all shutdown rod banks withdrawn. G2.1.43 RO 4.1
Equipment Control	R, M	**c. V-NRC-JP-14915-HL20: Perform Axial Flux Difference (AFD) Surveillance for Inoperable DELTA FLUX DEVIATION Alarm** **Description:** The Unit 1 DELTA FLUX DEVIATION (AFD) alarm was inoperable when a 30% turbine load rejection occurred from full power. With data provided (pictures of control board meters), the applicant will be required to determine AFD using 14915-1, "Special Conditions Surveillance Logs," Data Sheet 6. The applicant will then determine if the surveillance is completed satisfactorily by comparing the results to the acceptance criterion. G2.2.12 RO 3.7

Radiation Control	R, M	**d. V-NRC-JP-00930-HL20: Select Correct RWP, Calculate Projected Dose, and Determine if a Task can be Performed Within Limits of the RWP** **Description:** A Unit 1 valve requires manipulation. The applicant will be given the valve name and location, a room map with the radiological conditions, and two different operations department RWPs. The applicant will be required to determine the location of the valve on the map and choose the correct RWP to be used based on the radiological conditions in the room. The applicant will then calculate the projected dose for the valve manipulation and will determine if the projected dose is within the limits of the selected RWP. G2.3.7 RO 3.5
Emergency Plan	N/A	N/A

NOTE: All items (five total) are required for SROs. RO applicants require only four items unless they are retaking only the administrative topics (which would require all five items).

* 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: Vogtle 1 & 2 Date of Examination: 08/31/2015
Examination Level: RO SRO ☑ Operating Test Number: 2015-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	R, D	**a. V-NRC-JP-19200-HL20: Evaluate Critical Safety Function Status Trees (CSFSTs) with an Inoperable Integrated Plant Computer (IPC)** **Description:** Unit 1 reactor tripped from full power, and the crew transitioned from 19000-C, "Reactor Trip or Safety Injection." The applicant will be directed to monitor and evaluate all CSFSTs, identify the highest priority critical safety function, and determine any required procedure transition using 19200-C, "Critical Safety Function Status Trees." With the IPC not available, the applicant will be given data for multiple parameters to be used in the evaluation. Same as RO Admin JPM a. G2.1.7 SRO 4.7
Conduct of Operations	R, D	**b. V-NRC-JP-14005-HL20: Determine k_{eff} for All Shutdown Rod Banks Withdrawn in Preparation for Reactor Startup** **Description:** Unit 2 is performing a reactor startup following a trip from steady state, 100% reactor power. Prior to commencing shutdown rod bank withdrawal, the applicant will be required to calculate k_{eff} for the given conditions using 14005-2, "Shutdown Margin and K_{eff} Calculations," and determine if k_{eff} will remain less than 0.99 with all shutdown rod banks withdrawn. Same as RO Admin JPM b. G2.1.43 SRO 4.3
Equipment Control	R, M	**c. V-NRC-JP-14915-HL20: Perform and Evaluate Axial Flux Difference (AFD) Surveillance for Inoperable DELTA FLUX DEVIATION Alarm** **Description:** The Unit 1 DELTA FLUX DEVIATION (AFD) alarm was inoperable when a 30% turbine load rejection occurred from full power. With data provided (pictures of control board meters), the applicant will be required to complete 14915-1, "Special Conditions Surveillance Logs," Data Sheet 6, to determine AFD and then evaluate the data. The surveillance will be unsatisfactory, so the AFD Tech Spec LCO Required Action Statement will be entered. G2.2.12 SRO 4.1

Radiation Control	R, M	**d. V-NRC-JP-91301-HL20: Assess Radiological Conditions in an Emergency and Approve Emergency Exposure Permits** **Description:** During a General Emergency, three operators are to be dispatched to operate vital equipment. The applicant will be given the equipment location, a room map with the radiological conditions, and three completed Emergency Exposure Permits for the operators. The applicant will be directed to determine the appropriate Emergency Exposure Limit for the task, calculate the projected dose to the operators, and review and approve the Emergency Exposure Permits. One of the Emergency Exposure Permits will be completed incorrectly and should not be approved. G2.3.4 SRO 3.7
Emergency Plan	R, M	**e. V-NRC-JP-NMP-EP-110-HL20: Classify an Emergency Event and Complete the Emergency Notification Form** **Description:** Using the conditions given for a plant event, the applicant will be directed to determine the highest emergency classification level for the event using NMP-EP-110, "Emergency Classification Determination and Initial Action." WebEOC will not be available, which will require the applicant to manually complete NMP-EP-111-F10, "SNC Emergency Notifications Form (ENF)." G2.4.41 SRO 4.6

NOTE: All items (five total) are required for SROs. RO applicants require only four items unless they are retaking only the administrative topics (which would require all five items).

* 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: Vogtle 1 & 2 Date of Examination: 08/31/2015
Exam Level: RO ☑ SRO-I ☑ SRO-U ☑ Operating Test Number: 2015-301

Control Room Systems:* 8 for RO; 7 for SRO-I; 2 or 3 for SRO-U

System / JPM Title	Type Code*	Safety Function
a. **V-NRC-JP-13009-HL20: Initiate Emergency Boration to Clear ROD BANK LO-LO LIMIT Alarm** **Description:** Unit 1 completed a rapid power reduction that resulted in a valid ROD BANK LO-LO LIMIT alarm. The applicant will be directed to initiate emergency boration using 13009-1, "CVCS Reactor Makeup Control System," to clear the alarm. One Boric Acid Transfer Pump (BATP) is tagged out, and the available BATP will not start when its handswitch is taken to START. This will require the applicant to initiate the emergency boration from the RWST through the normal charging flow path instead of using the BAST. (RO / SRO-I / SRO-U) 024AA1.20 RO 3.2* SRO 3.3	A, M, S	1
b. **V-NRC-JP-19013-HL20: Align the Containment Spray System to the Recirculation Mode** **Description:** Unit 1 reactor trip and SI occurred due to a large break LOCA. Following alignment of ECCS pumps to the cold leg recirculation mode, the crew has returned to 19010-C, "Loss of Reactor or Secondary Coolant." RWST level lowers to 8%, so the applicant will be directed to align the Containment Spray System to the recirculation mode using 19013-C, "Transfer to Cold Leg Recirculation." (RO / SRO-I / SRO-U) 011EA1.12 RO 4.1 SRO 4.4	D, EN, L, S	3
c. **V-NRC-JP-13830-HL20: Establish Main Generator Field Excitation Using Automatic Voltage Regulation** **Description:** Unit 1 is starting up following a refueling outage. The main turbine is at 1800 rpm and the main generator and its excitation system have been prepared for startup. The applicant will be directed to use 13830-1, "Main Generator Operation," to establish main generator field excitation using automatic voltage regulation. (RO / SRO-I / SRO-U) 062A4.01 RO 3.3 SRO 3.1	M, S	6

d. **V-NRC-JP-13006-HL20: Raise Normal Letdown Flow Rate from 75 gpm to 120 gpm** **Description:** Unit 1 is at 100% reactor power. Normal letdown has been returned to service at 75 gpm following a system outage. With charging and letdown conditions stable, the applicant will be directed to raise letdown flow rate from 75 gpm to 120 gpm using 13006-1, "Chemical and Volume Control System." (RO / SRO-I) 004A4.05 RO 3.6 SRO 3.1	N, S	2
e. **V-NRC-JP-19231-HL20: Establish RCS Bleed and Feed Following a Loss of Secondary Heat Sink** **Description:** Unit 1 reactor was manually tripped following a low suction pressure trip of both MFPs. No AFW was available, so the crew entered 19231-C, "Response to Loss of Secondary Heat Sink." The applicant will be directed to establish bleed and feed for RCS heat removal. When establishing the bleed path, one pressurizer PORV will not open, so the reactor vessel head vent valves must be opened to provide an additional bleed path. (RO / SRO-I) WE05EA1.1 RO 4.1 SRO 4.0	A, D, L, S	4P
f. **V-NRC-JP-19020-HL20: Identify and Isolate a Faulted Steam Generator** **Description:** Unit 1 reactor trip and SI occurred due to a SG secondary fault. The applicant will be directed to identify and isolate the faulted SG using 19020-C, "Faulted Steam Generator Isolation." After isolating the main steam lines, all SGs will continue to depressurize, which will require a transition to 19121-C, "Uncontrolled Depressurization of All Steam Generators," to minimize the uncontrolled cool down. (RO / SRO-I) WE12EA2.1 RO 3.2 SRO 4.0	A, D, L, S	4S

g. **V-NRC-JP-19251-HL20: Respond to High Containment Pressure** **Description:** Unit 1 reactor trip and SI occurred due to a large break LOCA. An orange path develops on the CSFSTs due to containment high pressure, so the applicant will be directed to perform the actions of 19251-C, "Response to High Containment Pressure." During procedure performance, the applicant will be required to manually actuate Containment Isolation Phase A, manually start Containment Spray pumps, and open Train 'A" Containment Cooler isolation valves, which will not operate automatically as expected. (RO / SRO-I) WE14EA1.1 RO 3.7 SRO 3.7	M, EN, L, S	5
h. **V-NRC-JP-13301-HL20: Manually Actuate Control Room Isolation Due to Smoke in the Outside Air Intake** **Description:** Unit 1 is at 100% power when a large brush fire causes smoke to enter the control room through the outside air intakes. The applicant will be directed to manually actuate Control Room Isolation and close the outside air supply dampers using 13301-C, "CBCR Normal HVAC and Emergency Filtration System," to limit smoke intake. (RO) 067AA1.05 RO 3.0 SRO 3.1	D, S	8 **RO ONLY**

In-Plant Systems:* 3 for RO; 3 for SRO-I; 3 or 2 for SRO-U		
i. **V-NRC-JP-18007-HL20: Locally Control Charging Flow** **Description:** On Unit 2, the charging flow controller, 2FIC-121, has malfunctioned and charging flow cannot be adjusted from the main control room. The applicant will be directed to establish local control of charging using 2FHC-121 and establish 75 gpm charging flow using 18007-C, "Chemical and Volume Control System Malfunction," Attachment 'C'. (RO / SRO-I / SRO-U) 022AA1.01 RO 3.4 SRO 3.3	D, E, R	2

j. **V-NRC-JP-18038-HL20: Establish Local Control of Train 'A' and Train 'B' 4160 VAC Switchgears Following a Control Room Evacuation** **Description:** The Unit 2 control room has been evacuated and local control has been established at Shutdown Panel 'A' and Shutdown Panel 'B'. The applicant will be required to establish local control of the Train 'A' and Train 'B' 4160 VAC switchgears and check ACCW pump status. The ACCW pumps will not be operating, so stopping the RCPs and isolating letdown will be required. (RO / SRO-I / SRO-U) 068AA1.21 RO 3.9 SRO 4.1	A, D, E, L	8
k. **V-NRC-JP-13610-HL20: Locally Operate the TDAFW Pump in Manual Following a Loss of Remote Control** **Description:** Following a Unit 1 trip, the TDAFW pump was supplying AFW to all SGs when it failed to respond to the Unit Operator's AFW flow adjustment. The TDAFW pump was tripped and, subsequently, reset. The applicant will be required to establish local manual control of the TDAFW pump and raise its speed using 13610-1, "Auxiliary Feedwater System." (RO / SRO-I) 061A2.05 RO 3.1* SRO 3.4*	D, L	4S

* All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all five SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.

* 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 / ≥ 1 / ≥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	

Facility: VOGTLE Date of Exam: AUGUST 2015

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	3	3	3	N/A			3	3	N/A		3	18	3		3		6
	2	1	1	2				2	2			1	9	2		2		4
	Tier Totals	4	4	5				5	5			4	27	5		5		10
2. Plant Systems	1	3	2	2	2	3	3	3	3	2	3	2	28	3		2		5
	2	1	1	1	1	1	1	1	0	1	1	1	10	0	1	2		3
	Tier Totals	4	3	3	3	4	4	4	3	3	4	3	38	4		4		8
3. Generic Knowledge and Abilities Categories		1			2			3			4		10	1	2	3	4	7
		3			2			2			3			2	1	2	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 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).
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 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.
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' 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.
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.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
007EK1.05	Reactor Trip - Stabilization - Recovery / 1	3.3	3.8	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Decay power as a function of time
008AA1.03	Pressurizer Vapor Space Accident / 3	2.8	2.6	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Turbine bypass in manual control to maintain header pressure
009EA1.06	Small Break LOCA / 3	3	3.3	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Plant computer
011EK3.01	Large Break LOCA / 3	3.4	3.5	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Verifying main steam isolation valve position
015AA2.11	RCP Malfunctions / 4	3.4	3.8	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	When to jog RCPs during ICC
022AK1.03	Loss of Rx Coolant Makeup / 2	3	3.4	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Relationship between charging flow and PZR level
025AK2.02	Loss of RHR System / 4	3.2	3.2	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	LPI or Decay Heat Removal/RHR pumps
026AG2.4.46	Loss of Component Cooling Water / 8	4.2	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to verify that the alarms are consistent with the plant conditions.
029EA2.05	ATWS / 1	3.4	3.4	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	System component valve position indications
038EK1.02	Steam Gen. Tube Rupture / 3	3.2	3.5	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Leak rate vs. pressure drop
054AK3.04	Loss of Main Feedwater / 4	4.4	4.6	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Actions contained in EOPs for loss of MFW AND OR EOP's.

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KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
056AA2.20	Loss of Off-site Power / 6	3.9	4.1	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	AFW flow indicator
057AG2.4.35	Loss of Vital AC Inst. Bus / 6	3.8	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects
062AK3.01	Loss of Nuclear Svc Water / 4	3.2	3.5	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	The conditions that will initiate the automatic opening and closing of the SWS isolation valves to the nuclear service water coolers
065AA1.04	Loss of Instrument Air / 8	3.5	3.4	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Emergency air compressor
WE04EK2.1	LOCA Outside Containment / 3	3.5	3.9	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes and automatic and manual features.
WE05EK2.2	Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4	3.9	4.2	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems and relations between the proper operation of these systems to the operation of the facility.
we12EG2.4.2	Steam Line Rupture - Excessive Heat Transfer / 4	3.8	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of operational implications of EOP warnings, cautions and notes.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
024AA1.23	Emergency Boration / 1	3.3	3.3	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	CVCS centrifugal charging pump switches and indicators
036AK3.03	Fuel Handling Accident / 8	3.7	4.1	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Guidance contained in EOP for fuel handling incident or AOPs
059AG2.1.23	Accidental Liquid RadWaste Rel. / 9	4.3	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to perform specific system and integrated plant procedures during all modes of plant operation.
074EA1.17	Inad. Core Cooling / 4	4	4.1	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	S/G pressure and level indicators
WE01EK2.1	Rediagnosis / 3	3.3	3.5	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes and automatic and manual features.
WE03EA2.2	LOCA Cooldown - Depress. / 4	3.5	4.1	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.
WE13EK3.4	Steam Generator Over-pressure / 4	3.1	3.3	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	RO or SRO function within the control room team as appropriate to the assigned position, in such a way that procedures are adhered to and the limitations in the facilities license and amendments are not violated. MAY BE HARD TO DO ?
WE14EK1.2	Loss of CTMT Integrity / 5	3.2	~~3.7~~	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Normal, abnormal and emergency operating procedures associated with (High Containment Pressure).
WE16EA2.2	High Containment Radiation / 9	3.0	3.3	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
003K5.02	Reactor Coolant Pump	2.8	3.2	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Effects of RCP coastdown on RCS parameters
003K6.04	Reactor Coolant Pump	2.8	3.1	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Containment isolation valves affecting RCP operation ?
004K2.06	Chemical and Volume Control	2.6	2.7	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Control instrumentation
004K5.30	Chemical and Volume Control	3.8	4.2	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Relationship between temperature and pressure in CVCS components during solid plant operation
005K2.01	Residual Heat Removal	3.0	3.2	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	RHR pumps
006A3.03	Emergency Core Cooling	4.1	4.1	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	ESFAS-operated valves
007A3.01	Pressurizer Relief/Quench Tank	2.7	2.9	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	Components which discharge to the PRT
008G2.4.4	Component Cooling Water	4.5	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.
008K1.01	Component Cooling Water	3.1	3.1	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	SWS
010K4.02	Pressurizer Pressure Control	3.0	3.4	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Prevention of uncovering PZR heaters
012A1.01	Reactor Protection	2.9	3.4	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Trip setpoint adjustment

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
012K6.03	Reactor Protection	3.1	3.5	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Trip logic circuits
013A1.04	Engineered Safety Features Actuation	3.4	3.6	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	S/G level
013A4.02	Engineered Safety Features Actuation	4.3	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Reset of ESFAS channels
022A1.04	Containment Cooling	3.2	3.3	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Cooling water flow
026A4.05	Containment Spray	3.5	3.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Containment spray reset switches
039A2.04	Main and Reheat Steam	3.4	3.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Malfunctioning steam dump
039K5.08	Main and Reheat Steam	3.6	3.6	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Effect of steam removal on reactivity
059G2.4.11	Main Feedwater	4.0	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of abnormal condition procedures.
061K6.01	Auxiliary/Emergency Feedwater	2.5	2.8	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Controllers and positioners
062K1.04	AC Electrical Distribution	3.7	4.2	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Off-site power sources
063K1.03	DC Electrical Distribution	2.9	3.5	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Battery charger and battery

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
064A4 01	Emergency Diesel Generator	4.0	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Local and remote operation of the ED/G
073A2.02	Process Radiation Monitoring	2.7	3.2	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Detector failure
076K3.01	Service Water	3.4	3.6	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Closed cooling water
078K4.03	Instrument Air	3.1	3.3	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Securing of SAS upon loss of cooling water
103A2.05	Containment	2.9	3.9	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Emergency containment entry
103K3.03	Containment	3.7	4.1	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Loss of containment integrity under refueling operations.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
002K6.03	Reactor Coolant	3.1	3.6	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Reactor vessel level indication
011K2.02	Pressurizer Level Control	3.1	3.2	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	PZR heaters
015K5.09	Nuclear Instrumentation	2.5	2.9	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	In-core detector operation
016A4.01	Non-nuclear Instrumentation	2.9	2.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	NNI channel select controls
033A3.01	Spent Fuel Pool Cooling	2.5	2.7	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	Temperature control valves
034K1.04	Fuel Handling Equipment	2.6	3.5	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	NIS
035K3.01	Steam Generator	4.4	4.6	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	RCS
071A1.06	Waste Gas Disposal	2.5	2.8	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Ventilation system
079K4.01	Station Air	2.9	3.2	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Cross-connect with IAS
086G2.2.22	Fire Protection	4.0	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of limiting conditions for operations and safety limits.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.15	Conduct of operations	2.7	3.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of administrative requirements for temporary management directives such as standing orders, night orders, Operations memos, etc.
G2.1.17	Conduct of operations	3.9	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to make accurate, clear and concise verbal reports.
G2.1.27	Conduct of operations	3.9	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of system purpose and or function.
G2.2.42	Equipment Control	3.9	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to recognize system parameters that are entry-level conditions for Technical Specifications
G2.2.44	Equipment Control	4.2	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	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
G2.3.11	Radiation Control	3.8	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to control radiation releases.
G2.3.12	Radiation Control	3.2	3.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiological safety principles pertaining to licensed operator duties
G2.4.1	Emergency Procedures/Plans	4.6	4.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of EOP entry conditions and immediate action steps.
G2.4.14	Emergency Procedures/Plans	3.8	4.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of general guidelines for EOP usage.
G2.4.32	Emergency Procedures/Plans	3.6	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of operator response to loss of all annunciators.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
007EA2.06	Reactor Trip - Stabilization - Recovery / 1	4.3	4.5	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Occurrence of a reactor trip
009EA2.38	Small Break LOCA / 3	3.9	4.3	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Existence of head bubble
027AA2.10	Pressurizer Pressure Control System Malfunction / 3	3.3	3.6	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	PZR heater energized/de-energized condition
040AG2.2.40	Steam Line Rupture - Excessive Heat Transfer / 4	3.4	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to apply technical specifications for a system.
057AG2.4.30	Loss of Vital AC Inst. Bus / 6	2.7	4.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of events related to system operations/status that must be reported to internal orginizations or outside agencies.
062AG2.1.25	Loss of Nuclear Svc Water / 4	3.9	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to interpret reference materials such as graphs, monographs and tables which contain performance data.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
003AG2.2.25	Dropped Control Rod / 1	3.2	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.
037AG2.1.20	Steam Generator Tube Leak / 3	4.6	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to execute procedure steps.
067AA2.06	Plant Fire On-site / 8	3.3	3.6	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Need for pressurizing control room (recirculation mode)
WE06EA2.1	Degraded Core Cooling / 4	3.4	4.2	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.

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KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
004G2.1.23	Chemical and Volume Control	4.3	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to perform specific system and integrated plant procedures during all modes of plant operation.
006G2.1.7	Emergency Core Cooling	4.4	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior and instrument interpretation.
013A2.03	Engineered Safety Features Actuation	4.4	4.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Rapid depressurization
059A2.03	Main Feedwater	2.7	3.1	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Overfeeding event
064A2.21	Emergency Diesel Generator	2.6	2.9	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Significance and interpretation of opening of ring bus during test

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
002G2.2.37	Reactor Coolant	3.6	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to determine operability and/or availability of safety related equipment
011A2.02	Pressurizer Level Control	3.2	3.2	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Excessive charging
068G2.4.41	Liquid Radwaste	2.9	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the emergency action level thresholds and classifications.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.13	Conduct of operations	2.5	3.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of facility requirements for controlling vital / controlled access.
G2.1.35	Conduct of operations	2.2	3.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the fuel handling responsibilities of SRO's
G2.2.2	Equipment Control	4.6	4.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to manipulate the console controls as required to operate the facility between shutdown and designated power levels.
G2.3.14	Radiation Control	3.4	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities
G2.3.6	Radiation Control	2.0	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to aprove release permits
G2.4.23	Emergency Procedures/Plans	3.4	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the bases for prioritizing emergency procedure implementation during emergency operations.
G2.4.26	Emergency Procedures/Plans	3.1	3.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of facility protection requirements including fire brigade and portable fire fighting equipment usage.

K/A listed in column 2 is the rejected K/A

Tier / Group	Randomly Selected K/A	Reason for Rejection
T2G2 RO	033A3.01	Vogtle's Spent Fuel Pool Cooling System does not have any automatically controlled temperature control valves. All temperature control is done with manual valve alignments. NRC Chief Examiner randomly selected 033A3.02 as the replacement K/A.
T3 (generic) RO	G2.4.32	Vogtle does not have an AOP or EOP for responding to a loss of all annunciators. The only knowledge item associated with a loss of all annunciators is related to emergency classifications, which is SRO-only. NRC Chief Examiner randomly selected G2.4.37 as the replacement K/A.

ES-401 **Written Examination Quality Checklist** **Form ES-401-6**

Facility: Vogtle 1 & 2 Date of Exam: 08/31/2015 Exam Level: RO ☑ SRO ☑

	Item Description	Initial a	Initial b*	Initial c*#
1.	Questions and answers are technically accurate and applicable to the facility.	JCC	[illegible]	[illegible]
2.	a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	JCC	[illegible]	[illegible]
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401	JCC	[illegible]	[illegible]
4	The sampling process was random and systematic (If more than 4 RO or 2 SRO questions were repeated from the last two NRC licensing exams, consult the NRR/NRO OL program office).	JCC	[illegible]	[illegible]
5.	Question duplication from the licensee screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate __ The audit exam was systematically and randomly developed; or __ the audit exam was completed before the license exam was started; or __ the examinations were developed independently; or _x_ the licensee certifies that there is no duplication; or __ other (explain)	JCC	[illegible]	[illegible]

		Bank	Modified	New			
6.	Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right	32 (43%) / 10 (40%)	24 (32%) / 4 (16%)	19 (25%) / 11 (44%)	JCC	[illegible]	[illegible]

		Memory	C/A			
7.	Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/ analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	35 (47%) / 9 (36%)	40 (53%) / 16 (64%)	JCC	[illegible]	[illegible]
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.	JCC	[illegible]	[illegible]
9.	Question content conforms to specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.	JCC	[illegible]	[illegible]
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.	JCC	[illegible]	[illegible]
11.	The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with the value on the cover sheet.	JCC	[illegible]	[illegible]

	Printed Name / Signature	Date
a. Author	Joseph C. Craine, III / J. C. Craine III	7-23-15
b. Facility Reviewer (*)	Ken Jenkins / [illegible]	07/24/15
c. NRC Chief Examiner (#)	RICHARD E. BALDWIN / [illegible]	08/12/2015
d. NRC Regional Supervisor	Eugene Guthrie / [illegible]	8/20/15

Note: * The facility reviewer's initials or signature are not applicable for NRC-developed examinations.
Independent NRC reviewer initials items in Column "c"; chief examiner concurrence required.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws: Stem Focus	Cues	T/F	Cred. Dist.	Partial	4. Job Content Flaws: Job-Link	Minutia	#/ units	Back-ward	5. Other: Q= K/A	SRO Only	6. B/M/N	7. U/E/S	8. Explanation

Instructions

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. Enter the level of difficulty (LOD) of each question using a 1 – 5 (easy – difficult) rating scale (questions in the 2 – 4 range are acceptable).
3. Check the appropriate box if a psychometric flaw is identified:
   - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
   - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
   - The answer choices are a collection of unrelated true/false statements.
   - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
   - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
4. Check the appropriate box if a job content error is identified:
   - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
   - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
   - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
   - The question requires reverse logic or application compared to the job requirements.
5. Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
6. Enter question source: (B)ank, (M)odified, or (N)ew. Check that (M)odified questions meet criteria of ES-401 Section D.2.f.
7. Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
8. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws	4. Job Content Flaws	5. Other	6. B/M/N	7. U/E/S	8. Explanation

Key/Summary

Question distribution:

	RO	SRO
Bank	34 (9 previous NRC exam, 4 of which are within last 2 exams)	11 (4 previous NRC exam, 1 of which are within last 2 exams)
Modified	23 (16 modified from previous NRC exams, 11 of which are within last 2 exams)	4 (3 of which are within last 2 exams)
New	18	10

Numbered comments by R. Baldwin

Un-numbered comments by A. Goldau

S	Indicates SAT: 3 SRO, 58 RO (initial submittal) **** SRO, ** RO SAT in final submittal**
E	Indicates Enhancement: 8 SRO, 4 RO (initial submittal)
U	Indicates UNSAT: 7 SRO, 5 RO (initial submittal)
U/E	Indicates UNSAT/ENHANCEMENT (likely due to two non-plausible distractors that are the same, as in a 2x2, i.e., the same distractor counted 2x as non-plausible) 7 SRO, 8 RO (initial submittal)
(pre)	Indicates presubmitted question comments

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
Generic to exam															E	1. Ensure there is an appropriate spread of questions between Unit 1 and Unit 2. 2. Ensure annunciator noun names are consistently written through the exam, i.e. a comma, capitalized title, quotation marks, etc. The same for procedure titles. 3. Be consistent with the which one of the following completes the following **statement** or **statements.** 4. Be consistent through the exam with caps or bold for parameter directions i.e. detector failed HIGH.
1 002K6.03	F	2												B	S	Question appears to match the KA. Added the number sign before RCPs. Question appears to be SAT. AG 5/13/15
2 003K5.02	H	2				X								M HL18	E S	Question appears to match the KA. How can loop delta T not changing be plausible? AG 4/13/15 06/23/2015 1. Could not make the question work as is so replaced. 2. Need to add, "Per the Bases. ..." 3. ROs are required to know the Bases for TSs. Bases is NOT capitalized. S Replacement is OK.
3 003K6.04	F	2												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/13/15
4 004K2.06	H	3				X								B	S	Question appears to match the KA. Question appears to be SAT. AG 5/13/15 Should a noun name for the power supplies be provided? 06/23/2015 Licensee states, no the power supplies should not be named with the noun name. added to the power supply the word ONE. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
5 004K5.30	F	2					X							B	E S	Question appears to match the KA. No time frame is given. Could TV-130 eventually be unable to account for rising temperature and cause letdown to isolate? A time frame needs to be added to the stem. Basing plausibility of distractors on applicant not considering information that is directly given in the stem of the question seems to make them not plausible. 5.What is the convention on capitalization of the word manual? AG 5/13/15 06/23/2015 1. Added the time frame. 2. Added a coma,
6 005K2.01	H	2												B HL18	S	Question appears to match the KA. Question appears to be SAT. AG 5/13/15 Should a noun name be provided for 1BA03? 06/23/2015 Appears to be ok.
7 006A3.03	F	2				X	X							B	U/E S	Question appears to match the KA. The valves will respond automatically to changes in RCS WR pressure as it directly affects CCP discharge pressure. AG 5/13/15 6. Does "white" need to be emphasized or capitalized? 7. Should the word "valves" be placed in the first part question title of 1HS8508A and B? 06/23/2015 1. White was bolded. 2. Valves is not required as requested above. Appears to be ok

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
8 007A3.01	F	2												B HL18	S	Question appears to match the KA. Question appears to be SAT. AG 5/13/15
9 007EK1.05	F	2				X						X		B	U S	Question appears to match the KA. Three implausible distractors. Stem of question states that RCS Tavg is stable and controlled in automatic. Implausible for an applicant to change the controller to continue to keep Tavg stable. AG 5/13/15 1. Should the word automatic be capitalized or bold? This question does not meet the KA. The question essentially asks how does a controller (any controller) work when in automatic. 06/23/2015 1. Changed from controller setpoint to controller demand set point. 2. No automatic not capitalized. 3. Meets the KA with this twist on the question. Appears to be ok.
10 008AA1.03	F	2												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15
11 008G2.4.4	H	3												M HL 19	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 1. In the question the "A," One CCW Train 'A.' OK as changed.
12 008K1.01	F	3												B HL 17	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 1. Changed to no other actions have been taken.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
13 009EA1.06	H	3												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015
14 010K4.02	H	2												B HL 18	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 1. Looks like pressurizer pressure is too high based on the level change. Asking the licensee to use a different level change. And therefore a pressurizer level. So there for at 25%, level is approximately 30-30%! 2. Below 2210 and above 2210. 3. Need to make more operationally valid. Change 2100 to 2180. Then pressurizer level is 25% and slowly rising. 4. Pressurizer pressure has returned to 2215 psig. 5. May have time to run on the simulator.
15 011EK3.01	F	2												N	S U S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 1. Had the word Train on last sentence brought down to the last sentence so that it reads, Train "B".... 2. IS this RO knowledge requirement. ?? Ops representative states YES. 3. This question may have two answers pointed out by NEWTON. This can be used if you use the E-1 procedure. 4. Need to put in 19010 and then have the MSIVs isolated. Will need to return to this question so that we have ONLY one answer. 06/24/2015 1. Changed all 4 distractors first part. See exam. "Prevents a return to criticality." And Distinguish between a primary and secondary break. This makes more of an RO question.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
16 011K2.02	H	3												M HL 18	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 Original question not provided. 06/23/2015 1. Bold required in first sentence. 2. Need to change this to make it two statements vice an and in the question. 3. See the question in the exam, it is completely different than the initially submitted question. 4. See exam.
17 012A1.01	H	2												M HL 18	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 Original question not provided. 06/23/2015 1. Distractors remain the same does not make sense or not as valid as if the question was done for a failure low. 2. Changed remain the same to lower and or raise. See exam to identify what has changed.
18 012K6.03	H	2												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 Bolded high and low in each statement.
19 013A1.04	H	3												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 1. Bold WHITE.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
20 013A4.02	F	2												M HL 19	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 1. No changes.
21 015AA2.11	H	3												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 1. Add degree symbol to 1220 F 2. Bold minimum in the second sentence. 3. Bold normal in the first in the first sentence.
22 015K5.09	H	2				X								N	U/E S	Question appears to match the KA. 1. Why include the statement "all control systems are in automatic"? With automatic outward rod motion permanently disabled at Vogtle, distractors for the first part question are implausible. Are there any cases where automatic outward rod motion will occur? No learning objective in lesson plan for Power Range instrument fails low. Could ask effect of PR high failure and the effect on QPTR as measured by in core instruments. 06/23/2015 1. Need to have all in auto because otherwise rods would not be in automatic. 2. Changed as requested and then changed the answer. 3. Added the procedure name in the second sentence so that this is required, vice used to confirm QPTR. 4. Changed back to the original used vice required. So we do not get too close to the SRO knowledge. 5. Removed the and, and added the procedure title.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
23 016A4.01	F	2												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 1. Added the word one, 2. Also re arranged the and added the instrument number in distractors, 3. Appears ok.
24 022A1.04	H	3												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/23/2015 1. Reactor cavity is isolated on an SI. So with SI, only containment.
25 022AK1.03	H	3												B HL 14	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Bolded CLOSED. 2. Appears to be ok.
26 024AA1.23	H	3												M	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Appears to be ok.
27 025AK2.02	H	3												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Changed to feet and inches. 2. Changed to 187 feet.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
28 026A4.05	H	2												M HL 18	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Appears to be ok.
29 026AG2.4.46	H	2												M HL 13	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Bolded LOW in first sentence. 2. Appears to be ok.
30 029EA2.05	H	2												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Appears to be ok.
31 033A3.02	H	1				X								M	U	Question appears to match the KA. The first part distractors are not plausible since the stem of the question directly states that the pump suction valve is closed, how will a candidate fail to recognize that the suction line is isolated? The second part of the question is LOD=1 since the choices are clearly borated or non-borated water sources.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
															S	Check the consistency of how SFP level is written. Is it feet comma inches, feet dash inches, or feet space inches? Note: Procedure 13719-1, caution above step 4.2.4.2, the first bullet has an error which has the inches portion of the level designated with a single and a double quote. 06/24/2015 1. Question was swapped out. 2. Second half was completely swapped out. 3. New question changed from 2 pumps running to ALL pumps running with ALL bolded. 4. Changed the way the SFP A pump to make sure that Unit 2 A was being used and leaking. Unit 2 Train A SFP cooling pump seal fails.
32 034K1.04	H	2				X								M HL 15	U/E S	Question appears to match the KA. The first part distractors are not plausible since the stem of the question directly states that N31 is providing audible indication implying only one channel is required for the stated plant conditions. Is it possible to select audible indication from one detector to the control room and the other to containment? 06/24/2015 1. Changed the second part to remove the suspended with in. 2. Ok with change. See change on the test. 3. Removed minimum, from the stem. 4. Used NO later than.
33 035K3.01	F	2	X											B	E S	Question appears to match the KA. Clarification that the question is looking for reactivity impact on the reactor is necessary. Add a degree symbol. Do UO and SLI need to be spelled out? 06/24/2015 1. Ok as changed.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
34 036AK3.03	F	3												B HL 17	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Continue on.
35 038EK1.02	F	2	X			X								N	U S	Question appears to match the KA. The first part of the question is too basic. Only GFES knowledge is required to answer the first part. The distractor for the first part is not plausible, it is not plausible that leak rate would remain the same as d/p changes. For the second part, are there any other events in which an RCS cooldown is performed to minimize SG pressure rise? The second part distractors are also not plausible. Also no information from the initial or current conditions is required to answer this question. 06/04/2015 06/24/2015 1. Completely redone. 2. The replacement question appears to be good.
36 039A2.04	F	2												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Appears to be ok.
37 039K5.08	F	3												M HL 17	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
38 054AK3.04	H	3												N	S	Question appears to match the KA.06/24/2015 Question appears to be SAT. AG 5/19/15 1. Make sure that this does not overlap with RO #20. At first glance might have overlapped.; 2. OK as is.
39 056AA2.20	H	3				X								B HL 15	U/E S	Question appears to match the KA. The distractors for the first part are not plausible, is the TDAFW pump ever operated or set up in d/p mode? Since speed mode is the normal standby alignment, d/p mode Tmay not be plausible. The names on the labels in the attached drawing do not match the names for components used in the question. i.e. d/p vs. delta-P and 1PDIC-5180A, TDAFW pump speed controller vs. TDAFW CNTL ΔP-FEED TO STM. 06/24/2015 1. As you hit up or down it swaps to manual. It tracks the last automatic demanded position. 2. LXR WILL NOT ACCEPT THE DELTA SYMBAL. 3. As far operating, Delta P is NEVER used. 4. Remove the Speed after the TDAFW pump. Will use pump flow. 5. In delta p mode, the discharge pressure of the pump is compared to the SG pressure, allows constant flow. THIS IS NOT USED ANY WHERE.
40 057AG2.4.35	H	3												M HL 18	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. 120 Vital AC. Eagle 21. Safe shutdown process cabinet. 2. Appears to be ok.
41 059AG2.1.23	F	2												B HL 14	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. The RE-848, does an automatic swap from the WWRB to the Dirty Tank. 2. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
42 059G2.4.11	H	2		X										N	S	Question appears to match the KA. Question shows references provided but last page of section A.1 references provided: none. 06/24/2015 1. Reference provided is. AOP 18016-C rev 228, page 31. 2. Intention to provide the page as it is. Will be ok.
43 061K6.01	H	3												M HL 17	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. On second question. Swapped the order of question. See test. 2. Appears to be ok.
44 062AK3.01	F	3												M	S	Question appears to match the KA based on unique NSCW system at Votgle. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Changed the second part to read this method of repressurization is designed to limit. 2. Changed from motor starting current to DG1A current. 3. Appears to be ok.
45 062K1.04	F	3										X		M HL 17	U S	Does not match K/A. Diesel is not considered an off-site power source. Discuss with Licensee 06/24/2015 1. Replaced the question 2. Time frame of 1 minute, provided to give a base where they are. 3. No 1E power UATs. This was done at approximately 38%, so the RCPs, Circ water pumps and condensate pumps are powered from the other power source or the UATS. 4. LOSP signal starts the strips the bus of ACCW then restarts two ACCW pumps, one on A and one on B. Therefore, two pumps are running and it onlyl needs one. 5. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
46 063K1.03	F	2												M HL 18	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Remove the 1AA02, add the associated bus. 2. The way this question is written, the initial conditions, have NOTHING to do with the conditions in the stem of the question. These questions can be answered without any of the conditions prese nted in the stem. remove and rewrite. 3. Re-wrote the stem. and made two statements rather than being connected to the stems information. Appears to be ok.
47 064A4.01	H	3												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Appears to be ok.
48 065AA1.04	F	2												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Appears to be ok.
49 071A1.06	F	3					X							M HL 19	E S	Question appears to match the KA. Awkward three possible answers to the second part. The question could be one part with four possible answers. The KA could be met with the second part question. 06/24/2015 1. New question. Took the suggestion and made this a one part question. 2. System based question. 3. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
50 073A2.02	H	2												M HL 18	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Appears to be ok.
51 074EA1.17	F	3												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/19/15 06/24/2015 1. Appears to be ok
52 076K3.01	F	2	X									X		B	U S	This question does not match the KA. The question is merely asking which one of the following is coolebd by TPCCW. The question can be answered without the Initial Conditions and Final Conditions in the stem. 06/24/2015 1. Replacement does match KA 2. Appears to be ok
53 078K4.03	F	2												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 1. Remove established and use supplied. 2. Appears to be ok.
54 079K4.01	F	3												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 Appears to be ok.
55 086G2.2.22	F	2												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 1. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
56 103A2.05	F	2				X								M	U/E S	Question appears to match the KA. How is not exiting containment when the lights are cycled multiple times plausible? Possible to ask if containment interlock failure is immediate or 1 hr TS action? Close door immediate or 1 hr. Take leak rate test action immediate or 1hr? "Question was written this way based on discussion with Rick. JCC" what does this mean? 06/24/2015 1. Suggested to loss of all lighting. 2. Changes appears to be ok.
57 103K3.03	F	3												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 1. Appears to be ok.
58 G2.1.15	F	2												M	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 1. Appears to be ok.
59 G2.1.17	F	2												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 1. Appears to be ok.
60 G2.1.27	F	2												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 1. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
61 G2.2.42	H	2												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 1. Appears to be ok.
62 G2.2.44	H	3												M HL 18	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 1. Changed the order of the second question. 2. Appears to be ok. 3. Associated RESET SETPOINT. SEE test for actual wording.
63 G2.3.11	F	2				X								B	U/E S	Question appears to match the KA. Distractor for second part is not plausible. It is not credible to think that a steam generator could depressurize uncontrollably through a ruptured U tube into the RCS. 06/24/2015 1. Reworded, B and D, to remove "through the rupture." 2. Appears to be ok.
64 G2.3.12	F	3												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/24/2015 1. Appears to be ok.
65 G2.4.1	H	2												M	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/25/2015 1. Appears to be ok.
66 G2.4.14	F	2												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/25/2015 1. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
67 G2.4.37	F	2		X		X								N	U/E S	Question appears to match the KA. The second part question cues the correct answer for the first part question. The second part question makes the first part distractors not plausible. 06/25/2015 1. Changed question to separate the two questions more. 2. And changed the answer 3. Rearranged the PER to put up in top, because it applies to both questions.
68 WE01EK2.01	H	3												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/25/2015 1. Appears to be ok
69 WE03EA2.02	H	3												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/25/2015 1. Added the degree symbol. 2. Started at 557 T cold. 3. Cannot go below 457 in an hour. Would exceed this. 4. Appears to be ok.
70 WE04EK2.01	F	3				X								B	U/E S	Question appears to match the KA. The distractors for the first part are not plausible. A candidate that finds it reasonable that all ECCS systems would be addressed will find no reason to eliminate RHR and chose CCP. 06/17/2015 Asked if can ask is or is not, for CCP and then the answer will be is not. Will look at the change. 06/25/201 5 1. Replaced distractors and question. See the question for changes. 2. Changed from bank to modified. 3. Changes appear to make question ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
71 WE05EK2.02	H	3												B	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/25/2015 1. Added degree symbol 2. Appears to be ok.
72 WE12EG2.4.20	H	3												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/25/2015 1. Changed bus 2. Appears to be ok.
73 WE13EK3.04	H	3												M	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/25/2015 1. Changed distractor see the exam. 2. B and D second part was changed. 3. Appears to be ok.
74 WE14EK1.002	H	3												B HL 19	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/25/2015 1. Changed path names to all caps. 2. Appears to be ok.
75 WE16EA2.02	H	3												N	S	Question appears to match the KA. Question appears to be SAT. AG 5/21/15 06/25/2015 1. Appears to be ok.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
76 002G2.2.37	F	2												B HL 16	E	Question appears to match the KA. Question appears to meet SRO only guidance. 8. Need to add the degree symbol in the first question prior to the "F." That is the way it is in the text provided. 9. The first part discussion in the analysis discusses >10°F, however, the TS states at least 10°F, is this the same? This may be cutting hairs but it appears that at least should be represented as greater than or equal to. Discuss with licensee to make this clear if I am incorrect. 10. In question stem it is identified as "reactor core" however, the TS Note only discusses "core" should the question be changed to "core" vice "reactor core?" 06/22/2015 1. Added all suggestions.
															S	
77 003AG2.2.25	H	3	X										No	B	U	Question appears to match the KA. 1. The first part of the question is confusing, should it start with the movement of the 3 steps like: Once Rod H-8 was withdrawn 3 steps from its current location (110 steps) per the bases of Tech Spec LCO 3.1.4, " " rod H-8 _____ Operable? I suppose it does not matter, however, I was not reading the question correctly. Discuss with licensee. 2. Procedure 18003-C, step A11, tells the crew to reduce Thermal Power to less than 75% within 1 hour. While this is not TS it is an abnormal operating procedure. 3. Not sure that I agree with the discussion of incorrect second part in distractor B. I knew that the power decrease was supposed to be below 75% and not sure why this is SRO ONLY. Discuss with licensee to explain why they believe this is.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
															S	06/22/2015 1. Second part was NOT the SRO 2. Did as requested in 1 above. OK as changed. Should not have been a Unsat to begin with.
78 004G2.1.23	H	3	X											M HL 16	E S	Question appears to match the KA. 1. In the Current conditions, should there be quotes around "Seal Injection Valves," are closed. 2. First part is RO system knowledge. Second part is SRO knowledge. Use of procedure, but based on the information provided not sure that the RO should also know this system knowledge. 3. Does the word CLOSED in the Current Conditions need to be in all CAPS? Ie. CLOSED. Discuss with licensee 4. Can for the second sentence use should or should not? 06/22/2015 1. Do not use that convention as suggested in # 1 above 2. This is not a systems lesson plan, background knowledge for SRO. SO therefore not RO knowledge. 3. Added should and should not.
79 006G2.1.7	H	3												M HL 19	S	Question appears to match the KA. Question appears to meet SRO only guidance. 1. Is "Integrity" supposed to be in all CAPS? Question appears to be SAT. AG 5/18/15 06/22/2015 Not required by this convention ONLY the color or the CSFST.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
80 007EA2.06	H	2											No	B HL 19	U S	Question appears to match the KA. This question is not SRO only guidance. It can be answered using only system knowledge. If the first half of the question is answered "is" based on system knowledge, then the second half requires only system knowledge to recognize the reactor has tripped and arrive at the correct answer. The SRO only is tied to procedure selection, however to enter or not to enter a particular procedure is not "selecting" a procedure. 1. The flow path of the AOP is shown in the supporting documentation as the Rx trip does not occur. I do not believe this is correct. It shows a NO and going to the RNO column. Based on the initial conditions the applicants should be able to identify that a Rx Trip did occur. 2. Supplied reference (EAL) is not identified in stem and not necessary to answer this question. 06/17/2015 Will try trip level, indication, not all rods on the bottom. Maybe use a instrument malfunction that will show a trip but not be a warranted trip. 06/22/2015 1. Question was completely replaced. 2. KA appears to match 3. Question as changed is ok New Question appears to be ok.
81 009EA2.38	H	2												N	U/E	Question appears to match the KA. Question appears to meet SRO only guidance. There are four Emergency Declaration questions on this exam, there is also an Emergency Declaration JPM. This item is being oversampled. Questions 81, 87, 92, and 95. 1. Should the answer for Site Area be Site Area Emergency?

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			2. Should minimum be bolded or underlined? Ask licensee what convention so we don't have the applicants make a mistake because of nomenclature. 06/22/2015
															S	1. Alert or Alert Emergency. This is the way they identify this. Alert Emergency. 2. Newton asked why would they ever NOT have a void in the heard. Or would this be picked? 3. Validated as 6 of 6 chose the correct answer. 4. Need to change to a steam void in the reactor head. Or reactor head steam void. 5. 63% pressurizer level is where uncover fuel. 6. Newton pointed out that the 60 % hump looked funny to determine that the levels not look at. Changed 60 to 45%. Looks good this way. OK as is.
82 011A2.02	H	3											No	N	U	Distractor analysis states plausibility for the second half distractor is based on which procedure contains guidance to put safety grade charging in service, however the way the question is worded is really asking whether safety grade charging will be put in service or not. If you are asking for the applicant to select between procedures, make those the choices. SRO only would require selection of the correct procedure. 06/17/2015 Use the steps in AOP, but the AOP does not have all the steps but can get some. Will look at this and provide choice between the SRO
															S	06/22/2015 1. Second part was changed so that the SRO has to select the procedure. This is better than the first question. 2. Remove the reference to the extra temporary air compressor. This was important to the first revision of the question. This will be removed. OK as changed.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
83 013A2.03	H	3				X								B	U/E S	Question appears to match the KA. Question appears to meet SRO only guidance. 1. I do not understand why 13503B-1 is a reasonable distractor. I need to understand better why someone would think this is reasonable. If I didn't know I would guess that the attachment is the better of the two answers. Is there an example of an SOP being directed out of an EOP for performance? Discuss with licensee to better understand or select something else to select to drop the slave relays. 2. Potentially two distractors not a plausible distractor. 06/22/2015 1. Ok as is, no changes warranted. 2. 13503 is the normal procedure to reset but due to the inability to reset SI train B, need to do it in the procedure. 3. Remove the identification of the procedure in the last statement so that it does not look like cueing. 4. Add to the first statement from the main control room.
84 027AA2.10	H	3		X										N	U/E S	Question appears to match the KA. Question appears to meet SRO only guidance. 1. Should the word "high" bolded in the initial conditions be all caps as well? Does the second question give away the answer to the first? ie "When the COT is performed..." if the COT was **not** allowed, why would the second part say when it is performed? Does the noun name for COT need to be spelled out or do all applicants clearly understand what this means? 06/22/2015 1. Just bold the high as is in the question. 2. BTI, bypass test instrumentation interlock.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
85 037AG2.1.20	H	3		X										M HL 19	U/E S	Question appears to match the KA. Question appears to meet SRO only guidance. Distractors for first half are not plausible with the inclusion of the statement "under the stress of a LOCA or MSLB"; reword this question without teaching or leading. 1. Would suggest that the word "NOT" in the first statement be capitalized so the applicants do not miss it. 2. Can we change the time in the second time frame from 1020 to that of 1045? Something other than the 20 min interval from the procedure. 3. Why don't we change the answer so that the leak rate is greater than 75 but less than 150 gpm so that the other answer of 12004-C would be correct? Discuss with licensee. 06/22/2015 1. Removed the first, stress of MSLB or LOCA. 2. Capitalized NOT, 3. # 3 does not make sense with the way the steps are written. In procedure step 7 we have two parallel paths. This then provides the applicant to go to step 8. Have to know what is going to drive to rapid power reduction. Greater than 30 gpd/hr. computer screen in the control room radiation monitor. Rate of change. ROC, rate of change.
86 040AG2.2.40	H	2				X								M HL 19	E S	Question appears to match the KA. Question appears to meet SRO only guidance. 1. Should the noun name for the Alarm be in quotes? 2. The question states REFERENCES PROVIDED, there is ONLY one reference, change to REFERENCE PROVIDED. 3. Is the reference for this question the same as the HLC-19 question? Discuss with licensee. 4. Is 10 gpm a valid distractor? WE are looking for UNIDENTIFIED leakage, there is a 1 gpm unidentified leakage but not 10 gpm. There is 10 gpm for identified leakage. Discuss with licensee. 06/22/2015 1. References. Will be used. REFERENCES. 2. Ok with the 10 gpm.;

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
87 057AG2.4.30	H	3	X											N	U/E	Question appears to match the KA. Question appears to meet SRO only guidance. There are four Emergency Declaration questions on this exam, there is also an Emergency Declaration JPM. This item is being oversampled. Questions 81, 87, 92, and 95. 1. Is it necessary to provide the respective bus that the DG1A is supplying? Just say it started and powered its respective electrical bus. Question 81 referenced an "Alert" this question, an "Alert Emergency" what is the Vogtle nomenclature? Be consistent through the exam.
															S	06/22/2015 1. Changed Emergency 2. DG1A is now supplying its associated panel. Ok as changed.
88 059A2.03	H	3												B	E	Question appears to match the KA. Question appears to meet SRO only guidance. Stem says references provided but there is no reference in the submittal for this question in section A.5 however the A.1 analysis states the complete procedure will be provided? If the entire procedure is provided, this would be a direct lookup. 1. Insure that we have a table of contents that lists the Documents we have for the applicants. This has to be done for the RO and the SRO examinations. WE will use this instead of actually putting the entire submittal of documents the applicants need to use for the exam. Only the table of contents goes with the FINAL exams.
															S	06/22/2015 1. Provide the paper. 2. VSC auditorium. Will take the examination.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
89 062AG2.1.25	H	2											No	N	U S	Question appears to match the KA. 1. Is the graph going to have the notes of how many fans are running. Can that be removed? This is sort of a direct look up. Discuss with licensee. 2. Need to add the degree symbol prior to the F in the stem for both temperatures. 3. When you provide the 73°F, what is this temperature type a dry bulb? When you describe the 70°F what method of temperature representation is this? WET BULB, Dry BULB? Discuss with licensee. Liquid phase in temperature. 4. This question does not appear to meet the SRO ONLY requirements. Basically the way the second part is written appears to be a determination of whether the applicability of the Surveillance requirement SR 3.03 applies. In this question the reader is presented with a situation where the individual has to decide if SR 3.03 applies. The question is designed to have the reader remember the format of SR 3.03 and apply it in this case. The TS provided does not show that TS 3.03 does not apply therefore the individual knows that SR 3.03 does apply. This information is considered above the line and is NOT SRO ONLY. Discuss with licensee. May need to be replaced. . 06/22/2015 1. Ops would be uncomfortable with removing the fans from the graph. 2. How do you apply 3.0.3 3. All SRs are SRO, according to Gary O 4. Appears that the question should not have been evaluated as Unsatisfactory.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
90 064A2.21	H	1				X								N	U S	Question appears to match the KA. Question appears to meet SRO only guidance. The distractor "is NOT" is not plausible for the second part of this question. Both 'within 24 hrs' and 'within 4 hours' are bound by 'within 24 hours'. This is a subset issue. The analysis would support offering either 4 hr delay or 24 hr delay for the two options for the second part. 1. While this question tests the 24 hour requirement it really appears to be not very discerning. We provide the applicant the 24 hour time. I believe it would be better to test the B.3 idea for the 4 hour requirement. Discuss with licensee. 06/22/2015 1. Used the above suggestion. 2. Have not validated with the new version. Will validate. 3. Ok as changed.
91 067AA2.06	H	2												N	S	Question appears to match the KA. Question appears to meet SRO only guidance. Question appears to be SAT. AG 5/18/15 1. Does the word inoperable, need to be in CAPS based on TS? 2. Is it necessary to use "were" closed vice just closed? Remove were. 3. There is NO safe guards information associated with this Security Threat procedure that we have to worry about is there? Ask licensee. 4. While this question is kind of basic, the level of difficulty is not very high. 06/22/2015 1. No inoperable is NOT capitalized. 2. This is security sensitive. WE need to REMOVE this from putting this in the examination file. 3. HOW is this going to be handled. Is this CONFIDENTIAL

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
92 068G2.4.41	H	2												N	E S	Question appears to match the KA. Question appears to meet SRO only guidance. There are four Emergency Declaration questions on this exam, there is also an Emergency Declaration JPM. This item is being oversampled. Questions 81, 87, 92, and 95 This question K/A directly asks for EAL classification. 1. In the Stem, should have the procedure by which the WMT is being released. Add procedure to stem. 2. Should provide what the applicants see for 1RE-0018, the value and that the RED HIGH alarm light is lit. Or something like that. Can use what the alert is showing. Are there high and alert alarm lights? 3. First question is AUO/RO knowledge. 4. I think it would be more discerning if we asked if an ALERT or whatever other EAL should be called at the 16 minute point. This way we are going to the next step in answering and evaluating what has happened. The applicants would have to evaluate the 1 min passed the 15 time frame. And call an alert or a NOUE. I think that is correct. Also it is better than determining if the set point has been exceeded. Change the second part as to call or not call out an ALERT. 06/22/2015 1. Directly is bolded. 2. Applicants will have larger print EALs. 3. Added the procedure that it is being used to the stem. 4. Added for last the ALERT emergency.
93 G2.1.13	F	1												B	U	Question appears to match the KA. Question appears to meet SRO only guidance. 1. First question is RO knowledge. Could change this to have who can give permissions to allow Priority KEYs to the end of the shift, the answer could be Security or issuing department must give permission approval. Use this vice are or are not allowed. This would be closer to an SRO question.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			2. Second part is SRO knowledge but not very discerning. I think that it be changed to who has to be informed. The answer would be the SSM or responsible department manager. Not sure this will work. Discuss with licensee the changes if they will or will not work. I think that the second part may not work... 06/22/2015 1. Done better than before. 2. Has to now use two keys. 3. Reevaluate as a 2-3.
															S	
94 G2.1.35	F	2				X								B	E	Question appears to match the KA. Question appears to meet SRO only guidance. 1. Add to the stem what procedure is being followed for the core reload. Number as well as the noun name of the procedure. And for fuel movement in the FHB. Distractor D does not make sense for SRO to authorize fuel unlatch in SFP. Discuss with licensee. Is the procedure for fuel movement in the FHB the same as the one for core reload? 06/23/2015 1. Licensee states, at this time, there are approximately 6 procedures in force so if they use this procedure there are no other procedures that will conflict. 2. D, looks ok OK as is. No changes necessary.
															S	
95 G2.2.2	H	1		X										N	U	Question appears to match the KA. The second part of this question is a direct lookup from the supplied reference. The second part is RO level.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.	8.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	B/M/N	U/E/S	Explanation
															S	There are four Emergency Declaration questions on this exam, there is also an Emergency Declaration JPM. This item is being oversampled. Questions 81, 87, 92, and 95 06/23/2015 1. Replaced question. Replacement question appears to be ok.
96 G2.3.14	H	3												B HL 19	E	Question appears to match the KA. Question appears to meet SRO only guidance. Question appears to be SAT. AG 5/18/15 1. While the question reads ok it could be stated the first time the LCO is out of specification. This may be better than phrasing it as a NOT met question. 2. Add the degree symbol between the 500 and F ie. 500°F. This can be done by using Word then copying the symbol and pasting it in if you use LXR. Not sure if the licensee uses LXR. 3. The second part of the question concerns itself with modes 3, 4, and 5. While the first part concerns itself with mode 1. Does this matter the way the second part is written? 4. Plausibility analysis uses character u versus μ, needs to be corrected.
															S	06/23/2015 1. Did not change as requested does not make sense to do what was asked. 2. Need to change from opening to minimize the risk of opening. See question to understand what was changed. 3. Do not use minimize, use reduce. Appears to be ok.
97 G2.3.6	F	2				X								B HL 7	U/E	Question appears to match the KA. Question appears to meet SRO only guidance. Second part distractor may not be plausible, Chemistry department does not get involved in Gaseous releases- doesn't the HP department approve those?

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only			
															S	06/23/2015 1. HP has nothing to do with releases, ONLY chemistry department. 2. Removed the , "In addition to the Shift Supervisor," now trying to decide how to ask this in the question. Decided to add procedure 13216-1, Per the procedure the chemistry manager, ___ . Now this reads , see the exam for the changes. Nothing has to be changed. Appears to be ok as is.
98 G2.4.23	H	3				X								B	U/E	Question appears to match the KA. Question appears to meet SRO only guidance. The distractor for the second part may not be plausible. Is it possible to have, Subcriticality, ORANGE with the condition "reactor tripped" in the stem? This may not be operationally valid. IR SUR needs to be positive to make 19211-C a plausible distractor.
															S	06/23/2015 1. Orange will bounce in, due to feed, or instrumentation spiking for a positive SUR. 2. Ok as changed.
99 2.4.26	H	3												N	S	Question appears to match the KA. Question appears to meet SRO only guidance. Question appears to be SAT. AG 5/18/15
100 WE06EA2.01	F	3												B HL 17	E	Question appears to match the KA. Question appears to meet SRO only guidance. Procedure title and noun name for 19241-C needs to be listed. Should "Integrity" and "Core Cooling" be all caps?

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. B/M/N	7. U/E/S	8. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		S	1. How is this question different than Q98? Both are asking the same concept whether to complete or immediately transition to another FRP? 2. What does asterisk on step numbers 12 through 14 in 19222-C mean? 06/23/2015 1. Added procedure title as requested. 2. More knowledge of procedures than CFSTs usage. 3. Removing the word completion in distractors A and C. 4. NO to capitalize as above. 5. * is to be continuous action steps. 6. The RCPs should or are required to be. Will be