Facility: OCONEE Date of Exam: MAY 2011

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	2	1	2				2	1			1	9	2	2	4
	Tier Totals	5	4	5				5	4			4	27	5	5	10
2. Plant Systems	1	3	2	3	3	2	3	2	3	2	3	2	28	2	3	5
	2	1	1	1	1	1	0	1	1	1	1	1	10	0 1	2	3
	Tier Totals	4	3	4	4	3	3	3	4	3	4	3	38	3	5	8
3. Generic Knowledge and Abilities Categories		1			2			3			4		10	1 2 3 4				7
		2			2			3			3			1 2 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:
007EK3.01	Reactor Trip - Stabilization - Recovery / 1	4	4.6	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Actions contained in EOP for reactor trip
008AK3.05	Pressurizer Vapor Space Accident / 3	4	4.5	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	ECCS termination or throttling criteria
009EK1.01	Small Break LOCA / 3	4.2	4.7	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Natural circulation and cooling, including reflux boiling
011EK2.02	Large Break LOCA / 3	2.6	2.7	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Pumps
015AG2.1.7	RCP Malfunctions / 4	4.4	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior and instrument interpretation.
025AK1.01	Loss of RHR System / 4	3.9	4.3	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Loss of RHRS during all modes of operation
027AK2.03	Pressurizer Pressure Control System Malfunction / 3	2.6	2.8	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Controllers and positioners
029EK2.06	ATWS / 1	2.9	3.1	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Breakers, relays, and disconnects.
038EA1.10	Steam Gen. Tube Rupture / 3	3.7	3.7	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Control room radiation monitoring indicators and alarms
054AA1.03	Loss of Main Feedwater / 4	3.5	3.7	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	AFW auxiliaries, including oil cooling water supply
055EA2.06	Station Blackout / 6	3.7	4.1	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Faults and lockouts that must be cleared prior to re-energizing buses

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
056AK1.01	Loss of Off-site Power / 6	3.7	4.2	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Principle of cooling by natural convection
058AG2.4.11	Loss of DC Power / 6	4.0	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of abnormal condition procedures.
062AA2.04	Loss of Nuclear Svc Water / 4	2.5	2.9	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	The normal values and upper limits for the temperatures of the components cooled by SWS
065AA2.05	Loss of Instrument Air / 8	3.4	4.1	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	When to commence plant shutdown if instrument air pressure is decreasing
077AA1.05	Generator Voltage and Electric Grid Disturbances / 6	3.9	4.0	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Engineered Safety Features
BE04EK3.3	Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4	4.2	3.8	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Manipulation of controls required to obtain desired operating results during abnormal, and emergency situations.
BE05EG2.4.6	Steam Line Rupture - Excessive Heat Transfer / 4	3.7	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge symptom based EOP mitigation strategies.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
003AA2.03	Dropped Control Rod / 1	3.6	3.8	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Dropped rod, using in-core/ex-core instrumentation in-core or loop temperature measurements
005AK2.01	Inoperable/Stuck Control Rod / 1	2.5	2.5	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Controllers and positioners
028AK1.01	Pressurizer Level Malfunction / 2	2.8	3.1	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	PZR reference leak abnormalities
032AA1.01	Loss of Source Range NI / 7	3.1	3.4	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Manual restoration of power
076AK3.06	High Reactor Coolant Activity / 9	3.2	3.8	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Actions contained in EOP for high reactor coolant activity
BA03AA1.1	Loss of NNI-Y / 7	4	4	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features.
BA05AK3.1	Emergency Diesel Actuation / 6	3.2	3.4	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Facility operating characteristics during transient conditions, including coolant chemistry and the effects of temperature, pressure, and reactivity changes and operating limitations and reasons for these operating characteristics.
BE03EG2.4.45	Inadequate Subcooling Margin / 4	4.1	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to prioritize and interpret the significance of each annunciator or alarm.
BE09EK1.3	Natural Circ. / 4	3.5	3.5	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Annunciators and conditions indicating signals, and remedial actions associated with the (Natural Circulation Cooldown).

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
003A4.02	Reactor Coolant Pump	2.9	2.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	RCP motor parameters
004A1.07	Chemical and Volume Control	2.7	3.1	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Maximum specified letdown flow
004K5.37	Chemical and Volume Control	2.6	3.1	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Effects of boron saturation on ion exchanger behavior
005K4.01	Residual Heat Removal	3.0	3.2	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Overpressure mitigation system
006K1.08	Emergency Core Cooling	3.6	3.9	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	CVCS
007K4.01	Pressurizer Relief/Quench Tank	2.6	2.9	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Quench tank cooling
008A4.10	Component Cooling Water	3.1	3.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Conditions that require the operation of two CCW coolers
008K1.03	Component Cooling Water	2.8	3.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	PRMS
010K2.03	Pressurizer Pressure Control	2.8	3.0	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Indicator for PORV position
012K3.02	Reactor Protection	3.2	3.3	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	T/G
013K6.01	Engineered Safety Features Actuation	2.7	3.1	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Sensors and detectors

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
022K2.01	Containment Cooling	3.0	3.1	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Containment cooling fans
026A2.08	Containment Spray	3.2	3.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Safe securing of containment spray when it can be done)
026K3.01	Containment Spray	3.9	4.1	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	CCS
039A3.02	Main and Reheat Steam	3.1	3.5	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	Isolation of the MRSS
059A4.03	Main Feedwater	2.9	2.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Feedwater control during power increase and decrease
061A2.06	Auxiliary/Emergency Feedwater	2.7	3.0	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Back leakage of MFW
061K6.01	Auxiliary/Emergency Feedwater	2.5	2.8	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Controllers and positioners
062G2.4.47	AC Electrical Distribution	4.2	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material.
063G2.4.2	DC Electrical Distribution	4.5	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of system set points, interlocks and automatic actions associated with EOP entry conditions.
063K3.02	DC Electrical Distribution	3.5	3.7	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Components using DC control power
064A1.01	Emergency Diesel Generator	3.0	3.1	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	ED/G lube oil temperature and pressure

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
064K6.08	Emergency Diesel Generator	3.2	3.3	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Fuel oil storage tanks
073A2.01	Process Radiation Monitoring	2.5	2.9	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Erratic or failed power supply
073K5.01	Process Radiation Monitoring	2.5	3.0	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Radiation theory, including sources, types, units and effects
076A3.02	Service Water	3.7	3.7	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	Emergency heat loads
078K1.03	Instrument Air	3.3	3.4	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Containment air
103K4.06	Containment	3.1	3.7	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Containment isolation system

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
001A1.06	Control Rod Drive	4.1	4.4	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Reactor power
011K1.05	Pressurizer Level Control	3.4	3.5	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Reactor regulating system
014G2.1.20	Rod Position Indication	4.6	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to execute procedure steps.
017K3.01	In-core Temperature Monitor	3.5	3.7	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Natural circulation indications
034A4.01	Fuel Handling Equipment	3.3	3.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Radiation levels
041A2.02	Steam Dump/Turbine Bypass Control	3.6	3.9	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Steam valve stuck open
045A3.11	Main Turbine Generator	2.6	2.9	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	Generator trip
068K5.04	Liquid Radwaste	3.2	3.5	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Biological hazards of radiation and the resulting goal of ALARA
075K2.03	Circulating Water	2.6	2.7	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Emergency/essential SWS pumps
086K4.02	Fire Protection	3.0	3.4	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Maintenance of fire header pressure

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.42	Conduct of operations	2.5	3.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of new and spent fuel movement procedures
G2.1.8	Conduct of operations	3.4	4.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to coordinate personnel activities outside the control room.
G2.2.20	Equipment Control	2.6	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the process for managing troubleshooting activities.
G2.2.7	Equipment Control	2.9	3.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the process for conducting special or infrequent tests
G2.3.11	Radiation Control	3.8	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to control radiation releases.
G2.3.15	Radiation Control	2.9	3.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation monitoring systems
G2.3.7	Radiation Control	3.5	3.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to comply with radiation work permit requirements during normal or abnormal conditions
G2.4.32	Emergency Procedures/Plans	3.6	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of operator response to loss of all annunciators.
G2.4.39	Emergency Procedures/Plans	3.9	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the RO's responsibilities in emergency plan implementation.
G2.4.8	Emergency Procedures/Plans	3.8	4.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of how abnormal operating procedures are used in conjunction with EOPs.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
007EA2.02	Reactor Trip - Stabilization - Recovery / 1	4.3	4.6	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Proper actions to be taken if the automatic safety functions have not taken place
009EG2.4.18	Small Break LOCA / 3	3.3	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the specific bases for EOPs.
015AA2.01	RCP Malfunctions / 4	3	3.5	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Cause of RCP failure
040AA2.01	Steam Line Rupture - Excessive Heat Transfer / 4	4.2	4.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Occurrence and location of a steam line rupture from pressure and flow indications
058AG2.2.22	Loss of DC Power / 6	4.0	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of limiting conditions for operations and safety limits.
062AG2.1.20	Loss of Nuclear Svc Water / 4	4.6	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to execute procedure steps.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
037AG2.4.41	Steam Generator Tube Leak / 3	2.9	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the emergency action level thresholds and classifications.
BA04AA2.1	Turbine Trip / 4	3.3	3.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.
BA08AG2.2.25	Refueling Canal Level Decrease / 8	3.2	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.
BE08EA2.1	LOCA Cooldown - Depress. / 4	2.8	4.2	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
006G2.4.50	Emergency Core Cooling	4.2	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.
007A2.02	Pressurizer Relief/Quench Tank	2.6	3.2	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Abnormal pressure in the PRT
061A2.03	Auxiliary/Emergency Feedwater	2.7	2.9	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Flow rates expected from various combinations of AFW pump discharge valves
063G2.4.20	DC Electrical Distribution	3.8	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of operational implications of EOP warnings, cautions and notes.
064G2.1.23	Emergency Diesel Generator	4.3	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to perform specific system and integrated plant procedures during all modes of plant operation.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
016A2.01	Non-nuclear Instrumentation	3.0	3.1	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Detector failure
017G2.1.7	In-core Temperature Monitor	4.4	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior and instrument interpretation.
068G2.1.32	Liquid Radwaste	3.8	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to explain and apply all system limits and precautions.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.35	Conduct of operations	2.2	3.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the fuel handling responsibilities of SRO's
G2.2.15	Equipment Control	3.9	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to determine the expected plant configuration using design and configuration control documentaion
G2.2.19	Equipment Control	2.3	3.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of maintenance work order requirements.
G2.3.13	Radiation Control	3.4	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiological safety procedures pertaining to licensed operator duties
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
G2.4.29	Emergency Procedures/Plans	3.1	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the emergency plan.
G2.4.9	Emergency Procedures/Plans	3.8	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of low power / shutdown implications in accident (e.g. LOCA or loss of RHR) mitigation strategies.

May, 2011

Facility: **Oconee**		Date of Examination: **May, 2011**
Examination Level: RO [X] SRO [ ]		Operating Test Number: **1**
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations [KA G2.1.25 (3.9/4.2)] (13 min)	D, R	**ADMIN-112 Calculate Requirements To Makeup To BWST** Both
Conduct of Operations [KA G2.1.7 (4.4/4.7)] (15 min)	D, R	**ADMIN-115 Calculate An Estimated Critical Boron Concentration** RO only
Equipment Control [KA G2.2.14 (3.9/4.3)] (30 min)	M, R	**ADMIN-212 Determine LTOP Requirements** RO only
Radiation Control [KA G2.3.4 (3.2/3.7)] (20 min)	M, R	**ADMIN-305 Calculate the Maximum Permissible Stay Time Within Emergency Dose Limits (EDLs)** Both

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: **Oconee**		Date of Examination: **May, 2011**
Examination Level: RO ☐ SRO ☒		Operating Test Number: **1**
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations [KA G2.1.25 (3.9/4.2)] (13 min)	D, R	**ADMIN-112 Calculate Requirements To Makeup To BWST** Both
Conduct of Operations [KA G2.1.4 (3.3/3.8)] (15 min)	M, R	**ADMIN-124 Determine Minimum Shift Staffing Requirements** SRO only
Equipment Control [KA G2.2.12 (3.7/4.1)] (15 min)	M, R	**ADMIN-213 SSF RCMUP Operability On Unit 3** SRO only
Radiation Control [KA G2.3.4 (3.2/3.7)] (20 min)	M, R	**ADMIN-305 Calculate the Maximum Permissible Stay Time Within Emergency Dose Limits (EDLs)** Both
Emergency Plan [KA G2.4.38 (2.4/4.4)] (20 min)	D, R	**ADMIN-408 Determine Emergency Classification and Protective Action Recommendations** SRO only

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(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: **Oconee**	Date of Examination: **May, 2011**
Exam Level: **RO** [X] SRO-I [ ] SRO-U [ ]	Operating Test No.: **1**

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. **CRO-108, Align Emergency Boration During an ATWS** EOP Rule 1 (ATWS/Unanticipated Nuclear Power Production) [KA: BW/E13 EA1.1 (3.4/3.2)] (5 min)	M, A, S	1
b. **CRO-208, Remove 1A Letdown Cooler from Service** OP/1/A/1104/002 Encl. 4.5 [KA 004 G2.2.2 (4.6/4.1)] (15 min)	N, S	2
c. **CRO-028, Align HPI/LPI Piggyback Mode** EOP Encl. 5.12, ECCS Suction Swap to RBES [KA: EPE-009 EK3.21 (4.2/4.5)] (12 min)	D, A, S, E, EN	3
d. **CRO-403, Start A Reactor Coolant Pump** EOP Encl. 5.6, RCP Restart [KA: 003 A1.01 (2.9/2.9)] (15 min)	D, A, S, L	4P
e. **CRO-014, Depressurize S/Gs and Feed With CBPs** EOP, Rule 3 (Loss of Main or Emergency FDW) [KA: APE-054 AA1.01 (4.5/4.4)] (12 min)	D, S, E, L	4S
f. **CRO-501, Pump the Quench Tank** OP/1/A/1104/017 Encl. 4.1 (Pumping QT) [KA: 007 A1.01 (2.9/3.1)] (10 min)	N, S	5
g. **CRO-085, Adjust Radiation Monitor Setpoints** OP/1&2/A/1104/018, GWD System, Encl. 4.9 & 4.10 PT/0/A/230/01, Radiation Monitor Check [KA: 073 A4.02 (3.7/3.7)] (15 min)	D, S	7
h. **CRO-011a, Align Intake Canal for Recirculation on Dam Failure** AP/13, Dam Failure [KA: 075 G2.1.23 (4.3/4.4)] (15 min)	D, A, L, S	8

In-Plant Systems[@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. **NLO-201, Secure the B DAC and Align for Standby Following a Loss of IA** OP/0/A/1106/27 Encl. 4.35 ('B' Diesel Service Air Compressor Operation) [KA: APE-065 AA1.04 (3.5*/3.4*)] (12 min)	N, A, E	8
j. **NLO-017, Align Cooling Water To HPIPs From Station ASWPs** EOP Encl. 5.10 (Station ASW Pump Alignment) [KA: 076 A2.01 (3.5*/3.7*)] (16 min)	D, R, E	4S
k. **NLO-037, Place a Control Battery Charger in Service** OP/1107/010, (Removal From Service and Restoration To Service of a Control Charger) [KA: 063 K1.03 (2.9/3.5)] (12 min)	D	6

@ 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.

* 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	

Facility: **Oconee**	Date of Examination: **May, 2011**
Exam Level: **RO** ☐ SRO-I ☒ SRO-U ☐	Operating Test No.: **1**

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. **CRO-108, Align Emergency Boration During an ATWS** EOP Rule 1 (ATWS/Unanticipated Nuclear Power Production) [KA: BW/E13 EA1.1 (3.4/3.2)] (5 min)	M, A, S	1
b. **CRO-208, Remove 1A Letdown Cooler from Service** OP/1/A/1104/002 Encl. 4.5 [KA 004 G2.2.2 (4.6/4.1)] (15 min)	N, S	2
c. **CRO-028, Align HPI/LPI Piggyback Mode** EOP Encl. 5.12, ECCS Suction Swap to RBES [KA: EPE009 EK3.21 (4.2/4.5)] (12 min)	D, A, S, E, EN	3
d. **CRO-403, Start A Reactor Coolant Pump** EOP Encl. 5.6, RCP Restart [KA: 003 A1.01 (2.9/2.9)] (15 min)	D, A, S, L	4P
e. **CRO-014, Depressurize S/Gs and Feed With CBPs** EOP, Rule 3 (Loss of Main or Emergency FDW) [KA: APE-054 AA1.01 (4.5/4.4)] (12 min)	D, S, E, L	4S
f. **CRO-501, Pump the Quench Tank** OP/1/A/1104/017 Encl. 4.1 (Pumping QT) [KA: 007 A1.01 (2.9/3.1)] (10 min)	N, S	5
g. **N/A**		
h. **CRO-011a, Align Intake Canal for Recirculation on Dam Failure** AP/13, Dam Failure [KA: 075 G2.1.23 (4.3/4.4)] (15 min)	D, A, L, S	8

In-Plant Systems[@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. **NLO-201, Secure the B DAC and Align for Standby Following a Loss of IA** OP/0/A/1106/27 Encl. 4.35 ('B' Diesel Service Air Compressor Operation) [KA: APE065 AA1.04 (3.5*/3.4*)] (12 min)	N, A, E	8
j. **NLO-017, Align Cooling Water To HPIPs From Station ASWPs** EOP Encl. 5.10 (Station ASW Pump Alignment) [KA: 076 A2.01 (3.5*/3.7*)] (16 min)	D, R, E	4S
k. **NLO-037, Place a Control Battery Charger in Service** OP/1107/010, (Removal From Service and Restoration To Service of a Control Charger) [KA: 063 K1.03 (2.9/3.5)] (12 min)	D	6

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* 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	

May, 2011

Facility: **Oconee**	Date of Examination: **May, 2011**
Exam Level: **RO** ☐ SRO-I ☐ SRO-U ☒	Operating Test No.: **1**

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. **CRO-108, Align Emergency Boration During an ATWS** EOP Rule 1 (ATWS/Unanticipated Nuclear Power Production) [KA: BW/E13 EA1.1 (3.4/3.2)] (5 min)	M, A, S	1
b. **N/A**		
c. **CRO-028, Align HPI/LPI Piggyback Mode** EOP Encl. 5.12, ECCS Suction Swap to RBES [KA: EPE009 EK3.21 (4.2/4.5)] (12 min)	D, A, S, E, EN	3
d. **N/A**		
e. **N/A**		
f. **N/A**		
g. **N/A**		
h. **CRO-011a, Align Intake Canal for Recirc on Dam Failure** AP/13, Dam Failure [KA: 075 G2.1.23 (4.3/4.4)] (15 min)	D, A, L, S	8

In-Plant Systems[@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. **N/A**		
j. **NLO-017, Align Cooling Water To HPIPs From Station ASWPs** EOP Encl. 5.10 (Station ASW Pump Alignment) [KA: 076 A2.01 (3.5*/3.7*)] (16 min)	D, R, E	4S
k. **NLO-037, Place a Control Battery Charger in Service** OP/1107/010, (Removal From Service and Restoration To Service of a Control Charger) [KA: 063 K1.03 (2.9/3.5)] (12 min)	D	6

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* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
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(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	