Facility: OCONEE Date of Exam: 2010-302

Tier	Group	RO K/A Category Points											SRO-Only Points		
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	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	3	2	3	3	2	2	3	3	2	2	28	2	3	5
	2	1	1	1	1	0	1	1	1	1	1	1	10	1	2	3
	Tier Totals	4	4	3	4	3	3	3	4	4	3	3	38		5	8
3. Generic Knowledge and Abilities Categories		1		2		3		4		10			1	2	3	4	7
		3		3		2		2					2	1	2	2	

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 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 KAs.
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:
008AG2.4.49	Pressurizer Vapor Space Accident / 3	4.6	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.
009EA2.38	Small Break LOCA / 3	3.9	4.3	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Existence of head bubble
011EG2.4.21 2.4.20	Large Break LOCA / 3	4.0	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the parameters and logic used to assess the status of safety functions
OK 015AK2.07	RCP Malfunctions / 4	2.9	2.9	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	RCP seals
022AG2.1.7	Loss of Rx Coolant Makeup / 2	4.4	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior and instrument interpretation.
025AA1.03	Loss of RHR System / 4	3.4	3.3	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	LPI pumps
027AK3.03 AK304	Pressurizer Pressure Control System Malfunction / 3	3.7	4.1	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Actions contained in EOP for PZR PCS malfunction
029EK1.01	ATWS / 1	2.8	3.1	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Reactor nucleonics and thermo-hydraulics behavior
038EA1.32	Steam Gen. Tube Rupture / 3	4.6	4.7	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Isolation of a ruptured S/G
040AA2.05	Steam Line Rupture - Excessive Heat Transfer / 4	4.1	4.5	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	When ESFAS systems may be secured
054AA2.06	Loss of Main Feedwater / 4	4	4.3	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	AFW adjustments needed to maintain proper T-ave. and S/G level

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
055EK1.01	Station Blackout / 6	3.3	3.7	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Effect of battery discharge rates on capacity
056AA1.25	Loss of Off-site Power / 6	2.9	2.9	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Main steam supply valve control switch
057AK3.01 AA1.05	Loss of Vital AC Inst. Bus / 6	4.1	4.4	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Actions contained in EOP for loss of vital ac electrical instrument bus
065AK3.04	Loss of Instrument Air / 8	3	3.2	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Cross-over to backup air supplies
207 077AK2.01	Generator Voltage and Electric Grid Disturbances / 6	3.1	3.2	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Motors
BE04EK1.2	Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4	4	4.2	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Normal, abnormal and emergency operating procedures associated with (Inadequate Heat Transfer).
BE10EK2.2	Reactor Trip - Stabilization - Recovery / 1	3.5	4	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	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.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
005AA1.01	Inoperable/Stuck Control Rod / 1	3.6	3.4	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	CRDS
032AK1.01	Loss of Source Range NI / 7	2.5	3.1	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Effects of voltage changes on performance
051AK3.01	Loss of Condenser Vacuum / 4	2.8	3.1	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Loss of steam dump capability upon loss of condenser vacuum
061AK1.01	ARM System Alarms / 7	2.5	2.9	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Detector limitations
069AG2.2.38	Loss of CTMT Integrity / 5	3.6	4.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of conditions and limitations in the facility license.
076AK2.01	High Reactor Coolant Activity / 9	2.6	3	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Process radiation monitors
BA07AA1.2	Flooding / 8	2.8	3	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Operating behavior characteristics of the facility.
BE03EK3.2	Inadequate Subcooling Margin / 4	3.6	3.8	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Normal, abnormal and emergency operating procedures associated with (Inadequate Subcooling Margin).
BE09EA2.1	Natural Circ. / 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:
003K1.13	Reactor Coolant Pump	2.5	2.5	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	RCP bearing lift oil pump
003K4.04	Reactor Coolant Pump	2.8	3.1	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Adequate cooling of RCP motor and seals
004G2.1.32	Chemical and Volume Control	3.8	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to explain and apply all system limits and precautions.
005K6.03	Residual Heat Removal	2.5	2.6	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	RHR heat exchanger
3.02 006K3.03	Emergency Core Cooling	4.2	4.4	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Containment
007A3.01	Pressurizer Relief/Quench Tank	2.7	2.9	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	Components which discharge to the PRT
008A1.02	Component Cooling Water	2.9	3.1	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	CCW temperature
008A4.07	Component Cooling Water	2.9	2.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Control of minimum level in the CCWS surge tank
010A3.02	Pressurizer Pressure Control	3.6	3.5	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	PZR pressure
012K5.02	Reactor Protection	3.1	3.3	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Power density
013K1.08	Engineered Safety Features Actuation	3.6	3.8	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	CCWS

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
022A4.05	Containment Cooling	3.8	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Containment readings of temperature, pressure and humidity system
204 026A2.02	Containment Spray	4.2	4.4	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Failure of automatic recirculation transfer
026G2.4.46	Containment Spray	4.2	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to verify that the alarms are consistent with the plant conditions.
039K5.05	Main and Reheat Steam	2.7	3.1	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Bases for RCS cooldown limits
059K4.19	Main Feedwater	3.2	3.4	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Automatic feedwater isolation of MFW
202 061K2.01	Auxiliary/Emergency Feedwater	3.2	3.3	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	AFW system MOVs
061K5.02	Auxiliary/Emergency Feedwater	3.2	3.6	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	Decay heat sources and magnitude
062K2.01	AC Electrical Distribution	3.3	3.4	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Major system loads
063K2.01	DC Electrical Distribution	2.9	3.1	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	Major DC loads
103 064A1.04	Emergency Diesel Generator	2.8	2.9	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Crankcase temperature and pressure
608 064K6.07	Emergency Diesel Generator	2.7	2.9	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Air receivers

Lake Lvl vs Fuel oil

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
073A2.02	Process Radiation Monitoring	2.7	3.2	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Detector failure
076A2.01	Service Water	3.5	3.7	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Loss of SWS
078K3.02	Instrument Air	3.4	3.6	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Systems having pneumatic valves and controls
078K4.03 4.02	Instrument Air	3.1	3.3	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Securing of SAS upon loss of cooling water
103A3.01	Containment	3.9	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	Containment isolation
OK 103K1.05	Containment	2.8	3.0	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	Personnel access hatch and emergency access hatch

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
001K4.23	Control Rod Drive	3.4	3.8	☐	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	Rod motion inhibit
014A2.06	Rod Position Indication	2.6	3.0	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Loss of LVDT
015K2.01	Nuclear Instrumentation	3.3	3.7	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	NIS channels, components and interconnections
017K3.01 401	In-core Temperature Monitor	3.5	3.7	☐	☐	☑	☐	☐	☐	☐	☐	☐	☐	☐	Natural circulation indications
029A3.01	Containment Purge	3.8	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	CPS isolation
033K1.02	Spent Fuel Pool Cooling	2.5	2.7	☑	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	RHRS
034A1.02	Fuel Handling Equipment	2.9	3.7	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	Water level in the refueling canal
041K6.03	Steam Dump/Turbine Bypass Control	2.7	2.9	☐	☐	☐	☐	☐	☑	☐	☐	☐	☐	☐	Controller and positioners, including ICS, S/G, CRDS
068G2.1.30 056	Liquid Radwaste	4.4	4.0	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to locate and operate components, including local controls.
ok 075A4.01	Circulating Water	3.2	3.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	☐	Emergency/essential SWS pumps

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.14	Conduct of operations	3.1	3.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of criteria or conditions that require plant-wide announcements, such as pump starts, reactor trip, mode changes, etc.
G2.1.26	Conduct of operations	3.4	3.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of industrial safety procedures (such as rotating equipment, electrical, high temperature, high pressure, caustic, chlorine, oxygen and hydrogen).
G2.1.8	Conduct of operations	3.4	4.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to coordinate personnel activities outside the control room.
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.
G2.2.39	Equipment Control	3.9	4.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of less than one hour technical specification action statements for systems.
G2.2.42	Equipment Control	3.9	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to recognize system parameters that are entry-level conditions for Technical Specifications
G2.3.11	Radiation Control	3.8	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to control radiation releases.
G2.3.4	Radiation Control	3.2	3.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation exposure limits under normal and emergency conditions
G2.4.23	Emergency Procedures/Plans	3.4	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the bases for prioritizing emergency procedure implementation during emergency operations.
G2.4.29	Emergency Procedures/Plans	3.1	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the emergency plan.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
008AG2.4.41	Pressurizer Vapor Space Accident / 3	2.9	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the emergency action level thresholds and classifications.
015AG2.2.44	RCP Malfunctions / 4	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
025AA2.04	Loss of RHR System / 4	3.3	3.6	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Location and isolability of leaks
038EA2.16	Steam Gen. Tube Rupture / 3	4.2	4.6	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Actions to be taken if S/G goes solid and water enters steam line
058AA2.02	Loss of DC Power / 6	3.3	3.6	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	125V dc bus voltage, low/critical low, alarm
BE04EG2.4.8	Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4	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:
032AA2.08 AA 207	Loss of Source Range NI / 7	2.2	3.1	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Testing required if power lost, then restored
033AG2.2.25 2.02	Loss of Intermediate Range NI / 7	3.2	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.
076AA2.04	High Reactor Coolant Activity / 9	2.6	3	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Process effluent radiation chart recorder
~~BE13EG2.4.9~~ 3E10 EA2.1	EOP Rules	3.8	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of low power / shutdown implications in accident (e.g. LOCA or loss of RHR) mitigation strategies.

ES-401, REV 9 **SRO T2G1 PWR EXAMINATION OUTLINE** **FORM ES-401-2**

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
003A2.02	Reactor Coolant Pump	3.7	3.9	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Conditions which exist for an abnormal shutdown of an RCP in comparison to a normal shutdown of an RCP
006G2.4.30	Emergency Core Cooling	2.7	4.1	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of events related to system operations/status that must be reported to internal orginizations or outside agencies.
007A2.06	Pressurizer Relief/Quench Tank	2.6	2.8	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Bubble formation in PZR
2,2,2															
064G2.2.3	Emergency Diesel Generator	3.8	3.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	(multi-unit license) Knowledge of the design, procedural and operational differences between units.
073G2.2.~~37~~ 40	Process Radiation Monitoring	3.6	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to determine operability and/or availability of safety related equipment

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
034A2.03	Fuel Handling Equipment	3.3	4.0	☐	☐	☐	☐	☐	☐	☐	☑	☐	☐	☐	Mispositioned fuel element
068G2.2.~~36~~ 44	Liquid Radwaste	3.1	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions of operations
~~068~~ G2.4.6 035	Fire Protection	3.7	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge symptom based ~~EOP~~ mitigation strategies.

Admin Response Guidance Since no EOP.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.34	Conduct of operations	2.7	3.5	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of primary and secondary chemistry limits
G2.1.5	Conduct of operations	2.9	3.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to locate and use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc.
G2.2.40	Equipment Control	3.4	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to apply technical specifications for a system.
G2.3.12	Radiation Control	3.2	3.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiological safety principles pertaining to licensed operator duties
G2.3.6	Radiation Control	2.0	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to aprove release permits
G2.4.12	Emergency Procedures/Plans	4.0	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of general operating crew responsibilities during emergency operations.
G2.4.44	Emergency Procedures/Plans	2.4	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of emergency plan protective action recommendations.

DRAFT

Facility: **Oconee** Date of Examination: **10/25/10**

Examination Level: RO [X] SRO [ ] Operating Test Number: **1**

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations G2.1.25 (3.9/4.2)	D,R	**Admin-126 Manual Shutdown Margin Calculation** Both
Conduct of Operations G2.1.4 (3.3/3.8)	N,R	**Admin-124 Determine if RO License requirements met** RO Only
Equipment Control G2.2.42 (3.9/4.6)	D,R	**Admin-202 Determine SSF RCMUP Operability** RO Only
Radiation Control G2.3.12 (3.2/3.7)	N,R	**Admin-304 Determine Posting and Access requirements of LPI Room Based on Plan View** 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)

DRAFT

Facility: **Oconee**		Date of Examination: **10/25/10**
Examination Level: RO ☐ SRO [X]		Operating Test Number: **1**
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations G2.1.25 (3.9/4.2)	D,R	**Admin-126 Manual Shutdown Margin Calculation** Both
Conduct of Operations G2.1.4 (3.3/3.8)	N,R	**Admin-125 Determine if SRO License requirements met** SRO only
Equipment Control G2.2.40 (3.4/4.7)	N,R	**Admin-211 Determine Tech Spec and SLC requirements for inoperable ADV flowpath** SRO only
Radiation Control G2.3.12 (3.2/3.7)	N,R	**Admin-304 Determine Posting and Access requirements of LPI Room Based on Plan View** Both
Emergency Plan G2.4.30 (2.7/4.1)	N,R	**Admin-409 Determine "Immediate" reportability requirements for a Reactor Trip.** SRO only

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)

DRAFT

Facility: **Oconee** Date of Examination: **10/25/2010**

Exam Level: **RO** ☐ SRO-I **X** 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, Recover a Dropped Rod** OP/O/A/1105/009, Enclosure 4.15 (Recovery Of Dropped/Misaligned Safety Or Regulating Control Rod with Diamond In Automatic) APE 005 AA2.03 (3.5/4.4) (15 min)	M, A, S	1
b. **CRO-207 Pressure makeup to CFT with failure** OP/1/A/1104/01, Enclosure 4.7 (Pressure Makeup To CFTs Using Nitrogen) 006 A1.13 (3.5/3.7) (10 min)	D, A, S, P	2
c. **CRO-004, Perform Actions For a Failed LPI Train** EP/1/A/1800/001 (Emergency Operating Procedure) Enclosure 5.1 (ES Actuation) EPW 011 EA1.04 (4.4/4.4) (10 min)	M, A, S, E, EN	3
d. **CRO-092, Swapping LPI Modes – High Pressure Mode to LPI Normal** OP/1/A/1104/004, Enclosure 4.15 (Swapping LPI Modes – High Press Mode to LPI Normal Mode) 005 A4.01 (3.6*/3.4) (20 min)	D, S, L	4P
e. **CRO-402, Perform Rule 3 For a loss of Main FDW** EP/1/A/1800/001 (Emergency Operating Procedure), Rule 3 (Loss of Main or Emergency FDW) APE054 AA2.04 (4.2/4.3) (5 min)	N, A,S, E	4S
f. **CRO-602, Live Bus Transfer Of MFB Power From CT 4 To CT 1** OP/0/A/1106/019, Enclosure 4.16 (Live Bus Transfer Of MFB Power From CT 4 To CT 1) 062 A4.01 (3.3/3.1) (10 min)	N, S, L	6
g. **CRO-060, Perform Required Actions for a Turbine Building Flood** AP/10, (Uncontrollable Flooding of Turbine Building) APE BW/A07 AA1.3 (3.3/3.5) (7 min)	M, A, S	8
h. n/a		

In-Plant Systems[@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. **NLO-026, Manually Operate FDW-315** EOP Encl. 5.27 (Alternate Methods for Controlling EFDW Flow) APE 054 AK3.03 (3.8/4.1) (20 min)	D, E, R	4S
j. **NLO-003, Shutdown of Inverters During SBO** EOP Enclosure 5.32 (Load Shed of Inverters During SBO) EPE 055 G2.1.30 (3.9/3.4) (5 min)	D, E, L	6
k. **NLO-041, Restart The Primary IA Compressor Following A Compressor Trip** OP/0/A/1106/27, Enclosure 4.3 (Primary IA Compressor Restart Following Trip) 078 G2.1.30 (4.4/4.0) (11 min)	D, E	8
@ 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	

DRAFT

Facility: **Oconee** Date of Examination: **10/25/2010**

Exam Level: **RO** ☐ SRO-I ☐ SRO-U **X** 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, Recover a Dropped Rod** OP/O/A/1105/009, Enclosure 4.15 (Recovery Of Dropped/Misaligned Safety Or Regulating Control Rod with Diamond In Automatic) APE 005 AA2.03 (3.5/4.4) (15 min)	M, A, S	1
b. n/a		
c. **CRO- 004 Perform Actions For a Failed LPI Train** EOP Enclosure 5.1 (ES Actuation) EPW 011 EA1.04 (4.4/4.4) (10 min)	M, A, S, E, EN	3
d. n/a		
e. n/a		
f. **CRO-602, Live Bus Transfer Of MFB Power From CT 4 To CT 1** OP/0/A/1106/019 Enclosure. 4.16 (Live Bus Transfer Of MFB Power From CT 4 To CT 1) 062 A4.01 (3.3/3.1) (10 min)	N, S, L	6
g. n/a		
h. n/a		
In-Plant Systems@ (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. **NLO-026, Manually Operate FDW-315** EOP Enclosure 5.27 (Alternate Methods for Controlling EFDW Flow) APE 054 AK3.03 (3.8/4.1) (7 min)	D, E, R	4S
j. n/a		
k. **NLO-041, Restart The Primary IA Compressor Following A Compressor Trip** OP/0/A/1106/27, Enclosure 4.3 (Primary IA Compressor Restart Following Trip) 078 G2.1.30 (4.4/4.0) (11 min)	D, E	8

@ 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	