

# Draft Submittal

(Pink Paper)

DRAFT Written Exam Quality Checklist (ES-401-6)  
& Written Exam Sample Plan

**TURKEY POINT JULY/AUGUST 2005 EXAM**

**50-250/2005-301 AND 50-251/2005-301**

**JULY 18 - 22, 2005 & AUGUST 1 - 5, 2005  
JULY 15, 2005 (WRITTEN)**

ate: 6/28/04



UNITED STATES  
NUCLEAR REGULATORY COMMISSION

FACSIMILE TRANSMITTAL

TO: Mack Chetty (Turkey Pt. RD outline)  
Name

RTI/ORS/OLHP 404-562-4854  
Location

Pages: 17 + Transmittal Sheet

FROM: Browns Ferry

Facility: Turkey Point														Date of Exam				
Tier	Group	RO K/A Category Points											SRO-Only Points					
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	Total	K	A	A2	G*	Total
1. Emergency & Abnormal Plant Evolutions	1	3	2	4				3	4			2	18					
	2	2	1	1				1	2			2	9					
	Tier Totals	5	3	5				4	6			4	27					
2. Plant Systems	1	4	3	2	2	2	1	3	2	3	3	3	28					
	2	0	0	2	2	0	1	1	1	1	1	1	10					
	Tier Totals	4	3	4	4	2	2	4	3	4	4	4	38					
3. Generic Knowledge and Abilities Category				1		2		3		4				1	2	3	4	
				3		3		2		2		10						

1. Ensure that at least two topics from every K/A category are sampled within each tier of the RO outline (i.e., the "Tier Totals" in each K/A category shall not be less than two). Refer to Section D.1.c for additional guidance regarding SRO sampling.
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. Select topics from many systems and evolutions; avoid selecting more than two K/A topics from a given system or evolution unless they relate to plant-specific priorities.
4. Systems/evolutions within each group are identified on the associated outline.
5. The shaded areas are not applicable to the category/tier.
- 6.\* 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. The SRO K/As must also be linked to 10 CFR 55.43 or an SRO-level learning objective.
7. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IR) 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; summarize all the SRO-only knowledge and non-A2 ability categories in the columns labeled "K" and "A". Use duplicate pages for RO and SRO-only exams.
8. For Tier 3, enter the K/A numbers, descriptions, importance ratings, and point totals on Form ES-401-3.
9. Refer to ES-401, Attachment 2, for guidance regarding the elimination of inappropriate K/A statements.

# Tier Group 1

Name/Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Reactor Trip - Stabilization - Recovery / 1	0	1	0	0	0	0	007EK2.03	Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Reactor trip status panel	3.5	3.6
Pressurizer Vapor Space Accident / 3	0	0	0	1	0	0	008AA1.03 <i>008AA1.07</i>	Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Turbine bypass in manual control to maintain header pressure <i>N/A TP RESAMPLE K/A</i>	2.8	2.6
Small Break LOCA / 3	0	0	0	0	0	1	009EG2.2.22	This is a Generic, no stem statement is associated.	Knowledge of limiting conditions for operations and safety limits.	3.4	4.1
Large Break LOCA / 3	0	0	0	0	1	0	011EA2.08	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Conditions necessary for recovery when accident reaches stable phase	3.4	3.9
RCP Malfunctions / 4	0	0	0	1	0	0	015AA1.22	Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	RCP seal failure/malfunction	4	4.2
Loss of Rx Coolant Makeup / 2	1	0	0	0	0	0	022AK1.01	Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Consequences of thermal shock to RCP seals	2.8	3.2
Loss of RHR System / 4	1	0	0	0	0	0	025AK1.01	Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Loss of RHRS during all modes of operation	3.9	4.3
Loss of Component Cooling Water / 8	0	1	0	0	0	0	026AK2 <i>026AK3.02</i>	Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	0 <i>COULD NOT USE K/A AS IS, SELECTED K3 AND RANDOMLY SELECTED NEW K/A FROM THERE</i>	0	0

# Tier 1 Group 1

Name/Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Pressurizer Pressure Control System Malfunction / 3	0	0	0	0	1	0	027AA2.03	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Effects of RCS pressure changes on key components in plant	3.3	3.4
ATWS / 1	0	0	1	0	0	0	029EK3.10	Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	Manual rod insertion	4.1	4.1
Steam Gen. Tube Rupture / 3	0	0	0	0	1	0	038EA2.07	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Plant conditions from survey of control room indications	4.4	4.8
Steam Line Rupture - Excessive Heat Transfer / 4	0	1	0	0	0	0	040AK2.01	Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Valves	2.6	2.5
Loss of Main Feedwater / 4	0	0	0	0	0	0	054AK2	Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	K/A Randomly Rejected	0	0
Station Blackout / 6	0	0	1	0	0	0	055EK3.02	Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	Actions contained in EOP for loss of offsite and onsite power	4.3	4.6
Loss of Off-site Power / 6	0	0	0	0	1	0	056AA2.32	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Transient trend of coolant temperature toward no-load T-ave	4.3	4.3

# Tier Group 1

Name/Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Loss of Vital AC Inst. Bus / 6	0	0	0	0	0	0	057AK3.01	Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	K/A Randomly Rejected	4.1	4.4
Loss of DC Power / 6	0	0	0	0	0	0	058AA2.03	Ability to determine and interpret the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.5	3.9
Loss of Nuclear Svc Water / 4	0	0	0	0	0	0	062AK3.04	Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	K/A Randomly Rejected	3.5	3.7
Loss of Instrument Air / 8	0	0	1	0	0	0	065AK3.03	Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	Knowing effects on plant operation of isolating certain equipment from instrument air	2.9	3.4
LOCA Outside Containment / 3	0	0	0	0	0	1	WE04EG2.1.3.	This is a Generic, no stem statement is associated.	Ability to explain and apply all system limits and precautions.	3.4	3.8
Loss of Emergency Coolant Recirc. / 4	1	0	0	0	0	0	WE11EK1.3	Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Annunciators and conditions indicating signals, and remedial actions associated with the (Loss of Emergency Coolant Recir).	3.6	4.0
Steam Line Rupture - Excessive Heat Transfer / 4	0	0	0	0	0	0	WE12EA2.2	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.4	3.9
Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4	0	0	0	1	0	0	WE05EA1.2	Ability to operate and / or monitor the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Operating behavior characteristics of the facility.	3.7	4.0

# Tier 1 Group 1

Name/Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO

# Tier Group 2

Name / Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Continuous Rod Withd	0	0	0	0	0	0	001AA1.01	Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	K/A Randomly Rejected	3.5	3.2
Dropped Control Rod /	0	0	0	0	1	0	003AA2.05	Ability to determine and interpret the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Interpretation of computer in-core TC map for dropped rod location	2.5	3.2
Inoperable/Stuck Contr	0	1	0	0	0	0	005AK2.03 <i>005AK2.01</i>	Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Metroscope <i>K/A TP RESAMPLED FOR K/A</i>	3.1	3.3
Emergency Boration / 1	0	0	0	0	0	0	024AA1.26	Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	K/A Randomly Rejected	3.3	3.3
Pressurizer Level Malft.	0	0	0	0	0	0	028AA1.05	Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	K/A Randomly Rejected	2.8	2.9
Loss of Source Range	0	0	0	0	0	0	032AG2.1.28	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.2	3.3
Loss of Intermediate Ri	0	0	0	0	0	1	033AG2.2.22	This is a Generic, no stem statement is associated.	Knowledge of limiting conditions for operations and safety limits.	3.4	4.1
Fuel Handling Accident	0	0	0	0	0	0	036AG2.2.22	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.4	4.1
Steam Generator Tube	0	0	0	0	0	0	037AA2.06	Ability to determine and interpret the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 /	K/A Randomly Rejected	4.3	4.5



# Tier 1 Group 2

Name / Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
								45.13)			
Loss of Condenser Vac	0	0	0	0	0	0	051AK2	Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	K/A Randomly Rejected	0	0
Accidental Liquid RadV	0	0	0	1	0	0	059AA1.03 <i>059AA1.01</i>	Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Flow rate controller <i>N/A TP RESAMPLED N/A</i>	3	2.9
Accidental Gaseous Re	0	0	0	0	0	0	060AK3.01	Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	K/A Randomly Rejected	2.9	4.2
ARM System Alarms /	1	0	0	0	0	0	061AK1.01	Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Detector limitations	2.5	2.9
Plant Fire On-site / 9 8	0	0	0	0	0	0	067AA2.02	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	2.5	2.9
Control Room Evac. / 8	0	0	0	0	0	0	068AG2.1.23	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.9	4
Loss of CTMT Integrity	0	0	0	0	0	0	069AK2.03	Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	K/A Randomly Rejected	2.8	2.9
Inad. Core Cooling / 4	0	0	0	0	0	0	074EA2.04	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 /	K/A Randomly Rejected	3.7	4.2

# Tier 1 Group 2

Name / Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
								45.13)			
High Reactor Coolant /	0	0	0	0	0	0	076AG2.4.4	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	4	4.3
Rediagnosis / 3	0	0	0	0	0	0	WE01EK1.2	Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	K/A Randomly Rejected	3.4	4
Steam Generator Over	0	0	1	0	0	0	WE13EK3.1	Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	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.	2.9	3.2
Containment Flooding /	0	0	0	0	0	0	WE15EA2.2	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	2.9	3.3
High Containment Radi	0	0	0	0	0	0	WE16EK1.2	Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	K/A Randomly Rejected	2.7	3.2
SI Termination / 3	0	0	0	0	1	0	WE02EA2.2	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.	3.5	4.0
LOCA Cooldown - Dep	0	0	0	0	0	0	WE03EA1.1	Ability to operate and / or monitor the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	K/A Randomly Rejected	4.0	4.0

## Tier Group 2

Name / Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Natural Circ. / 4	1	0	0	0	0	0	WE09EK1.1	Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Components, capacity, and function of emergency systems.	3.0	3.4
Natural Circ. With Sear	0	0	0	0	0	0	WE10EK3.2	Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	K/A Randomly Rejected	3.2	3.7
RCS Overcooling - PT	0	0	0	0	0	0	WE08EK3.4	Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	K/A Randomly Rejected	3.4	3.7
Degraded Core Cooling	0	0	0	0	0	1	WE06EG2.4.4	This is a Generic, no stem statement is associated.	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4	4.3
Saturated Core Cooling	0	0	0	0	0	0	WE07EA1.2	Ability to operate and / or monitor the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	K/A Randomly Rejected	3.2	3.7
Loss of CTMT Integrity	0	0	0	0	0	0	WE14EG2.4.4	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	4	4

# Tier Group 1

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	KIA Topic(s)	KA	RO	SRO
Reactor Coolant Pump	0	0	0	0	0	0	0	1	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Effects of VCT pressure on RCP seal leakoff flows	003A2.05	2.5	2.8
Chemical and Volume Control	0	0	1	0	0	0	0	0	0	0	0	Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	PZR level and pressure	004K3.07	3.8	4.1
Residual Heat Removal	0	0	0	1	0	0	0	0	0	0	0	Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	Function of RHR pump miniflow recirculation <i>KIA TOO EASY, RESEARCHED</i>	005K4.06 <i>005K4.01</i>	2.7	3.0
Emergency Core Cooling	1	0	0	0	0	0	0	0	0	0	0	Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	CVCS	006K1.08	3.6	3.9
Pressurizer Relief/Quench Tank	0	0	0	0	0	0	0	0	1	0	0	Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Components which discharge to the PRT	007A3.01	2.7	2.9
Component Cooling Water	0	0	0	0	0	0	0	1	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Consequences of high or low CCW flow rate and temperature; the flow rate at which the CCW standby pump will start	008A2.07	2.5	2.8
Pressurizer Pressure Control	0	0	0	0	0	0	0	0	1	0	0	Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	PZR pressure	010A3.02	3.6	3.5

# Tier Group 1

Name / Safety Functional	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Reactor Protection	1	0	0	0	0	0	0	0	0	0	0	Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	RPIS	012K1.04	3.2	3.3
Engineered Safety Features Actuation	0	0	0	0	1	0	0	0	0	0	0	Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	Definitions of safety train and ESF channel	013K5.01	2.8	3.2
Containment Cooling	0	0	0	0	0	0	1	0	0	0	0	Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	Containment humidity	022A1.03	3.1	3.4
Ice Condenser	0	0	0	0	0	0	0	0	0	0	0		K/A Rejected	025K3.01	0	0
Containment Spray	0	0	0	0	0	0	0	0	0	0	1	This is a Generic, no stem statement is associated.	Knowledge of operator responsibilities during all modes of plant operation.	026GG2.1.2	3.0	4.0
Main and Reheat Steam	1	0	0	0	0	0	0	0	0	0	0	Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	T/G	039K1.05	2.5	2.6
Condensate	0	0	0	0	0	0	0	0	0	0	1	This is a Generic, no stem statement is associated.	Knowledge of limiting conditions for operations and safety limits.	056G2.2.22	3.4	4.1
Main Feedwater	0	0	0	1	0	0	0	0	0	0	0	Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	Control of speed of MFW pump turbine <i>NIA TP RESAMPLED K/A</i>	059K4.05	2.5	2.8
Auxiliary/Emergency	0	0	0	0	0	0	1	0	0	0	0	Ability to predict and/or monitor changes	S/G pressure	061A1.01	3.3	3.6

# Tier Group 1

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Feedwater												in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)				
AC Electrical Distribution	0	1	0	0	0	0	0	0	0	0	0	Knowledge of electrical power supplies to the following:(CFR: 41.7)	Major system loads	062K2.01	3.3	3.4
DC Electrical Distribution	0	1	0	0	0	0	0	0	0	0	0	Knowledge of electrical power supplies to the following:(CFR: 41.7)	Major DC loads	063K2.01	2.9	3.1
Emergency Diesel Generator	0	0	0	0	0	1	0	0	0	0	0	Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)	Fuel oil storage tanks	064K6.08	3.2	3.3
Process Radiation Monitoring	0	0	0	0	0	0	0	0	0	1	0	Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	Radiation monitoring system control panel	073A4.02	3.7	3.7
Service Water	0	0	0	0	0	0	1	0	0	0	0	Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	Reactor and turbine building closed cooling water temperatures.	076A1.02	2.6	2.6
Instrument Air	0	0	0	0	0	0	0	0	1	0	0	Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Air pressure	078A3.01	3.1	3.2
Containment	0	0	0	0	0	0	0	0	0	0	1	This is a Generic, no stem statement is associated.	Knowledge of system status criteria which require the notification of plant personnel.	103GG2.1.14	2.5	3.3
DC Electrical Distribution	0	0	0	0	0	0	0	0	0	1	0	Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	Major breakers and control power fuses	063A4.01	2.8	3.1

# Tier Group 1

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Engineered Safety Features Actuation	1	0	0	0	0	0	0	0	0	0	0	Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	RCP	013K1.02	3.2	3.6
Emergency Core Cooling	0	1	0	0	0	0	0	0	0	0	0	Knowledge of electrical power supplies to the following:(CFR: 41.7)	ECCS pumps	006K2.01	3.6	3.9
Main and Reheat Steam	0	0	0	0	1	0	0	0	0	0	0	Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	Bases for RCS cooldown limits	039K5.05	2.7	3.1
Pressurizer Relief/Quench Tank	0	0	0	0	0	0	0	0	0	1	0	Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	PRT spray supply valve	007A4.01	2.7	2.7
Emergency Core Cooling	0	0	1	0	0	0	0	0	0	0	0	Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	Fuel	006K3.02	4.3	4.4

# Tier Group 2

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Hydrogen Recombiner and Purge Control	0	0	0	0	0	1	0	0	0	0	0	Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)	Hydrogen recombiners <i>N/A TP RESAMPLED K/A</i>	028K6.01  002K6.02	2.6	3.1
Containment Purge	0	0	0	0	0	0	0	0	1	0	0	Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	CPS isolation	029A3.01	3.8	4.0
Spent Fuel Pool Cooling	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	033GG2.4.50	3.3	3.3
Fuel Handling Equipment	0	0	0	0	0	0	0	0	0	1	0	Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	Radiation levels	034A4.01	3.3	3.7
Steam Generator	0	0	0	0	0	0	0	0	0	0	0	Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	K/A Randomly Rejected	035K5.03	2.8	3.1
Steam Dump/Turbine Bypass Control	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	041GG2.1.27	2.8	2.9
Main Turbine Generator	0	0	0	1	0	0	0	0	0	0	0	Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	Automatic turbine runback	045K4.12	3.3	3.6
Condenser Air Removal	0	0	0	0	0	0	0	0	0	0	1	This is a Generic, no stem statement is associated.	Ability to explain and apply all system limits and precautions.	055GG2.1.32	3.4	3.8
Liquid Radwaste	0	0	0	0	0	0	0	0	0	0	0	Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	K/A Randomly Rejected	068K5.03	2.6	2.6



# Tier Group 2

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Waste Gas Disposal	0	0	0	0	0	0	0	1	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Loss of meteorological tower	071A2.07	2.5	2.9
Area Radiation Monitoring	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	072GG2.1.2	3.0	4.0
Circulating Water	0	0	0	0	0	0	0	0	0	0	0	Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	K/A Randomly Rejected	075A3	0	0
Station Air	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	079A2.01	2.9	3.2
Fire Protection	0	0	0	0	0	1	0	0	0	0	0	Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	Fire doors	086A1.03	2.7	3.2
Control Rod Drive	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	001GG2.4.4	4.0	4.3
Reactor Coolant	0	0	0	0	0	0	0	0	0	0	0	Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	K/A Randomly Rejected	002A4.03	4.3	4.4
Pressurizer Level	0	0	0	1	0	0	0	0	0	0	0	Knowledge of (SYSTEM) design	PZR level controller	011K4.02	3.3	3.4

# Tier Group 2

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1A2	A3	A4	G	Question Type feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	K/A Topic(s)	KA	RO	SRO
Control															
Rod Position Indication	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	014GG2.4.31	3.3	3.4
Nuclear Instrumentation	0	0	1	0	0	0	0	0	0	0	Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	Reactor regulating system	015K3.06	2.9	3.2
Non-nuclear Instrumentation	0	0	0	0	0	0	0	0	0	0	Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	K/A Randomly Rejected	016K4.01	2.8	2.9
In-core Temperature Monitor	0	0	1	0	0	0	0	0	0	0	Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	Natural circulation indications <i>HAVE QUESTION BUT K/A MAY NOT BE APPLICABLE</i>	017K3.01	3.5	3.7
Containment Iodine Removal	0	0	0	0	0	0	0	0	0	0	Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	K/A Randomly Rejected	027K5.01	3.1	3.4

----- Draft -----

Facility: Turkey Point Date of Exam: ~~2005-301~~ 08/14/2005 Exam Level: SRO

Item Description	Initial									
	a	b*	c*							
1. Questions and answers are technically accurate and applicable to the facility.	C	N/A	EL							
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	C	N/A	EL							
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	C	N/A	EL							
4. If more than four RO and two SRO questions are repeated from the last two NRC licensing exams, the facility licensee's sampling process was random and systematic.			N/A							
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input type="checkbox"/> the audit exam was systematically and randomly developed <input type="checkbox"/> the audit exam was completed before the license exam was started <input checked="" type="checkbox"/> the examinations were developed independently <input type="checkbox"/> the licensee certifies that there is no duplication <input type="checkbox"/> other (explain)	C		EL							
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.	<table border="1"> <tr> <td>Bank</td> <td>Modified</td> <td>New</td> </tr> <tr> <td>8/25</td> <td>5/25</td> <td>12/25</td> </tr> </table>	Bank	Modified	New	8/25	5/25	12/25	C	N/A	EL
Bank	Modified	New								
8/25	5/25	12/25								
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.	<table border="1"> <tr> <td>Memory 48%</td> <td>CIA 52%</td> </tr> <tr> <td>12/25</td> <td>13/25</td> </tr> </table>	Memory 48%	CIA 52%	12/25	13/25	C	N/A	EL		
Memory 48%	CIA 52%									
12/25	13/25									
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	NONE TO BE PROVIDED	C	N/A	N/A						
9. Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.		C	N/A	EL						
10. Question psychometric quality and format meet the guidelines in ES Appendix B.		C	N/A	EL						
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.		C	N/A	EL						

	Printed Name / Signature	Date
a. Author	Mark A. Chitty / <i>Mark A. Chitty</i>	01/05/2005
b. Facility Reviewer (*)	N/A	N/A
c. NRC Chief Examiner (#)	Edwin Lea / <i>Edwin Lea</i>	4/5/05
d. NRC Regional Supervisor	Jim Moorman / <i>Jim Moorman</i>	1-5-05

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

\* SAMPLE PLAN INDEPENDENTLY GENERATED BY NRC.

**ES-401 Written Examination Quality Checklist Draft In-Office Review Form ES-401-6**

Facility: Turkey Point		Date of Exam: 08/13/2005		Exam Level: RO		
Item Description				Initial		
				a	b*	c*
1. Questions and answers are technically accurate and applicable to the facility.				C	N/A	CL
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.				C	N/A	CL
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401				N/A	N/A	N/A
4. If more than four RO and two SRO questions are repeated from the last two NRC licensing exams, the facility licensee's sampling process was random and systematic.				N/A	N/A	N/A
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input type="checkbox"/> the audit exam was systematically and randomly developed <input type="checkbox"/> the audit exam was completed before the license exam was started <input checked="" type="checkbox"/> the examinations were developed independently <input type="checkbox"/> the licensee certifies that there is no duplication <input type="checkbox"/> other (explain)				C	N/A	CL
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.				Bank	Modified	New
				27 136%	15 120%	33 144%
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.				Memory	C/A	
				30 40%		
				45 60%	45 60%	
8. References/handouts provided do not give away answers or aid in the elimination of distractors.				C	N/A	CL
9. Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.				C	N/A	CL
10. Question psychometric quality and format meet the guidelines in ES Appendix B.				C	N/A	CL
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.				C	N/A	CL
a. Author				Printed Name / Signature		Date
b. Facility Reviewer (*)				M. J. Kelly		11/23/04
c. NRC Chief Examiner (#)				Eduardo Diaz		11/26/04
d. NRC Regional Supervisor				[Signature]		11/26/04
Note: * The facility reviewer's initials/signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.						

Facility: Turkey Point													Date of Exam						
Tier	Group	RO K/A Category Points											SRO-Only Points						
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	Total	K	A	A2	G*	Total	
1. Emergency & Abnormal Plant Evolutions	1																4	3	7
	2																3	2	5
	Tier Totals																7	5	12
2. Plant Systems	1																1 <del>2</del>	3	4 <del>5</del>
	2																1	1	2
	Tier Totals																2 <del>3</del>	4	6 <del>7</del>
3. Generic Knowledge and Abilities Category				1		2		3		4				1	2	3	4		
														2	2	1	2	7	

1. Ensure that at least two topics from every K/A category are sampled within each tier of the RO outline (i.e., the "Tier Totals" in each K/A category shall not be less than two). Refer to Section D.1.c for additional guidance regarding SRO sampling.
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  $\pm 1$  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. Select topics from many systems and evolutions; avoid selecting more than two K/A topics from a given system or evolution unless they relate to plant-specific priorities.
4. Systems/evolutions within each group are identified on the associated outline.
5. The shaded areas are not applicable to the category/tier.
- 6.\* 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. The SRO K/As must also be linked to 10 CFR 55.43 or an SRO-level learning objective.
7. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IR) 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; summarize all the SRO-only knowledge and non-A2 ability categories in the columns labeled "K" and "A". Use duplicate pages for RO and SRO-only exams.
8. For Tier 3, enter the K/A numbers, descriptions, importance ratings, and point totals on Form ES-401-3.
9. Refer to ES-401, Attachment 2, for guidance regarding the elimination of inappropriate K/A statements.

# Tier Group 1

Name/Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Reactor Trip - Stabilization - Recovery / 1	0	0	0	0	0	0	007EG2.1.32	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.4	3.8
Pressurizer Vapor Space Accident / 3	0	0	0	0	0	0	008AA2.24	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	2.6	2.6
Small Break LOCA / 3	0	0	0	0	0	0	009EG2.4.30	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	2.2	3.6
Large Break LOCA / 3	0	0	0	0	0	0	011EA2.05	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.3	3.7
RCP Malfunctions / 4	0	0	0	0	0	1	015AG2.4.49	This is a Generic, no stem statement is associated.	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.	4	4
Loss of Rx Coolant Makeup / 2	0	0	0	0	0	0	022AG2.4.6	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.1	4
Loss of RHR System / 4	0	0	0	0	0	0	025AG2.1.33	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.4	4
Loss of Component Cooling Water / 8	0	0	0	0	0	0	026AA2.06	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	2.8	3.1
Pressurizer Pressure Control System Malfunction / 3	0	0	0	0	0	1	027AG2.2.25	This is a Generic, no stem statement is associated.	Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	2.5	3.7

# Tier Group 1

Name/Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
ATWS / 1	0	0	0	0	0	0	029EA2.03	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	2.9	3.1
Steam Gen. Tube Rupture / 3	0	0	0	0	0	0	038EG2.1.33	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.4	4
Steam Line Rupture - Excessive Heat Transfer / 4	0	0	0	0	0	0	040AA2.04	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	4.5	4.7
Loss of Main Feedwater / 4	0	0	0	0	0	0	054AA2.02	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	4.1	4.4
Station Blackout / 6	0	0	0	0	1	0	055EA2.03	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Actions necessary to restore power	3.9	4.7
Loss of Off-site Power / 6	0	0	0	0	1	0	056AA2.51	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	_T, (core, heat exchanger, etc.)	3.3	3.4
Loss of Vital AC Inst. Bus / 6	0	0	0	0	0	0	057AG2.2.25	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	2.5	3.7
Loss of DC Power / 6	0	0	0	0	0	1	058AG2.2.25	This is a Generic, no stem statement is associated.	Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	2.5	3.7

# Tier 1 Group 1

Name/Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Loss of Nuclear Svc Water / 4	0	0	0	0	0	0	062AA2.04	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	2.5	2.9
Loss of Instrument Air / 8	0	0	0	0	1	0	065AA2.06	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	When to trip reactor if instrument air pressure is de-creasing	3.6	4.2
LOCA Outside Containment / 3	0	0	0	0	0	0	WE04EA2.2	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.6	4.2
Loss of Emergency Coolant Recirc. / 4	0	0	0	0	0	0	WE11EG2.4.6	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.1	4
Steam Line Rupture - Excessive Heat Transfer / 4	0	0	0	0	0	0	WE12EG2.2.2!	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	2.5	3.7
Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4	0	0	0	0	1	0	WE05EA2.2	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.	3.7	4.3



# Tier 1 Group 2

Name / Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Continuous Rod Withdr	0	0	0	0	0	0	001AG2.4.30	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	2.2	3.6
Dropped Control Rod /	0	0	0	0	0	1	003AG2.2.25	This is a Generic, no stem statement is associated.	Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	2.5	3.7
Inoperable/Stuck Contr	0	0	0	0	0	0	005AG2.1.32	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.4	3.8
Emergency Boration / 1	0	0	0	0	0	0	024AG2.4.49	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	4	4
Pressurizer Level Malft.	0	0	0	0	0	0	028AG2.2.25	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	2.5	3.7
Loss of Source Range	0	0	0	0	0	0	032AA2.07	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	2.8	3.4
Loss of Intermediate R:	0	0	0	0	0	0	033AG2.4.30	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	2.2	3.6
Fuel Handling Accident	0	0	0	0	0	0	036AA2.02	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.4	4.1
Steam Generator Tube	0	0	0	0	0	0	037AA2.11	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.8	3.8
Loss of Condenser Vac	0	0	0	0	0	0	051AA2.01	Ability to determine and interpret the	K/A Randomly Rejected	2.4	2.7

# Tier 1 Group 2

Name / Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Accidental Liquid Radw	0	0	0	0	0	0	059AA2.01	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.2	3.5
Accidental Gaseous Re	0	0	0	0	0	0	060AA2.03	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.2	3.9
ARM System Alarms /	0	0	0	0	0	0	061AG2.4.1	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.3	3.3
Plant Fire On-site / 9 8	0	0	0	0	0	0	067AA2.06	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.3	3.6
Control Room Evac. / 8	0	0	0	0	0	0	068AA2.07	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	4.1	4.3
Loss of CTMT Integrity	0	0	0	0	0	0	069AA2.01	Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.7	4.3
Inad. Core Cooling / 4	0	0	0	0	0	0	074EG2.1.33	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	3.4	4
High Reactor Coolant /	0	0	0	0	0	0	076AA2.05	Ability to determine and interpret the	K/A Randomly Rejected	2.2	2.5

# Tier Group 2

Name / Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Rediagnosis / 3	0	0	0	0	1	0	WE01EA2.2	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.	3.3	3.9
Steam Generator Over.	0	0	0	0	0	0	WE13EA2.1	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	2.9	3.4
Containment Flooding /	0	0	0	0	0	0	WE15EG2.4.4	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	4	4.3
High Containment Radi	0	0	0	0	1	0	WE16EA2.1	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.	2.9	3.3
SI Termination / 3	0	0	0	0	0	0	WE02EA2.1	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.3	4.2
LOCA Cooledown - Depi	0	0	0	0	1	0	WE03EA2.2	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.	3.5	4.1
Natural Circ. / 4	0	0	0	0	0	0	WE09EA2.2	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.4	3.8

# Tier Group 2

Name / Safety Function	K1	K2	K3	A1	A2	G	KA	Question Type	K/A Topic(s)	RO	SRO
Natural Circ. With Sear	0	0	0	0	0	0	WE10EG2.2.2!	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	2.5	3.7
RCS Overcooling - PTS	0	0	0	0	0	1	WE08EG2.4.4	This is a Generic, no stem statement is associated.	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4	4.3
Degraded Core Cooling	0	0	0	0	0	0	WE06EG2.4.4	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	4	4.3
Saturated Core Cooling	0	0	0	0	0	0	WE07EG2.2.2!	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	2.5	3.7
Loss of CTMT Integrity	0	0	0	0	0	0	WE14EA2.1	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	K/A Randomly Rejected	3.3	3.8

# Tier Group 1

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Reactor Coolant Pump	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	003A2.01	3.5	3.9
Chemical and Volume Control	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	004GG2.4.6	3.1	4
Residual Heat Removal	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	005GG2.4.30	2.2	3.6
Emergency Core Cooling	0	0	0	0	0	0	0	0	0	0	1	This is a Generic, no stem statement is associated.	Knowledge of the purpose and function of major system components and controls.	006GG2.1.28	3.2	3.3
Pressurizer Relief/Quench Tank	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	007GG2.1.2	3.0	4.0
Component Cooling Water	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	008GG2.1.32	3.4	3.8
Pressurizer Pressure Control	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	010GG2.4.50	3.3	3.3
Reactor Protection	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	012A2.02	3.6	3.9
Engineered Safety	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the	K/A Randomly Rejected	013A2.01	4.6	4.8

# Tier Group 1

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	Question Type	K/A Topic(s)	KA	RO	SRO
Features Actuation											following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)				
Containment Cooling	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	022GG2.1.30	3.9	3.4
Ice Condenser <i>NIA TP</i>	0	0	0	0	0	0	0	1	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Abnormal glycol expansion tank level	025A2.05	2.5	2.7
Containment Spray	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	026A2.01	2.7	3.0
Main and Reheat Steam	0	0	0	0	0	0	0	0	0	1	This is a Generic, no stem statement is associated.	Ability to explain and apply all system limits and precautions.	039GG2.1.32	3.4	3.8
Condensate	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	056A2.04	2.6	2.8
Main Feedwater	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is	K/A Randomly Rejected	059GG2.4.50	3.3	3.3

# Tier ~ Group 1

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Auxiliary/Emergency Feedwater	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	061A2.01	3.2	3.6
AC Electrical Distribution	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	062GG2.1.23	3.9	4.0
DC Electrical Distribution	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	063A2.01	2.5	3.2
Emergency Diesel Generator	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	064GG2.4.50	3.3	3.3
Process Radiation Monitoring	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	073GG2.1.33	3.4	4.0
Service Water	0	0	0	0	0	0	0	0	0	0	1	This is a Generic, no stem statement is associated.	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.	076GG2.4.49	4.0	4.0
Instrument Air	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those	K/A Randomly Rejected	078A2	0	0

# Tier ~ Group 1

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO	
												abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)					
Containment	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	103GG2.1.14	2.5	3.3	3.3
Emergency Diesel Generator	0	0	0	0	0	0	0	1	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Operating unloaded, lightly loaded and highly loaded time limit	064A2.06	2.9	3.3	3.3



# Tier Group 2

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Control Rod Drive	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: (CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	001A2.06	3.4	3.7
Reactor Coolant	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	002GG2.1.33	3.4	4.0
Pressurizer Level Control	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: (CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	011A2.07	3.0	3.3
Rod Position Indication	0	0	0	0	0	0	0	1	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: (CFR: 41.5 / 43.5 / 45.3 / 45.13)	Loss of feed switch N/A TP Resampled → Loss of LVDT (Linear Variable Differential Transformer)	014A2.07	2.6	2.9
Nuclear Instrumentation	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation: (CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	015A2.05	3.3	3.8
Non-nuclear Instrumentation	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or	K/A Randomly Rejected	016A2.01	3.0	3.1

# Tier Group 2

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
In-core Temperature Monitor	0	0	0	0	0	0	0	0	0	0	0	mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	017GG2.4.31	3.3	3.4
Containment Iodine Removal	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	027A2.01	3.0	3.3
Hydrogen Recombiner and Purge Control	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	028GG2.1.2	3.0	4.0
Containment Purge	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	029A2.03	2.7	3.1
Spent Fuel Pool Cooling	0	0	0	0	0	0	0	0	0	0	1	This is a Generic, no stem statement is associated.	Knowledge of which events related to system operations/status should be reported to outside agencies.	033GG2.4.30	2.2	3.6
Fuel Handling Equipment	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 /	K/A Randomly Rejected	034A2.01	3.6	4.4

# Tier Group 2

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Steam Generator	0	0	0	0	0	0	0	0	0	0	0	45.3 / 45.13)	K/A Randomly Rejected	035A2.06	4.5	4.6
Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)																
Steam Dump/Turbine Bypass Control	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	041GG2.2.25	2.5	3.7
Main Turbine Generator	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	045GG2.1.27	2.8	2.9
Condenser Air Removal	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	055GG2.4.30	2.2	3.6
Liquid Radwaste	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	068A2.02	2.7	2.8
Waste Gas Disposal	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	071A2.09	3.0	3.5
Area Radiation	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the	K/A Randomly Rejected	072A2.01	2.7	2.9

# Tier Group 2

Name / Safety Function	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	Question Type	K/A Topic(s)	KA	RO	SRO
Monitoring												following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)				
Circulating Water	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	075A2.01	3.0	3.2
Station Air	0	0	0	0	0	0	0	0	0	0	0	Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	K/A Randomly Rejected	079A2.01	2.9	3.2
Fire Protection	0	0	0	0	0	0	0	0	0	0	0	This is a Generic, no stem statement is associated.	K/A Randomly Rejected	086GG2.4.49	4.0	4.0