
FINAL OUTLINES

FOR THE DC COOK INITIAL EXAMINATION - FEBRUARY 2006

Facility: <u>DC Cook</u> Examination Level: RO <input type="checkbox"/> SRO <input checked="" type="checkbox"/>		Date of Examination: <u>02/06/06</u> Operating Test Number _____
Administrative Topic (See Note)	Type Code*	Describe activity to be performed
Conduct of Operations	D, R	N06-SRO-a Review Completed SDM Calculation KA: 2.1.25 2.8/3.1 (01-OHP-4021-001-012 Attachment 2)
Conduct of Operations	D, R	N06-SRO-b Review AFD Log KA: 2.1.12 2.9/4.0 & SYS015 A1.05 3.7/3.9 (01-OHP-4024-110 Drop 44 Attachment A)
Equipment Control	D,P,R	N06-SRO-c Verify Clearance Permit For East ESW Pump (NRC 2002 Exam) KA 2.2.13 3.6/3.8 (12-OHP-2110-CPS-001)
Radiation Control	N, R	N06-SRO-d Respond to a High SJAE Radiation Alarm (Graph Leakrate & Determine Actions) KA: 2.3.10 2.9/3.3 & APE037 AK3.05 3.7/4.0 (12-OHP-4024-139 Drop 25)
Emergency Plan	D, R	N06-SRO-e Prepare Prompt NRC Notification Worksheet (SF/FW flow trip, safety stuck open) KA: 2.4.30 2.2/3.6 (PMP-7030-001 Data Sheet 1)
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: DC COOK 2006 ILTDate of Examination: 02/06/06Exam Level: RO ☐ SRO(I) ☒ SRO(U) ☐

Operating Test No.:

Control Room Systems @ (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)

System / JPM Title	Type Code*	Safety Function
a. NRC2006-SIM01 – Perform Emergency Boration Step of 02-OHP-4023-FR-S.1 ATWS (Boric Acid Pumps fail – Align RWST) KA APE 024 A1.17 3.9/3.9, SYS 004 A2.14 3.8/3.9.	A,M,S	1
b. NRC2006-SIM02 – Raise SI Accumulator Level KA SYS 006 A1.13 3.5/3.7	D,S	2
c. NRC2006-SIM03 – Maximize Containment Cooling per 02-OHP-4021-028-001 KA SYS 022 A4.01 3.6/3.6	D,S	5
d. NRC2006-SIM04 – Re-Energize RCP Buses 2A & 2B from Reserve Feed per 02-OHP-4023-SUP-002. KA SYS 062 A4.07 3.1/3.1.	L,N,S	6
e. NRC2006-SIM05 – Control Room Ventilation Alignment for Unit 1 Safety Injection per OHP-4021.028.014 Attachment 13 and OHP-4024.201 Drop 59 (Charcoal filter fire after fan start) KA 072 A3.01 2.9/3.1	A,D,P,S 2002(RO)	7
f. NRC2006-SIM06 – Perform Turbine Driven AFW Pump Trip & Throttle Valve Operability Surveillance 02-OHP-4030-STP-017TV. KA SYS 061 K4.07 3.1/3.3.	N,S	4S
g. NRC2006-SIM07 – Start a RCP per 02-OHP-4023-SUP-010 & 007(CCW isolated - Restore) KA SYS 003 A4.08 3.2/2.9	A,L,M,S	4P

In-Plant Systems @ (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)

i. NRC2006-INP01 Locally Control the VCT Makeup Valve (QVR-400) per 4025-R-12-18 KA APE 068 AA1.22 4.0/4.3	D,E,R	2
j. NRC2006-INP02 Local Operation of SG PORVs per 4025-LS-4-3 KA APE 068 AA1.01 4.3/4.5	D,E,R	4S
k. NRC2006-INP03 Restore "N" Train Battery Charger per OHP 4021.082.015 and OHP 4024.115 Drop 57 (In-Service Charger fails, align Standby) KA APE 058 AA1.01 3.4/3.5	A,D,E,P,R 2002	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	$\leq 9 / \leq 8 / \leq 4$
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)
(R)CA	$\geq 1 / \geq 1 / \geq 1$
(S)imulator	

Facility: DC COOK 2006 ILTDate of Examination: 02/06/06Exam Level: RO ☐ SRO(I) ☐ SRO(U) ☒

Operating Test No.:

Control Room Systems @ (8 for RO; 7 for SRO-I; 2 or 3 for SRO-U)

System / JPM Title	Type Code*	Safety Function
a. NRC2006-SIM01 – Perform Emergency Boration Step of 02-OHP-4023-FR-S.1 ATWS (Boric Acid Pumps fail – Align RWST) KA APE 024 A1.17 3.9/3.9, SYS 004 A2.14 3.8/3.9.	A,M,S	1
b. NRC2006-SIM02 – Raise SI Accumulator Level KA SYS 006 A1.13 3.5/3.7	D,S	2
g. NRC2006-SIM07 – Start a RCP per 02-OHP-4023-SUP-010 & 007(CCW isolated - Restore) KA SYS 003 A4.08 3.2/2.9	A,L,M,S	4P

In-Plant Systems@ (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)

j. NRC2006-INP02 Local Operation of SG PORVs per 4025-LS-4-3 KA APE 068 AA1.01 4.3/4.5	D,E,R	4S
k. NRC2006-INP03 Restore "N" Train Battery Charger per OHP 4021.082.015 and OHP 4024.115 Drop 57 (In-Service Charger fails, align Standby) KA APE 058 AA1.01 3.4/3.5	A,D,E,P,R 2002	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	$\leq 9 / \leq 8 / \leq 4$
(E)mergency or abnormal in-plant	$\geq 1 / \geq 1 / \geq 1$
(L)ow-Power / Shutdown	$\geq 1 / \geq 1 / \geq 1$
(N)ew or (M)odified from bank including 1(A)	$\geq 2 / \geq 2 / \geq 1$
(P)revious 2 exams	$\leq 3 / \leq 3 / \leq 2$ (randomly selected)
(R)CA	$\geq 1 / \geq 1 / \geq 1$
(S)imulator	

Facility: DC Cook

Printed: 01/31/2006

Date Of Exam: 02/20/2006

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	3	3				3	3			3	18	0	0	0	0	0
	2	1	2	1				2	2			1	9	0	0	0	0	0
	Tier Totals	4	5	4				5	5			4	27	0	0	0	0	0
2. Plant Systems	1	3	2	3	3	2	2	3	3	2	2	3	28	0	0	0	0	0
	2	1	1	1	1	0	1	1	1	1	1	1	10	0	0	0	0	0
	Tier Totals	4	3	4	4	2	3	4	4	3	3	4	38	0	0	0	0	0
3. Generic Knowledge And Abilities Categories					1	2	3	4	10					1	2	3	4	0
					3	2	3	2						0	0	0	0	

Note:

1. Ensure that at least two topics from every 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 the outline should be added. Refer to ES-401, Attachment 2, 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.
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. 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.

PWR RO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-2

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
000007 Reactor Trip - Stabilization - Recovery / 1			X				EK3.01 - Actions contained in EOP for reactor trip	4.0	1
000008 Pressurizer Vapor Space Accident / 3		X					AK2.03 - Controllers and positioners	2.5	1
000009 Small Break LOCA / 3		X					EK2.03 - S/Gs	3.0	1
000015/000017 RCP Malfunctions / 4					X		AA2.09 - When to secure RCPs on high stator temperatures	3.4	1
000022 Loss of Rx Coolant Makeup / 2					X		AA2.02 - Charging pump problems	3.2	1
000025 Loss of RHR System / 4						X	2.2.23 - Ability to track limiting conditions for operations.	2.6	1
000026 Loss of Component Cooling Water / 8			X				AK3.01 - The conditions that will initiate the automatic opening and closing of the SWS isolation valves to the CCW/nuclear service water coolers	3.2*	1
000027 Pressurizer Pressure Control System Malfunction / 3	X						AK1.03 - Latent heat of vaporization/condensation	2.6	1
000029 ATWS / 1				X			EA1.05 - BIT outlet valve switches	3.7*	1
000038 Steam Gen. Tube Rupture / 3	X						EK1.02 - Leak rate vs. pressure drop	3.2	1
000054 Loss of Main Feedwater / 4				X			AA1.04 - HPI, under total feedwater loss conditions	4.4	1
000055 Station Blackout / 6						X	2.4.29 - Knowledge of the emergency plan.	2.6	1
000056 Loss of Off-site Power / 6	X						AK1.01 - Principle of cooling by natural convection	3.7	1
000058 Loss of DC Power / 6						X	2.2.26 - Knowledge of refueling administrative requirements.	2.5	1
000062 Loss of Nuclear Svc Water / 4			X				AK3.03 - Guidance actions contained in EOP for Loss of nuclear service water	4.0	1
W/E04 LOCA Outside Containment / 3					X		EA2.2 - Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments	3.6	1
W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4		X					EK2.2 - Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems, and relations between the proper operation of these systems to the operation of the facility	3.9	1
W/E12 - Steam Line Rupture - Excessive Heat Transfer / 4				X			EA1.3 - Desired operating results during abnormal and emergency situations	3.4	1

PWR RO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-2

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
K/A Category Totals:	3	3	3	3	3	3	Group Point Total:		18

PWR RO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-2

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
000001 Continuous Rod Withdrawal / 1						X	2.1.20 - Ability to execute procedure steps.	4.3	1
000003 Dropped Control Rod / 1				X			AA1.02 - Controls and components necessary to recover rod	3.6	1
000005 Inoperable/Stuck Control Rod / 1	X						AK1.02 - Flux tilt	3.1	1
000036 Fuel Handling Accident / 8			X				AK3.03 - Guidance contained in EOP for fuel handling incident	3.7	1
000061 ARM System Alarms / 7		X					AK2.01 - Detectors at each ARM system location	2.5*	1
000068 Control Room Evac. / 8				X			AA1.08 - Local boric acid flow	4.2*	1
000069 Loss of CTMT Integrity / 5		X					AK2.03 - Personnel access hatch and emergency access hatch	2.8*	1
000076 High Reactor Coolant Activity / 9					X		AA2.02 - Corrective actions required for high fission product activity in RCS	2.8	1
W/E01 Rediagnosis / 3					X		EA2.2 - Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments	3.3	1
K/A Category Totals:	1	2	1	2	2	1	Group Point Total: 9		

PWR RO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Plant Systems - Tier 2 / Group 1

Form ES-401-2

Sys/Evol # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
003 Reactor Coolant Pump								X				A2.05 - Effects of VCT pressure on RCP seal leakoff flows	2.5	1
003 Reactor Coolant Pump										X		A4.02 - RCP motor parameters	2.9	1
004 Chemical and Volume Control			X									K3.07 - PZR level and pressure	3.8	1
005 Residual Heat Removal								X				A2.01 - Failure modes for pressure, flow, pump motor amps, motor temperature, and tank level instrumentation	2.7	1
006 Emergency Core Cooling	X											K1.10 - Safety injection tank heating system	2.6*	1
007 Pressurizer Relief/Quench Tank											X	2.1.1 - Knowledge of conduct of operations requirements.	3.7	1
007 Pressurizer Relief/Quench Tank					X							K5.02 - Method of forming a steam bubble in the PZR	3.1	1
008 Component Cooling Water							X					A1.04 - Surge tank level	3.1	1
010 Pressurizer Pressure Control										X		A4.02 - PZR heaters	3.6	1
010 Pressurizer Pressure Control	X											K1.07 - Containment	2.9	1
012 Reactor Protection		X										K2.01 - RPS channels, components, and interconnections	3.3	1
013 Engineered Safety Features Actuation						X						K6.01 - Sensors and detectors	2.7*	1
022 Containment Cooling											X	2.1.32 - Ability to explain and apply all system limits and precautions.	3.4	1
022 Containment Cooling			X									K3.02 - Containment instrumentation readings	3.0	1
025 Ice Condenser						X						K6.01 - Upper and lower doors of the ice condenser	3.4*	1
026 Containment Spray				X								K4.04 - Reduction of temperature and pressure in containment after a LOCA by condensing steam, to reduce radiological hazard, and protect equipment from corrosion damage (spray)	3.7	1
039 Main and Reheat Steam	X											K1.09 - RMS	2.7	1
059 Main Feedwater							X					A1.07 - Feed Pump speed, including normal control speed for ICS	2.5*	1
061 Auxiliary/Emergency Feedwater					X							K5.01 - Relationship between AFW flow and	3.6	1

PWR RO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Plant Systems - Tier 2 / Group 1

Form ES-401-2

Sys/Evol # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
												RCS heat transfer		
062 AC Electrical Distribution								X				A2.08 - Consequences of exceeding voltage limitations	2.7	1
062 AC Electrical Distribution									X			A3.04 - Operation of inverter (e.g., precharging synchronizing light, static transfer)	2.7	1
063 DC Electrical Distribution				X								K4.04 - Trips	2.6?	1
064 Emergency Diesel Generator							X					A1.08 - Maintaining minimum load on ED/G (to prevent reverse power)	3.1	1
073 Process Radiation Monitoring			X									K3.01 - Radioactive effluent releases	3.6	1
076 Service Water											X	2.1.33 - Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.	3.4	1
076 Service Water		X										K2.04 - Reactor building closed cooling water	2.5*	1
078 Instrument Air									X			A3.01 - Air pressure	3.1	1
103 Containment				X								K4.06 - Containment isolation system	3.1	1
K/A Category Totals:	3	2	3	3	2	2	3	3	2	2	3	Group Point Total: 28		

PWR RO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Plant Systems - Tier 2 / Group 2

Form ES-401-2

Sys/Evol # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
001 Control Rod Drive							X					A1.06 - Reactor power	4.1	1
002 Reactor Coolant						X						K6.07 - Pumps	2.5	1
011 Pressurizer Level Control			X									K3.02 - RCS	3.5	1
015 Nuclear Instrumentation				X								K4.03 - Reading of source range/intermediate range/power range outside control room	3.9*	1
028 Hydrogen Recombiner and Purge Control		X										K2.01 - Hydrogen recombiners	2.5*	1
029 Containment Purge											X	2.4.31 - Knowledge of annunciators alarms and indications, and use of the response instructions.	3.3	1
035 Steam Generator										X		A4.01 - Shift of S/G controls between manual and automatic control, by bumpless transfer	3.7	1
041 Steam Dump/Turbine Bypass Control	X											K1.02 - S/G level	2.7	1
056 Condensate								X				A2.04 - Loss of condensate pumps	2.6	1
068 Liquid Radwaste									X			A3.02 - Automatic isolation	3.6	1
K/A Category Totals:	1	1	1	1	0	1	1	1	1	1	1	Group Point Total:	10	

Generic Knowledge and Abilities Outline (Tier 3)

PWR RO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

Form ES-401-3

<u>Generic Category</u>	<u>KA</u>	<u>KA Topic</u>	<u>Imp.</u>	<u>Points</u>
Conduct of Operations	2.1.12	Ability to apply technical specifications for a system.	2.9	1
	2.1.19	Ability to use plant computer to obtain and evaluate parametric information on system or component status.	3.0	1
	2.1.29	Knowledge of how to conduct and verify valve lineups.	3.4	1
	Category Total:			3
Equipment Control	2.2.11	Knowledge of the process for controlling temporary changes.	2.5	1
	2.2.27	Knowledge of the refueling process.	2.6	1
	Category Total:			2
Radiation Control	2.3.4	Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized.	2.5	1
	2.3.9	Knowledge of the process for performing a containment purge.	2.5	1
	2.3.10	Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.	2.9	1
	Category Total:			3
Emergency Procedures/Plan	2.4.29	Knowledge of the emergency plan.	2.6	1
	2.4.50	Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.	3.3	1
	Category Total:			2

Generic Total: 10

Facility: DC Cook

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Date Of Exam: 02/20/2006

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	0	0	0				0	0			0	0	0	0	4	2	6
	2	0	0	0				0	0			0	0	0	0	2	2	4
	Tier Totals	0	0	0				0	0			0	0	0	0	6	4	10
2. Plant Systems	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	5
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	3
	Tier Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	3	8
3. Generic Knowledge And Abilities Categories					1	2	3	4	0					1	2	3	4	7
					0	0	0	0						2	2	2	1	

Note:

1. Ensure that at least two topics from every 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 the outline should be added. Refer to ES-401, Attachment 2, 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.
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. 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.

PWR SRO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 1

Form ES-401-2

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
000009 Small Break LOCA / 3						X	2.2.25 - Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	3.7	1
000011 Large Break LOCA / 3						X	2.3.10 - Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.	3.3	1
000040 Steam Line Rupture - Excessive Heat Transfer / 4					X		AA2.01 - Occurrence and location of a steam line rupture from pressure and flow indications	4.7	1
000057 Loss of Vital AC Inst. Bus / 6					X		AA2.08 - Reactor power digital display and remote flux meter	3.5*	1
000065 Loss of Instrument Air / 8					X		AA2.06 - When to trip reactor if instrument air pressure is decreasing	4.2	1
W/E11 Loss of Emergency Coolant Recirc. / 4					X		EA2.2 - Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments	4.2	1
K/A Category Totals:	0	0	0	0	4	2	Group Point Total: 6		

PWR SRO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Emergency and Abnormal Plant Evolutions - Tier 1 / Group 2

Form ES-401-2

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	KA Topic	Imp.	Points
000033 Loss of Intermediate Range NI / 7						X	2.4.46 - Ability to verify that the alarms are consistent with the plant conditions.	3.6	1
W/E07 Inad. Core Cooling / 4					X		EA2.1 - Facility conditions and selection of appropriate procedures during abnormal and emergency operations	4.0	1
W/E13 Steam Generator Over-pressure / 4						X	2.1.7 - Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.	4.4	1
W/E15 Containment Flooding / 5					X		EA2.2 - Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments	3.3	1
K/A Category Totals:	0	0	0	0	2	2	Group Point Total: 4		

PWR SRO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Plant Systems - Tier 2 / Group 1

Form ES-401-2

Sys/Evol # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
006 Emergency Core Cooling											X	2.2.24 - Ability to analyze the affect of maintenance activities on LCO status.	3.8	1
008 Component Cooling Water								X				A2.04 - PRMS alarm	3.5*	1
025 Ice Condenser											X	2.4.35 - Knowledge of local auxiliary operator tasks during emergency operations including system geography and system implications.	3.5	1
026 Containment Spray								X				A2.08 - Safe securing of containment spray (when it can be done)	3.7	1
061 Auxiliary/Emergency Feedwater								X				A2.03 - Loss of dc power	3.4	1
K/A Category Totals:	0	0	0	0	0	0	0	3	0	0	2	Group Point Total:	5	

PWR SRO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

ES - 401

Plant Systems - Tier 2 / Group 2

Form ES-401-2

Sys/Evol # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	KA Topic	Imp.	Points
016 Non-nuclear Instrumentation											X	2.2.18 - Knowledge of the process for managing maintenance activities during shutdown operations.	3.6	1
034 Fuel Handling Equipment										X		A4.01 - Radiation levels	3.7	1
075 Circulating Water								X				A2.02 - Loss of circulating water pumps	2.7	1
K/A Category Totals:	0	0	0	0	0	0	0	1	0	1	1	Group Point Total:	3	

Generic Knowledge and Abilities Outline (Tier 3)

PWR SRO Examination Outline

Printed: 01/31/2006

Facility: DC Cook

Form ES-401-3

<u>Generic Category</u>	<u>KA</u>	<u>KA Topic</u>	<u>Imp.</u>	<u>Points</u>
Conduct of Operations	2.1.4	Knowledge of shift staffing requirements.	3.4	1
	2.1.13	Knowledge of facility requirements for controlling vital / controlled access.	2.9	1
	Category Total:			2
Equipment Control	2.2.6	Knowledge of the process for making changes in procedures as described in the safety analysis report.	3.3	1
	2.2.24	Ability to analyze the affect of maintenance activities on LCO status.	3.8	1
	Category Total:			2
Radiation Control	2.3.6	Knowledge of the requirements for reviewing and approving release permits.	3.1	1
	2.3.8	Knowledge of the process for performing a <i>planned gaseous radioactive release</i> .	3.2	1
	Category Total:			2
Emergency Procedures/Plan	2.4.28	Knowledge of procedures relating to emergency response to sabotage.	3.3	1
	Category Total:			1

Generic Total: 7