

# Draft Submittal

(Pink Paper)

ROBINSON RETAKE EXAM  
50-261/2001-302

DECEMBER 7, 2001

DRAFT RO WRITTEN EXAM OUTLINE



Serial: RNP-RA/01-0152

**SEP 26 2001**

Mr. Bruce S. Mallett  
Regional Administrator, Acting  
U. S. Nuclear Regulatory Commission - Region II  
Sam Nunn Atlanta Federal Center  
61 Forsyth Street S.W., Suite 23T85  
Atlanta, Georgia 30303-8931

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261/LICENSE NO. DPR-23

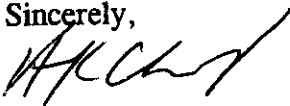
REACTOR OPERATOR REVISED EXAMINATION OUTLINE

Dear Mr. Mallett:

In response to NRC letter dated August 21, 2001, H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2, has submitted the examination outline to your staff. The letter requested that CP&L furnish the examination outline by September 28, 2001. The outline was mailed directly to Ms. K. O'Donohue of your staff on September 26, 2001.

If you have any questions concerning this matter, please contact Mr. H. K. Chernoff.

Sincerely,

  
for B. L. Fletcher III  
Manager - Regulatory Affairs

DJS/djs

c: Document Control Desk  
NRC Resident Inspector, HBRSEP  
R. Subbaratnam, NRC, NRR  
K. F. O'Donohue, NRC, Region II  
M. E. Ernstes, NRC, Region II

Robinson Nuclear Plant  
3581 West Entrance Road  
Hartsville, SC 29550



**CP&L**  
A Progress Energy Company

memo

Date: September 26, 2001  
To: Ms. Kathleen O'Donohue  
From: Mr. Don McCaskill *DMC*  
Subject: H. B. Robinson's RO Retake-Initial  
Written License Examination

The examination outline for H.B. Robinson's RO Retake-Initial Written License Examination to be given December 7, 2001 is attached. The RO written examination outline was developed and reviewed in accordance with NUREG 1021, Revision 8, Supplement 1.

Also attached are the following:

- 1) Form ES-201-2, Examination Outline Quality Checklist
- 2) H. B. Robinson Suppressed Topic Areas
- 3) Written Examination Outline
- 4) ES-401-4, PWR RO Examination Outline
- 5) ES-401-10, Record of Rejected K/As

Note: 16 pages total

Please call Julia Taylor (843-857-1558) or Don McCaskill (843-857-1252) if you have any questions or comments.

JT:JT  
Attachment

Facility: H.B. Robinson		Date of Exam: 12/7/01					Exam Level: RO						
Tier	Group	K/A Category Points											Point Total
		G	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	
1. Emergency & Abnormal Plant Evolutions	1	1	3	3	3				3	3			16
	2	2	3	2	5				2	3			17
	3	0	1	1	1				0	0			3
	<b>Tier Totals</b>	3	7	6	9				5	6			36
2. Plant Systems	1	1	2	2	2	3	2	2	2	2	3	2	23
	2	1	2	2	2	2	2	2	2	2	2	1	20
	3	0	1	1	1	1	1	1	1	0	0	1	8
	<b>Tier Totals</b>	2	5	5	5	6	5	5	5	4	5	4	51
3. Generic Knowledge and Abilities								Cat 1	Cat 2	Cat 3	Cat 4	13	
								3	4	3	3		

**Notes:**

1. Ensure that at least two topics from every K/A category are sampled within each tier (i.e., 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 exam must total 100 points.
3. Select topics from many systems; avoid selecting more than two or three K/A topics from a given system 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 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.
7. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings for the RO license level, and the point totals for each system and category. K/As below 2.5 should be justified on the basis of plant-specific priorities. Enter the tier totals for each category in the table above.

ROBINSON NRC License Examination  
PWR RO Written Examination outline  
Emergency and Abnormal Plant evolutions – Tier 1 Group 1

E/APE #/Name/Safety Function	G	K1	K2	K3	A1	A2	Number	K/A Topics	Imp.	Points
000005 /Inoperable/Stuck Control Rod /I		X					AK1.03	Knowledge of the operational implications of the following concepts as they apply to inoperable/Stuck Control Rod: Xenon transient	3.2	1
000015/17 /RCP Malfunctions /IV			X				AK2.07	Knowledge of the interrelations between the Reactor Coolant Pump malfunction (Loss of RC flow) and the following: RCP Seals	2.9	1
000024 /Emergency Boration /I				X			AK3.02	Knowledge of the reason for the following responses as they apply to Emergency Boration: Actions contained in EOP for Emergency Boration	4.2	1
000024 /Emergency Boration /I					X		AA1.20	Ability to operate and/or monitor the following as they apply to the Emergency Boration: Manual boration valve and indicators	3.2	1
000026 /Loss of Comp. Cooling Water /VIII				X			AK3.02	Knowledge of the reasons for the following responses as they apply to Loss of Component Cooling Water: The automatic actions (alignments) within the CCWS/nuclear service water resulting from the actuation of ESFAS	3.6	1
000027 /Pzr Press. Ctrl. Sys. Malf. /III										
000040/E12/Steam Line Break /IV			X				AK2.01	Knowledge of the interrelations between the Steam Line Rupture and the following: Valves	2.6	1
E08 /RCS Overcooling/PTS /IV	X						2.4.1	Knowledge of EOP Entry Conditions and Immediate action steps	4.3	1
E09 /Natural Circulation Operations / IV					X		EA1.2	Ability to operate and/or monitor the following as they apply to the (Natural Circulation Operations): Operating behavior characteristics of the facility	3.6	1
E09 /Natural Circulation Operations / IV			X				EK2.2	Knowledge of the interrelations between Natural Circulation and the following: Facility's heat removal systems, including primary coolant, emergency coolant, decay heat removal systems, and relations between the proper operation of these systems to the operation of the facility	3.6	1
E10 /Natural Circulation with Steam Void in vessel with/without RVLIS / IV										
000051 /Loss of Condenser vacuum /IV										
000055 /Station Blackout /VI						X	EA2.01	Ability to determine or interpret the following as they apply to a Station Blackout: Existing valve position on a loss of Instrument Air System	3.4	1
000057 /Loss of Vital AC Instrument Bus /VI										
000062 /Loss of Nuclear Service Water /IV					X		AA1.06	Ability to operate and/or monitor the following as they apply to the Loss of Nuclear Service Water: Control of flow rates to components cooled by CCWS	2.9	1
000067 /Plant Fire on Site /IX										
000068 /Control Room Evac. /VIII										
000069 /Loss of Cmt Integrity /V		X					AK1.01	Knowledge of the operational implications of the following concepts as they apply to Loss of Containment Integrity: Effect of pressure on leak rate	2.6	1

069AK101 was replaced w/069AK3.01 (Randomly selected) By NRC

ROBINSON NRC License Examination  
PWR RO Written examination outline  
Emergency and Abnormal Plant evolutions – Tier 1 Group 1

E/APE #/Name/Safety Function	G	K1	K2	K3	A1	A2	Number	K/A Topics	Imp.	Points
000076 /High Reactor Coolant Activity /IX						X	AA2.04	Ability to determine or interpret the following as they apply to High Reactor Coolant Activity: Process Effluent radiation chart recorder	2.6	1
E06/Degraded Core Cooling /IV		X					EK1.2	Knowledge of the operational implications of the following concepts as they apply to Degraded Core Cooling: Normal, abnormal, and emergency operating procedures associated with Degraded Core Cooling	3.5	1
E07/Inadequate Core Cooling /IV										
E12 /Uncontrolled Depress. Of all SG's / IV				X			EK3.1	Knowledge of the reasons for the following responses as they apply to Uncontrolled Depressurization of All Steam Generators: Facility operating characteristics during transient conditions, including coolant chemistry and the effects on temperature, pressure, and reactivity changes and operating limitations and reasons for these operating characteristics	3.5	1
E14 /High Containment Pressure / V						X	EA2.1	Ability to determine or interpret the following as they apply to High Containment pressure: Facility conditions and selection of appropriate procedures during abnormal and emergency operations	3.3	1
<b>K/A Category Totals</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>	<b>3</b>		<b>Group Point Total</b>		<b>16</b>

ROBINSON NRC Written Examination  
PWR RO Written Examination outline  
Emergency and Abnormal Plant evolutions – Tier 1 Group 2

E/APE #/Name/Safety Function	G	K1	K2	K3	A1	A2	Number	K/A Topics	Imp.	Points
000001 /Continuous Rod Withdrawal /I										
000003 /Dropped Control Rod /I										
000007/Reactor Trip – Recovery /I						X	EA2.06	Ability to determine or interpret the following as they apply to a reactor trip: Occurrence of a reactor trip	4.3	1
000007/Reactor Trip – Recovery /I			X				EK2.03	Knowledge of the interrelations between a reactor trip and the following: Reactor trip status panel	3.5	1
000008 /Pzr Vapor Space Accident /III					X		AA1.07	Ability to operate and/or monitor the following as they apply to the Pressurizer Vapor Space Accident: Reseating of code safety and PORV	4.0	1
000009 /Small Break LOCA /III				X			EK3.11	Knowledge of the reasons for the following responses as they apply to the small break LOCA: Dangers associated with inadequate core cooling	4.4	1
000011 /Large Break LOCA /III				X			EK3.15	Knowledge of the reasons for the following responses as they apply to Large Break LOCA: Criteria for shifting to recirculation mode	4.3	1
000022 /Loss of Rx Coolant Makeup /II										
000025 /Loss of RHR System /IV					X		AA1.04	Ability to operate and/or monitor the following as they apply to the Loss of Residual Heat Removal System: Closed cooling water pumps	2.8	1
000029 /ATWS /I		X					EK1.05	Knowledge of the operational implications of the following concepts as they apply to the ATWS: Definition of negative temperature coefficient as applied to large PWR coolant systems	2.8	1
000032 /Loss of Source Range NI /VII										
000033 /Loss of Intermediate Range NI /VII		X					AK1.01	Knowledge of the operational implications of the following concepts as they apply to Loss of Intermediate Range Nuclear Instrumentation: Effects of voltage changes on performance	2.7	1
000037 /SG Tube Leak /III						X	AA2.15	Ability to determine or interpret the following as they apply to the Steam Generator Tube leak: Magnitude of atmospheric radioactive release if cooldown must be completed using steam dump or atmospheric reliefs	3.4	1
000038 /SG Tube Rupture /III		X					EK1.02	Knowledge of the operational implications of the following concepts as they apply to the SGTR: Leak Rate versus pressure drop	3.2	1
000054 /Loss of Main Feedwater /IV										
000058 /Loss of DC Power /VI				X			AK3.02	Knowledge of the reasons for the following responses as they apply to Loss of DC power: Actions contained in EOP for Loss of DC power	4.0	1
000059 /Accidental Liquid Radwaste Release /IX			X				AK2.02	Knowledge of the interrelations between the Accidental Liquid Radwaste release and the following: Radioactive gas monitors	2.7	1
000060 /Accidental Gaseous Radwaste Release /IX										
000061 /ARM System Alarms /VII				X			AK3.02	Knowledge of the reasons for the following responses as they apply to Area Radiation Monitoring system alarms: Guidance contained in alarm response for ARM system	3.4	1

ROBINSON NRC License Examination  
PWR RO Written Examination outline  
Emergency and Abnormal Plant evolutions – Tier 1 Group 2

E/APE #/Name/Safety Function	G	K1	K2	K3	A1	A2	Number	K/A Topics	Imp.	Points
E04 /LOCA Outside Containment /IV						X	EA2.1	Ability to determine or interpret the following as they apply to Post LOCA Cooldown and Depressurization: Facility conditions and selection of appropriate procedures during abnormal and emergency operations	3.4	1
E01 /Rediagnosis /III										
E02 /SI Termination /III										
E03 /LOCA Cooldown, Depressurization /IV										
E05 /Loss of Secondary Heat Sink /	X						2.4.2	Knowledge of system setpoints, interlocks, and automatic actions associated with EOP entry conditions.	3.9	1
E11 /Loss of Emergency Coolant Recirc /IV	X						2.4.18	Knowledge of the specific basis for EOPs	2.7	1
E11 /Loss of Emergency Coolant Recirc /IV				X			EK3.2	Knowledge of the reasons for the following responses as they apply to Loss of Emergency Coolant Recirculation: Normal, abnormal, and emergency operating procedures associated with Loss of Emergency Coolant Recirculation	3.5	1
E16 /High Containment radiation /IX										
<b>K/A Category Totals</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>5</b>	<b>2</b>	<b>3</b>		<b>Group Point Total</b>		<b>17</b>



ROBINSON NRC License Examination  
PWR RO Written Examination outline  
Emergency and Abnormal Plant evolutions – Tier 1 Group 3

E/APE #/Name/Safety Function	G	K1	K2	K3	A1	A2	Number	K/A Topics	Imp.	Points
000028 /Pressurizer Level Malfunction /II										
000036 /Fuel Handling Accident /VIII			X				AK2.01	Knowledge of the interrelations between the Fuel Handling Incidents and the following: Fuel Handling Equipment	2.9	1
000056 /Loss of Off Site Power /VI										
000065 /Loss of Instrument Air /VIII										
E13 /Steam Generator Overpressure /IV		X					EK1.3	Knowledge of the operational implications of the following concepts as they apply to the Steam Generator Overpressure: Annunciators and conditions indicating signals, and remedial actions associated with the Steam Generator Overpressure	3.0	1
E13 /Steam Generator Overpressure /IV				X			EK3.4	Knowledge of the reasons for the following responses as they apply to the Steam Generator Overpressure: RO or SRO function within the control room team as appropriate to the assigned position, in such a way that procedures are adhered to and the limitations in the facility license and amendments are not violated	3.1	1
E15 /Containment Flooding /V										
<b>K/A Category Totals</b>	<b>0</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>		<b>Group Point Total</b>		<b>3</b>

ROBINSON NRC License Examination  
PWR RO Written Examination outline  
Plant Systems – Tier 2 Group 1

System #/Name	G	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	Number	K/A Topics	Imp.	Points
001 Control Rod Drive					X							K4.20	Knowledge of CRDS design features and/or interlocks which provide for the following: The permissives and interlocks associated with increase from zero power	3.2	1
001 Control Rod Drive							X					K6.13	Knowledge of the effect that a loss or malfunction of the following will have on CRDS: Location and operation of RPIS	3.6	1
003 Reactor Coolant Pump		X										K1.01	Knowledge of the physical connections and/or cause/effect relationship between the RCPS and the following: RCP Lube Oil	2.6	1
003 Reactor Coolant Pump			X									K2.02	Knowledge of bus power supplies to the following: CCW pumps	2.5	1
004 Chemical and Volume Control						X						K5.36	Knowledge of the operational implications of the following as they apply to CVCS: Solubility of boron in water; temperature effect	2.5	1
004 CVCS					X							K4.07	Knowledge of CVCS design features and/or interlocks which provide for the following: Water supplies	3.0	1
013 ESF Actuation			X									K2.01	Knowledge of bus power supplies to the following: ESFAS/Safeguards equipment control	3.6	1
013 ESF						X						K5.02	Knowledge of the operational implications of the following concepts as they apply to ESFAS: Safety system logic and reliability	2.9	1
015 Nuclear Instrumentation							X					K6.01	Knowledge of the effect that a loss or malfunction of the following will have on the NIS: Sensors, detectors, and indicators	2.9	1
015 Nuclear Instrumentation											X	A4.03	Ability to manually operate and/or monitor in the control room: Trip bypasses	3.8	1
017 In-Core Temperature Monitor									X			A2.02	Ability to (a) predict the impacts of the following malfunctions on the In-Core temperature Monitor system, and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions on operations: Core damage	3.6	1
017 In-Core temperature Monitoring										X		A3.01	Ability to monitor automatic operation of the In Core Temperature Monitoring system including: Indications of normal, natural, and interrupted circulation of the RCS	3.6	1
022 Containment Cooling								X				A1.04	Ability to predict and/or monitor changes in parameters to prevent exceeding design limits associated with operating the CCS controls including: Cooling Water flow	3.2	1
022 Containment Cooling				X								K3.02	Knowledge of the effect that a loss or malfunction of Containment Cooling will have on the following: Containment instrumentation readings	3.0	1

ROBINSON NRC License Examination  
PWR RO Written Examination outline  
Plant Systems – Tier 2 Group 1

System #/Name	G	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	Number	K/A Topics	Imp.	Points
056 Condensate									X			A2.04	Ability to (a) predict the impacts of the following malfunctions on the Condensate system, and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions on operations: Loss of Condensate Pumps	2.6	1
059 Main Feedwater											X	A4.11	Ability to manually operate and/or monitor in the control room: Recovery from automatic feedwater isolation	3.1	1
059 Main Feedwater	X											2.1.33	Ability to recognize system operating parameters which are entry level conditions for technical specifications	3.4	1
061 Auxiliary Feedwater										X		A3.01	Ability to monitor automatic operation of the AFW system including: AFW startup and flows	4.2	1
061 Auxiliary Feedwater				X								K3.02	Knowledge of the effect of a loss or malfunction of the AFW system will have on the following: S/G	4.2	1
061 Auxiliary Feedwater		X										K1.07	Knowledge of the physical connections and/or cause/effect relationship between the AFW system and the following: Emergency water source	3.6	1
068 Liquid Radwaste					X							K4.01	Knowledge of design features and/or interlocks which provide for the following: Safety and environmental precautions for handling hot, acidic, and radioactive liquids	3.4	1
071 Waste Gas Disposal								X				A1.06	Ability to predict and/or monitor changes in parameters to prevent exceeding design limits associated with operating the Waste Gas Disposal system controls including: Ventilation system	2.5	1
072 Area Radiation Monitoring										X		A3.01	Ability to monitor automatic operation of the Area Radiation Monitoring system including: Changes in ventilation alignment	2.9	1
K/A Category Point totals	1	2	2	2	3	2	2	2	2	3	2		Group Point Total		23

ROBINSON NRC License Examination  
PWR RO Written Examination outline  
Plant Systems – Tier 2 Group 2

System #/Name	G	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	Number	K/A Topics	Imp.	Points
002 Reactor Coolant															
006 Emergency Core Cooling						X						K5.04	Knowledge of the operational implications of the following concepts as they apply to ECCS: Brittle Fracture, including causes and preventive actions	2.9	1
006 ECCS							X					K6.01	Knowledge of the effect that a loss or malfunction of the following will have on the ECCS: BIT/Borated water sources	3.4	1
010 Pressurizer Pressure Control							X					K6.04	Knowledge of the effect that a loss or malfunction of the following will have on the Pzr PCS: PRT	2.9	1
010 Pressurizer Pressure Control											X	A4.03	Ability to manually operate and/or monitor the following in the Control Room: PORV and block valves	4.0	1
011 Pressurizer Level Control															
012 Reactor Protection			X									K2.01	Knowledge of bus power supplies to the following: RPS channels, components, and interconnections	3.3	1
012 RPS					X							K4.05	Knowledge of RPS design features and/or interlocks which provide for the following: Spurious trip protection	2.7	1
014 Rod Position Indication									X			A2.05	Ability to (a) predict the impacts of the following malfunctions on the RPI system, and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions on operations: Reactor Trip	3.9	1
016 Non-Nuclear Instrumentation					X							K4.01	Knowledge of NNIS design features and/or interlocks which provide for the following: Reading of NNIS channel values outside control room	2.8	1
026 Containment Spray															
029 Containment Purge		X										K1.04	Knowledge of the physical connections and/or cause/effect relationship between the containment purge system and the following system: Purge system	3.0	1
033 Spent Fuel Pool Cooling															
035 Steam Generator						X						K5.01	Knowledge of the operational implications of the following concepts as they apply to S/GS: Effects of secondary parameters, pressure, and temperature on reactivity	3.4	1
035 Steam Generator										X		A3.01	Ability to monitor automatic operation of the S/G system including: SG water level control	4.0	1
039 Main and Reheat Steam															
055 Condenser Air Removal															

ROBINSON NRC Written Examination  
PWR RO Written Examination outline  
Plant Systems – Tier 2 Group 2

System #/Name	G	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	Number	K/A Topics	Imp.	Points
062 AC Electrical Distribution								X				A1.03	Ability to predict and/or monitor changes in parameters to prevent exceeding design limits associated with operating the AC distribution controls including: Effect on instrumentation and controls of switching power supplies	2.5	1
062 AC Electrical Distribution				X								K3.02	Knowledge of the effect that a loss or malfunction of the AC distribution system will have on the following: ED/G	4.1	1
063 DC Distribution		X										K1.03	Knowledge of the physical connections and/or cause/effect relationship between the DC electrical system and the following system: Battery Charger and battery	2.9	1
063 DC Electrical Distribution									X			A2.01	Ability to (a) predict the impacts of the following malfunctions on the DC electrical systems, and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions on operations: Grounds	2.5	1
064 Emergency Diesel Generator				X								K3.02	Knowledge of the effect that a loss or malfunction of the ED/G system will have on the following: ESFAS controlled or actuated systems	4.2	1
073 Process Radiation Monitoring								X				A1.01	Ability to predict and/or monitor changes in parameters to prevent exceeding design limits associated with operating the PRM system controls including: Radiation levels	3.2	1
075 Circulating Water			X									K2.03	Knowledge of bus power supplies to the following: Emergency/Essential SWS pumps	2.6	1
075 Circulating Water	X											2.4.4	Ability to recognize abnormal indications for system operating parameters which are entry level conditions for emergency and abnormal operating procedures	4.0	1
079 Station Air															
086 Fire Protection										X		A3.03	Ability to monitor automatic operation of the Fire Protection system including: Actuation of fire detectors	2.9	1
K/A Category Point totals	1	2	2	2	2	2	2	2	2	2	1		Group Point Total		20

ROBINSON NRC Written Examination  
PWR RO Written Examination outline  
Plant Systems – Tier 2 Group 3

System #/Name	G	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	Number	K/A Topics	Imp.	Points
005 Residual Heat Removal					X							K4.01	Knowledge of RHRS design features and/or interlocks which provide for the following: Overpressure mitigation system	3.0	1
007 Pressurizer Relief/Quench Tank															
008 Component Cooling Water			X									K2.02	Knowledge of bus power supplies to the following: CCW pump, including emergency backup	3.0	1
008 Component Cooling Water								X				A1.01	Ability to predict and/or monitor changes in parameters to prevent exceeding design limits associated with operating the CCWS controls including: CCW flow rate	2.8	1
027 Containment Iodine Removal															
028 H2 Recombiner and Purge Control															
034 Fuel Handling Equipment							X					K6.02	Knowledge of the effect that a loss or malfunction of the following will have on the Fuel Handling system: Radiation Monitoring systems	2.6	1
041 Steam Dump/Turbine Bypass Control															
045 Main Turbine Generator						X						K5.23	Knowledge of the operational implications of the following concepts as they apply to the MT/G system: Relationship between rod control and RCS boron concentration during TG load increases	2.7	1
045 Main Turbine Generator		X										K1.20	Knowledge of the physical connections and/or cause/effect relationship between the MT/G system and the following: Protection systems	3.4	1
076 Service Water				X								K3.03	Knowledge of the effect that a loss or malfunction of the SWS will have on the following: Reactor Building Closed Cooling Water	3.5	1
078 Instrument Air															
103 Containment											X	A4.09	Ability to manually operate and/or monitor in the control room: Containment vacuum system	3.1	1
K/A Category Point totals	0	1	1	1	1	1	1	1	0	0	1		Group Point Total		8

ROBINSON NRC License Examination  
PWR RO Written Examination outline  
Plant Systems – Tier 2 Group 3

Plant-Specific Priorities			
System / Topic	Recommended Replacement for...	Reason	Points
APE 026 AK3.02	E10EK3.1	PRA significant plant specific priority	1
APE 008AA1.07	060AA1.02	PRA significant plant specific priority	1
APE 058AK3.02	060AA2.04	PRA significant plant specific priority	1
EPE 011EK3.15	061AK2.01	PRA significant plant specific priority	1
System 061A3.01	071K1.06	PRA significant plant specific priority	1
System 061K1.07	072K1.04	PRA significant plant specific priority	1
System 005K4.01	076K4.03	PRA significant plant specific priority	1
Plant-Specific Priority Total: (limit 10)			7

ROBINSON NRC License Examination  
PWR RO Written examination outline  
Generic Knowledge and Abilities Outline – Tier 3

Category	K/A #	Topic	Imp.	Points
Conduct of Operations	2.1.2	Knowledge of operator responsibilities during all modes of plant operation	3.0	1
	2.1.21	Ability to obtain and verify controlled procedure copy	3.1	1
	2.1.33	Ability to Recognize Tech Spec Entry	3.4	1
	Total			
Equipment Control	2.2.1	Ability to perform pre-startup procedures for the facility, including operating those controls associated with plant equipment that could affect reactivity	3.7	1
	2.2.12	Knowledge of Surveillance Procedures	3.0	1
	2.2.26	Knowledge of refueling administrative requirements	2.5	1
	2.2.27	Knowledge of the refueling process	2.6	1
	Total			
Radiation Control	2.3.2	Knowledge of facility ALARA program	2.5	1
	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
	Total			
Emergency Procedures and Plan	2.4.13	Knowledge of roles and responsibilities during EOP use	3.3	1
	2.4.14	Knowledge of general guidelines for EOP flowchart use	3.0	1
	2.4.49	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls	4.0	1
	Total			
Target Point Total (RO)				13





**H.B. Robinson**  
**Suppressed Topic Areas**

The following topic areas were suppressed for generation of the December 2001 RO written examination:

System 025 Ice Condenser. The facility does not have an Ice Condenser system

System 028 K/As related to Hydrogen Recombiners. The facility does not have an installed recombiner system.

K/A suppression includes:

K2.01

K6.01

A2.01

Other K/As selected for this system will be evaluated on a case by case basis and documented on ES-401-10 if found unsuitable

The written examination outline was developed using the Westinghouse Owner's Group random outline generator