SURRY EXAM 2002-301

50-280, 281/2002-301 MARCH 18 - 28, 2002

Administrative Documents

(Yellow Paper)

1.	Exam Preparation Checklist ES-201-1 🗸
2.	Exam Outline Quality Checklist ES-201-2 🗸
3.	Exam Security Agreement ES-201-3-
4.	Administrative Topics Outline (Final) ES-301-1 V
5.	Control Room Systems and Facility Walk-through Test Outline (Final)ES-301-2 V
6.	Operating Test Quality Check Sheet ES-301-3
7.	Simulator Scenario Quality Check Sheet ES-301-4
8.	Transient and Event Checklist ES-301-5
9.	Competencies Checklist ES-301-6
10.	Written Exam Quality Check Sheet ES-401-7 VA-/SM
11.	Written Exam Review Worksheet ES-401-9
12.	Written Exam Grading Quality Checklist ES-403-1
13.	Post-Exam Check Sheet ES-501-1 🛩

ES-201 Examination Preparation Checklist Form ES-201-1 (R8,S1)

	Surry Power Station Date of Examination: Weeks of Mar	rch18 & 25, 2002
Examination	ons Developed by: Facility / <u>NRC</u> (circle one)	- <u></u>
Target Date*	Task Description / Reference	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a & b)	RSB
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	RSB
-120	3. Facility contact briefed on security & other requirements (C.2.c)	RSB
-120	4. Corporate notification letter sent (C.2.d)	RSB
[-90]	[5. Reference material due (C.1.e; C.3.c)]	12/01 RSB
-75	6. Integrated examination outline(s) due (C.1.e & f; C.3.d)	RSB
-70	 Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e) 	RSB
-45	 Proposed examinations, supporting documentation, and reference materials due (C.1.e, f, g & h; C.3.d) 	RSB
-30	9. Preliminary license applications due (C.1.I; C.2.g; ES-202)	RSB
-14	10. Final license applications due and assignment sheet prepared (C.1.I; C.2.g; ES-202)	RSB
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	RSB
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f & h; C.3.g)	RSB
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	RSB
-7	 Final applications reviewed; assignment sheet updated; waiver letters sent (C.2.g, ES-204) 	RSB
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee and authorization granted to give written exams (if applicable) (C.3.k)	RSB
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	RSB
Th Th	rget dates are keyed to the examination date identified in the corporate notific ey are for planning purposes and may be adjusted on a case-by-case basis in the facility licensee. plies only to examinations prepared by the NRC.	cation letter. n coordination

Examination Outline Quality Checklist

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Facility	SURRY POWER STATION Date of Examination: Weeks of	<u>March 1</u> T		
Item	Task Description	a	Initia b	s c#
ļ			¥	6#
1. W	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	RLM		RSB
R I T	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled.	RLM		R\$8
т Е	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	RLM		RSB
Ň	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	RLM		RSB
2.	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, and major transients.			RSB
S I M	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity; ensure each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s)*, and scenarios will not be repeated over successive days.	RLM		RSB
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	RLM		RSB
3.	a. Verify that:	RLM		RSB
w / T	 the outline(s) contain(s) the required number of control room and in-plant tasks, no more than 30% of the test material is repeated from the last NRC examination, * no tasks are duplicated from the applicants' audit test(s), and no more than 80% of any operating test is taken directly from the licensee's exam banks. 			
	b. Verify that:	RLM		RSB
	 (1) the tasks are distributed among the safety function groupings as specified in ES-301, (2) one task is conducted in a low-power or shutdown condition, (3) 40% of the tasks require the applicant to implement an alternate path procedure, (4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and (5) the in-plant walk-through requires the applicant to enter the RCA. 			
	c. Verify that the required administrative topics are covered, with emphasis on performance- based activities.	RLM		RSB
	d. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on successive days.	RLM		R\$B
4.	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	RLM		RSB
G E	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	RLM	· •.	RSB
N E	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	RLM		RSB
R	d. Check for duplication and overlap among exam sections.	RLM	Ļ_	RSB
L	e. Check the entire exam for balance of coverage.	RLM		RSB
:	f. Assess whether the exam fits the appropriate job level (RO or SRO).	RLM		RSB
a. Aut b. Fac	ility Reviewer (*) N/A		3 /2	late
	C Chief Examiner (#) <u>Richard S. Baldwin / Lichard Ansulation</u> C Supervisor <u>Michael E. Ernstes / Dreu Casto</u>		<u>3/1</u> 3/1	2 <u>102</u> 2107
	Mininder L. Lindio J. J J IC M. L. Cone			<u> </u>
Note:	 Not applicable for NRC-developed examinations. # Independent NRC reviewer initial items in Column "c;" chief examiner concurrence required. 	<u></u>		

Examination Security Agreement

2002 Initial License Exam

1. <u>Pre-Examination</u>

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 3/18-3/262 as of the date of my signature. I agree that I will not knowingly divulge any information about these examinations to any persons who have not been authorized by the NRC chief examiner. I understand that I am not to instruct, evaluate, or provide performance feedback to those applicants scheduled to be administered these licensing examinations from this date until completion of examination administration, except as specifically noted below and authorized by the NRC.Furthermore, I am aware of the physical security measures and requirements (as documented in the facility licensee's procedures) and understand that violation of the conditions of this agreement may result in cancellation of the examinations and/or an enforcement action against me or the facility licensee. I will immediately report to facility management or the NRC chief examiner any indications or suggestions that examination security may have been compromised.

2. <u>Post-Examination</u>

To the best of my knowledge, I did not divulge to any unauthorized persons any information concerning the NRC licensing examinations administered during the week(s) of ______. From the date that I entered into this security agreement until the completion of examination administration, I did not instruct, evaluate, or provide performance feedback to those applicants who were administered these licensing examinations, except as specifically noted below and authorized by the NRC.

	PRINTED NAME	JOB TITLE / RESPONSIBILITY	SIGNATURE (1)	DATE	SIGNATURE (2)	DATE NOTE
	1. Ken Grover	Lead LORP/Lieson /Daveloper/Validation	Habuner	1/15/02	An Low	3/21/02
	2. CURT DARDEN	Admin	litter matrice	01-17-02	SAI autor and	4/3/02
	3. Jeff Spence,	TRAINING SUPERVISOR	Al tomae	1/24/02	All J Spence	13/28/02
	4. Duane Shepheand	Training Instructor (LCRP)	Munterand	1/24/02	SPM Lieau	4/14/02
	5. Robert N Godenhilm	Simulation Support Coordinoton / simulaton	about lon-	130/02	Boto Man	4/3/02
	6. CHRISTOPAER G. HUTH	SIMULATOR SUPPORT COORDINATOR/SW	Chr. Hute	1/30/02	Chrs. Thatt	4/3/02
	7. LAWRENCE C. TYNES	ASS. SI MULATOR SUPPORT COORDENATORION	Laurara Porch.	1/30/42		- 4-47- 317102
	8. PHAT TRAN-LAM	SIMULATON SUPPORT COURD.	Anece	1/20/02	Aur	4-13/02
	9. LORI HISKLY	Admin	Aller Musley	211902	- The Flight	43102
	10. Roy Simmons	Supu OPS Training	Ja Zaran	2126102	12 mil	3122102
	11. Janker C. Enny	LORD INAMACTON J	ALEX	2-25-02	1105-5	4-17-02
	12. WILLIAM W. MARSHALL	LEAD INSTRUCTOR -LICENSE CLASS	humankel	2-27-02	Whith hankle	3/28/02
	13. James H. Warren, TR	LOPEP Instructor	Jonoff hand.		mathe warmand.	4.16-03
	14. DAVIN T- CLEWELLING	Mich wie tert	Re-M	2/28/02	CALIN 1	4/17/02
	15. KC.AN W TRY IOR	NLO Instructor	Buon Tonton	3-1.02	Buch Eulos	3-37-02
	16. J.J. Julientonie	woster MS: - ORS - Surry / Mgr.		+3/12/02		13/25/02
	NOTES: 17 Kerin J. Labat	Troy Instructor	C DLOA	3/14/0	$\sim \Lambda \cdot \Lambda$	4/16/02
ĸ	15 Davik Cease	Booth counter	Paula	3/15/02	Ruth	4/16/02
	NUREG-1021, Revision 8	••• ·	24 95-24	- •	J ~	
	19, Daniel L Hughes	Soyuston	Dallin	3/18/0	2 Ofensp	4/17/02

SURRY 2002-301

Form ES-201-3

ES-201

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Form ES-301-1 (R8, S1)

1	Facility: Surry Power Station Date of Examination: Weeks of March 18 & 25, 2002 Examination Level (circle one): RO / SRO Operating Test Number: 1						
T	Administrative opic/Subject Description	Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions					
A.1		Perform valve position verifications (KA2.1.29)(RO)					
		Obtain VCT trend from computer and determine estimated leak rate. (KA2.1.19)(RO&SRO)					
A.2		Perform component tag out (KA2.2.13)(RO)					
A.3		Perform Attachment 1 of 0-OSP-RC-002, Primary to Secondary leak-rate using condenser air ejector rad monitor. (KA2.3.11)(RO)					
A.4		Stability Class Calculation IAW EPIP 2.01(KA2.4.39)(RO)					

Administrative Topics Outline

Form ES-301-1 (R8, S1)

	Facility: Surry Power Station Date of Examination: Weeks of March 18 & 25, 2002 Examination Level (circle one): SRO (I & U) Operating Test Number: 2						
7	Administrative Fopic/Subject Description	Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions					
A.1		Take actions IAW OPAP-0008 for mis-positioned locked valve that makes TS system inoperable. (KA2.1.33)(SRO)					
		Obtain VCT trend from computer and determine estimated leak rate. (KA2.1.19)(RO&SRO)					
A.2		Determine that work order cannot be released due to improper plant conditions for PMT. (KA2.2.17)(SRO)					
A.3		Determine pathway to and from work site that yields the lowest dose using a survey map. (KA2.3.10)(SRO)					
A.4		Notification determination IAW EPIP 1.01(KA2.4.41)(SRO)					

Control Room Systems and Facility Walk-Through Test Outline

Form ES-301-2 (R8, S1)

Facility: Surry Power Station Date of Examination: Weeks of March 18 & 25, 2002 Exam Level (circle one): RO / SRO-I Operating Test No.: 1								
B.1 Control Room Systems								
System / JPM Title	Type Code*	Safety Function						
a. Perform the Immediate Operator actions for Loss of Main Feedwater flow (Facility # LO26.08)	S, D	4s (KA054AA2.02)						
b. Recover dropped control rod (Facility # LO65.03)	S, D	1 (KA001K4.09)						
c. Verify Natural Circulation Flow w/ flow not occurring and Steam Dump failure (Facility #LO38.03)	S, A, M (Significant Modification)	2 (KA002A4.02)						
d. Transfer to cold leg recirc w/ RMT functional and MOV1860B failing to open (Facility #LO52.01)	S,A,M (Significant Modification)	3 (KA011EA1.11)						
e. Loss of RHR at at mid-loop(Facility #LO40.5)	S, D, L	4р (као25аа2.07)						
f. Respond to #3 EDG failure to load (Facility #LO55.06)	S,D	6 (KA064A4.06)						
 g. Perform CLS Component Verification (E-0, attachment 1), w/ A CTMT air recirc fan failing to trip (Facility #LO67.01) 	S,A,M	5 (KA022A3.01, A4.01)						
B.2 Facility Walk-Through								
a. Cross-tie Unit 1 emergency busses to restore Instrument Air (Facility #LO35.03)	D	6 (KA056AA1.37)						
b. Locally start the Emergency SW Pumps and mitigate over-temperature condition. (Facility #13.02)	D,M,A	4s (KA076A2.01)						
c. Makeup to the Unit 2 RWST from the Spent Fuel Pit (Facility #53.01B)	D, R	2 (KA006A2.02)						
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, room, (S)imulator, (L)ow-Power, (R)CA	(A)lternate pat	h, (C)ontrol						

Control Room Systems and Facility Walk-Through Test Outline

Form ES-301-2 (R8, S1)

Facility:Surry Power StationDate of Examination:Weeks of March 18 & 25, 2002Exam Level (circle one):SRO(U)Operating Test No.: 2-U								
B.1 Control Room Systems								
System / JPM 1	System / JPM Title							
а.								
b. Recover dropped control rod (Fac	S, D	1 (КА001К4.09)						
С.								
d. Transfer to cold leg recirc w/ RMT MOV1860B failing to open (Facility #	S,A,M (Significant Modification)	З (КА011ЕА1.11)						
е.								
f.								
g.								
B.2 Facility Walk-Through								
a. Cross-tie Unit 1 emergency busse Air (Facility #LO35.03)	es to restore Instrument	D	6 (KA056AA1.37)					
b. Locally start the Emergency SW F over temperature condition. (Facility		D,M,A	4s (KA076A2.01)					
c. Makeup to the Unit 2 RWST from (Facility #53.01B)	the Spent Fuel Pit	D, R	2 (KA006A2.02)					
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA								

Operating Test Quality Checklist

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		perating	Toot	lumb	or: 1
Facility:	Surry Power Station Date of Examination: Weeks of March 18 & 25, 2002 O	perading	<u> </u>	•	
	1. GENERAL CRITERIA	-	a	b t	s c#
a.	The operating test conforms with the previously approved outline; changes are consistent wi sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribut	th ion).	RLM		RSB
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.		RLM		RSB
c.	The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1	l.a).	RLM		R\$B
d.	Overlap with the written examination and between operating test categories is within accepta limits.	able	RLM		RSB
θ.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	ent	RLM		RSB
	2. WALK-THROUGH (CATEGORY A & B) CRITERIA				-
a.	Each JPM includes the following, as applicable:		RLM		RSB
	 initial conditions initiating cues references and tools, including associated procedures reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee specific performance criteria that include: detailed expected actions with exact criteria and nomenclature system response and other examiner cues statements describing important observations to be made by the applicant criteria for successful completion of the task identification of critical steps and their associated performance standards restrictions on the sequence of steps, if applicable 				
b.	The prescripted questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.		RLM		RSB
С.	Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.		RLM		RSB
d.	At least 20 percent of the JPMs on each test are new or significantly modified.		RLM		rs8
	3. SIMULATOR (CATEGORY C) CRITERIA				
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance Form ES-301-4 and a copy is attached.	with	RLM		RS6
	Printed Name / Signature			Date	
a. Autho	or Robert L. Monk/ Hobert C. Month		_3,	ן גו	10.2
b. Facili	ity Reviewer(*) <u>N/A</u>			,	<u> </u>
c. NRC	Chief Examiner (#) Richard S. Baldwin/ Kulul & But		3/	121	102
d. NRC	Supervisor Michael E, Ernstes/ Mile Eats		3/1	ι/	0. ²
NOTE:	 The facility signature is not applicable for NRC-developed tests. Independent NRC reviewer initial items in Column "c;" chief examiner concurrence require 	ed.			

Simulator Scenario Quality Checklist

Form ES-301-4 (R8, S1)

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Facility:	Surry Power Station Date of Exam: 03/18-28/02 Scenario Num	bers: 1 / 2 / Operati	ng Test I	No.: 1	
	QUALITATIVE ATTRIBUTES		L	Initials	r
	••••••••••••••••••••••••••••••••••••••	****	a	b*	c#
1.	The initial conditions are realistic, in that some equipment and/or instrument of service, but it does not cue the operators into expected events.	ation may be out	RLM		RSB
2.	The scenarios consist mostly of related events.		RLM		RSB
3.		RLM		RSB	
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated without a credible preceding incident such as a seismic event.	into the scenario	RLM		RSB
5.	The events are valid with regard to physics and thermodynamics.		RLM		RSB
6.	Sequencing and timing of events is reasonable, and allows the examination complete evaluation results commensurate with the scenario objectives.	team to obtain	RLM		RSB
7.	If time compression techniques are used, the scenario summary clearly so in Operators have sufficient time to carry out expected activities without undue Cues are given.	ndicates. time constraints.	RLM		RSB
8.	The simulator modeling is not altered.		RLM		RSB
9.	The scenarios have been validated. Any open simulator performance defici- evaluated to ensure that functional fidelity is maintained while running the pla		RLM		RSB
10.	Every operator will be evaluated using at least one new or significantly modi other scenarios have been altered in accordance with Section D.4 of ES-301	ied scenario. All	RLM		RSB
11.	All individual operator competencies can be evaluated, as verified using For (submit the form along with the simulator scenarios).	m ES-301-6	RLM		ASB
12.	Each applicant will be significantly involved in the minimum number of transi specified on Form ES-301-5 (submit the form with the simulator scenarios).	ents and events	RLM		RSB
13.	The level of difficulty is appropriate to support licensing decisions for each c	ew position.	RLM		RSB
TARGE	QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)	Actual Attributes			
1.	Total malfunctions (5-8)	5/4/3	RLM		RSB
2.	Malfunctions after EOP entry (1-2)	2/3/4	RLM		RSB
3.	Abnormal events (2-4)	4/3/3	RLM		RSB
4.	Major transients (1-2)	1/1/1	RLM		RSB
5.	EOPs entered/requiring substantive actions (1-2)	1/1/2	RLM		RSB
6.	EOP contingencies requiring substantive actions (0-2)	1/0/0	RLM		RSB
7.	Critical tasks (2-3)	2/2/2	RLM		RSB

Transient and Event Checklist

13

Form ES-301-5 (R8, S1)

	OPERA	TING TEST	NO.:	1						
Applicant Type	Evolution Type	Minimum Scenario Number								
туре	Туре	Number	RO1	BOP	ro2	BOP	во3	вор	RO4	во
	Reactivity	1	4		6					
	Normal	1		1		4		1		
RO	Instrument / Component	4	5,8 .7?	2. 3. 77	1,3	2,5		2		
	Major	1	6,9 ,10	8. 9.	7, 8	7. 8		6		

12 11 13 12

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	Reactivity	1	4		6		5	:	
	Normal	0		1,		4		1	
As RO	Instrument / Component	2	5.6 ,7?	2,3 7'?	1, 3	25	3,4	2	
	Major	1	6,9 .10	8,9 10	7. 8	7. 8	6	6	
SRO-I			11		12		13		
	Reactivity	0	4		6		5		
	Normal	1	1		4				
As SRO	Instrument / Component	2	2,3 5, 6,7		า้ญ้าว่อ		2,3 ,4		
	Major	1	8,9 ,10	•	7, 8		6		
			<u>, U1</u>						
	Reactivity	0	4		6				
SRO-U	Normal	1	1		4				
	Instrument / Component	2	2,3 6,7		1235				
	Major	1	8,9 ,10		7 8				

Instructions:

Enter the operating test number and Form ES-D-1 event numbers for each evolution type.

 Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.

(3) Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirement.

Author:

Robert L. Monk, #1 & #2, R. Baldwin # 3

NRC Reviewer: Richard S. Baldwin,

(1)

S-301		Surry		er Sta		<u>.</u>			m ES-	0010		<u>, ,</u>
		Applica /SRO-				pplica SRO-				pplica SRO-I		
Competencies		SCEN	ARIC)	5	CEN.	ARIC)	s	CEN/)
	во 1	вор 2	3	4	вор 1	^{во} 2	3	4	sro 1	sro 2	3	
Understand and Interpret Annunciators and Alarms	5?,6, 8, 10	2,5,6			2,3,7 ,8,9	1,3,7 ,8			4.2,3, 7,8,9, 10	1,2,3 ,5,6, 7,8		
Diagnose Events and Conditions	5,6,8 ,10	2,5,6			2,3,7 ,8,9	1,3,7 ,8			4,2,5, 3,7,8, 9, 10	1,2,3 ,5,6, 7,8		
Understand Plant and System Response	4,5,6 ,8,10	2,5,6			2,3,7 ,8,9	1,3,6 .7,8			4,2,5, 3,8,9, 10	1,2,3 ,4,5, 6,7,8		
Comply With and Use Procedures (1)	4,6	2,4,5 ,6			1,3,7	1,3,6 ,7,8			4,2,3, 7,8,9, 10	1,2.3 ,4,5, 6,7,8		
Operate Control Boards (2)	4.5,6 ,7,10	4,6			1,2,3 ,9	1,3,6						
Communicate and Interact With the Crew	4,5,6 ,9,10	2,5,6			1,2,3 ,7,8, 9	1,3,6 ,7			2,3,4, 5,7,8, 9, 10	1,2,3 ,4,5, 6,7,8		
Demonstrate Supervisory Ability (3)									1,2,3, 4,5,7, 8,9, 10	1,2,3 ,4,5, 6,7,8		
Comply With and Use Tech. Specs. (3)									1,6	1		

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

Author: Robert L. Monk

NRC Reviewer: Richard S. Baldwin

5-301		Surry	Powe	er Sta		t		For	<u>m ES-</u>	301-6	(R8	,
		Ma	arch	2002	: 1 /				n			
	- 11	Applica /SRO-				oplica				oplica SRO-I		
Competencies		SCEN	ARIC)	5	SCEN.	ARIC)	S	CENA	RIO)
	во 1	вор 2	3	4	вор 1	^{яо} 2	3	4	sпо 1	sro 2	3	
Understand and Interpret Annunciators and Alarms	57,6, 8, 10	2.5,6			2,3,7 ,8,9	1,3,7 ,8			4,2,3, 7,8,9, 10	1,2,3 ,5.6, 7,8		
Diagnose Events and Conditions	5,6.8 ,10	2,5,6			2,3,7 ,8,9	1,3.7 ,8			4,2,5, 3,7,8, 9, 10	1,2,3 ,5,6, 7,8		
Understand Plant and System Response	4,5,6 ,8,10	2,5,6			2,3,7 ,8,9	1,3,6 ,7,8			4,2,5, 3,8,9, 10	1,2,3 ,4,5, 6,7,8		
Comply With and Use Procedures (1)	4,6	2,4,5 ,6			1,3,7	1,3,6 ,7,8			4,2,3, 7,8,9, 10	1,2,3 .4,5, 6,7,8		
Operate Control Boards (2)	4,5,6 ,7,10	4,6			1,2,3 ,9	1,3,6						
Communicate and Interact With the Crew	4,5,6 ,9,10	2,5,6			1,2,3 ,7,8, 9	1,3,6 ,7			2,3,4, 5,7,8, 9, 10	1,2,3 ,4,5, 6,7,8		
Demonstrate Supervisory Ability (3)									1,2,3, 4,5,7, 8,9, 10	1,2,3 ,4,5, 6,7,8		
Comply With and Use Tech. Specs. (3)									1,6	1		

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

Circle the applicant's license type and enter one or more event numbers that will allow the examiners to evaluate every applicable competency for every applicant.

1

Robert L. Monk Author:

NRC Reviewer: **Richard S. Baldwin**

Written Examination Quality Checklist

Facility:	Surry Power Station Date of Exam: Marcl	h 2002				Exa	m Level	: SRO
							Initial	
	Item Description					a	b*	с*
1.	Questions and answers technically accurate and a	applicable (to facili	ty				ros
2.	a. NRC K/As referenced for all questionsb. Facility learning objectives referenced as available	able						123
3.	RO/SRO overlap is no more than 75 percent, and per Section D.2.d of ES-401	SRO ques	tions a	re app	ropriate	B		ps
1.	Question selection and duplication from the last tw appears consistent with a systematic sampling pro-	vo NRC lic ocess	ensing	exams	;			
5.	Question duplication from the license screening/a indicated below (check the item that applies) and the audit exam was systematically and random the audit exam was completed before the licen the examinations were developed independent the licensee certifies that there is no duplicatio other (explain)	appears ap nly develop nse exam w tly; or	opropria ed; or	ate:				pas
6.	Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank 1997 1 ³⁸⁶ 35	Modi 16	fied	New AC49			pob
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memo A ⁸⁶ 4 L	ory		C/A AS SP			pas
8.	References/handouts provided do not give away	answers		<u> </u>	<u>-</u>			10b
9.	Question content conforms with specific K/A state approved examination outline and is appropriate assigned; deviations are justified	ements in the for the Tier	he prev to whic	viously ch they	are	Å		JAD
10.	Question psychometric quality and format meet E	S, Append	lix B, gi	uideling	es	C/B		100
11.	The exam contains 100, one-point, multiple choic agrees with value on cover sheet	e items; th	e total	is corre	ect and	/JJ		pso
a. Auth	Printe Printe	d Name / S errad W. L	-	re) Ar.nd	Ì	0		ate /02
c. NRC	lity Reviewer (*) N/A Chief Examiner (#) M Richard S. Baldwin/// Regional Supervisor Michael E. Ernstes///	ine of Virland	Bee F. G				3/1 3 <u>/12</u>	102
Note:	* The facility reviewer's initials/signature are not # Independent NRC reviewer initial items in Colu	applicable ımn "c;" chi	for NR ief exa	C-deve miner c	loped ex	kaminati nce requ	ons. Jired.	

Written Examination Quality Checklist

Facility:	Surry Power Station Date of Exam: Marc	h 2002				Exa	am Leve	el: RO
					<u></u>		Initial	
	Item Description					а	b*	c*
1	Questions and answers technically accurate and	applicable	to facil	lity		H		100
2.	a. NRC K/As referenced for all questionsb. Facility learning objectives referenced as avail	able				<i>%</i>		Nob
3.	RO/SRO overlap is no more than 75 percent, and per Section D.2.d of ES-401	I SRO ques	tions a	are app	ropriate	MA		ports
1.	Question selection and duplication from the last to appears consistent with a systematic sampling pr		ensing	exams				psh
5.	Question duplication from the license screening/a indicated below (check the item that applies) and the audit exam was systematically and random the audit exam was completed before the licen the examinations were developed independen the licensee certifies that there is no duplication other (explain)	appears ap nly develop nse exam w tly; or	opropri ed; or	ate:		A A		рв
6.	Bank use meets limits (no more than 75 percent from the bank at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank 37 34	Modi Jø/	se l	New 94-47			j4b
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memo St 43	ory	5°5	C/A مورج ک	Ø,		pab
8.	References/handouts provided do not give away	answers				×		LW6
9.	Question content conforms with specific K/A state approved examination outline and is appropriate assigned; deviations are justified	ements in th for the Tier	ne prev to whi	viously ch they	are			NAN
10.	Question psychometric quality and format meet E	S, Append	ix B, g	uideline	s	Ø/		1b
11.	The exam contains 100, one-point, multiple choic agrees with value on cover sheet					A		jsh
c. NRC	Printe	d Name / S	-	j.		· · · · · · · · · · · · · · · · · · ·	Da 457 <u>3/112</u>	102 102
Note:	* The facility reviewer's initials/signature are not # Independent NRC reviewer initial items in Colu	applicable f Imn "c;" chi	ior NR ef exar	C-deve miner c	loped ex oncurren	aminatio ce requ	ons. ired.	

.0-41	01										Examina v Worksh		Form ES-401-9 (R8, S1			
	1.	2.	3. Psy	chometric	c Flaws		4.	Job Con	tent Fl	aws	5. Other	6.	7.			
Q#	LOK (F/H)	LOD (1-5)	Stem Cues Focus		Cred. Dist.		Job- Link	Minutia		Back- ward	Q= SRO K/A Only		Explanation			
		Instructions [Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]														
		[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.] Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.														
1.	Ent	Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level. Enter the level of difficulty (LOD) of each question using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable).														
2.	Ent	Enter the level of difficulty (LOD) of each question using a 1 - 5 (easy - difficult) rating scale (questions in the 2 - 4 range are acceptable). Check the appropriate box if a psychometric flaw is identified:														
3.	Che - - - - -															
4.	Che	-	The question i	s not línk equires t contains (ted to th the reca data wit	ne job re uli of kno th an un	equire owledge realis	ments (i.) ge that is tic level o	too sp of accu	pecific fo tracy or	or the closed inconsistent	referen units (e	t, as written, is not operational in content). ce test mode (i.e., it is not required to be known from memory). .g., panel meter in percent with question in gallons).			
5.	Che	eck que	stions that are	e sample	d for co	nformar	nce w	ith the ap	prove	d K/A ai	nd those tha	t are <u>des</u>	signated SRO-only (K/A and license level mismatches are unacceptable).			
6.	Bas	sed on t	the reviewer's	judgmen	nt, is the	e questic	on as	written (l	J)nacc	eptable	(requiring re	pair or r	eplacement), in need of (E)ditorial enhancement, or (S)atisfactory?			
7.	Ata	a minim	ium, explain a	ny "U" ra	tings (e	.g., how	the A	Appendix	B psy	chometi	ric attributes	are not	being met).			

	1.	2.	3	Psych	nometi	ric Flaw	S	4.	Job Cont	tent Fla	aws	5. C	ther	6.	7.
Q#	LOK (F/H)	1 (Stern Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward				Explanation
	S		e e e e							RO/S	RO CO	MBIN	ed qu	ESTION	S
1	Μ	1-2												S	001AA1.01, Modified, RLM States modified, no bank question attached. Agree with Mike it is easy, will look at rest of test to determine what if any changes need to be made to this question. February 27, 2002 ADD STEADY STATE CONDITIONS.

((1			
Q#	1. LOK	2. LOD	3	. Psyc	homet	ric Flaw	/s	4.	Job Cont	tent Fl	aws	J. U	ther	6.	7.
Q#	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
2	Н	2-3	:												001K3.01, New RLM, Appears ok. 2/27/02 No facility comment
3	Н	3												S	002K6.03, New, RLM Appears ok. 2/27/02 FACILITY COMMENTS, AT LEAST A 7 ON THE SCALE OF DIFFICULTY. WANT THE QUESTION REPLACED. ASK MIKE 3/08/02
4	м	2												s	003A3.02, Modified, RLM
															Easy as Mike stated Appears ok, will review rest of test to determine if change is necessary. 2/27/02 NO FACILITY COMMENT
5	F	3												S	003AK2.05, New, RLM Appears ok. 2/27/02 MEMORIZATION OF A NOTE, OUTSIDE OF RO KNOWLEDGE. ONLY A HANDFUL OF PEOPLE KNOW THIS ANSWER. THE NORMAL PWR SUPPLY AND BACKUP ARE NOT REDUNDANT. LOWER LEVEL ARP, NOT A NORMALLY RESPONDED TO ARP. WANT IT REPLACED. 3/11/02 Replaced with facility generated question
6	F	2-3			-									S	004K2.04, Bank, GWL Appears ok. NO COMMENT

											(. <u> </u>		
Q#	1. LOK	2. LOD	3	. Psyc	nomet	ric Flaw	s	4.	Job Cont	tent Fl	aws	J. C)ther	6.	7.
Q#	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
7	F	2-3												S	005AK1.02, Bank, RLM Change stem to state WOOTF combinations of parameters will be The stem was changed. Have BOB look at this to see if it is ok. Discuss .
							-								January 30, 2002 OK as changed.
															2/27/02
															UNDERLINED ADVERSELY. OK
8	н	3							1					S	006K5.10, New, RLM Appears ok.
															2/27/02
															added RCS penetration at end of distractor D. Ok
9	н	3												E	007G2.4.47, New, RLM Do we need to state in the stern what procedure we are in? ES-0.1 This may ensure we get the correct answer. Discuss with Bob
															January 30, 2002, Added to the stem OK as is.
															No Facility COMMENT
10	н	2-3												Е ***	011EK3.03, New, RLM A lot of window dressing. Does the applicant require all this information to answer the question. I am not sure he does.
												1			Discuss.
															February 1, 2002 Changed the stem to remove superfluous information.
														s	OK as changed.
															NO FACILITY COMMENT

4	<u> </u>							r			(<u></u>		
Q#	1. LOK	2. LOD	3	. Psycl	nomet	ric Flaw	s	4.	Job Cont	ent Fla	aws	J. U	ther	6.	7.
	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
11	Η	3												S	011K3.02, Modified, RLM Original question not available with package. Could clarify the stem to let them know you are talking about Pressurizer pressure. Done. Let Bob see how the stem was changed. January 30, 2002 OK as changed, GWL reviewed. TYPOS MADE THIS A UNIT 2 QUESTION BY ADDING 2
12	н	3												E ***	 013G2.4.4, Modified, GWL Do we need to define what lowering rapidly means? Can we put a rate in here? The same goes for RCS pressure lowering. In the past we have had problems not providing this type of information. Discuss with Gerry. Otherwise appears ok. February 1, 2002 Will have to see what the facility has to say. Would the plant be in these conditions. Are all the data points correct for the position we have. IE is this the correct PZR level for the conditions. NO FACILITY COMMENTS.
13	H	3												S	014K3.02, New, GWL Appears ok. 2/27/02 NO CORRECT ANSWER. Re-worded the stem and to make it clearer. Made the question concern B rods, see the stem. ok as changed.
14	н	3												S	015AK2.10, Bank GWL Appears ok. No Facility COMMENT

	1.	2.	3	. Psyc	homet	ric Flaw	s	4.	Job Cont	tent Fl	aws	J.C	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRO Only	U/E/S	Explanation
15	н	3												S	015K4.08, Bank, GWL Appears ok. NO Facility COMMENT
16	H	3												E	017A3.01, Bank, GWL Distractor B is the only one that provides a reason why the generators have boiled dry. Is it necessary to have that in the answer? Probably can remove that part and still be a valid answer. Not sure distractor D is valid, Discuss with Gerry. January 30, 2002 Changed B to remove the feed water loss. OK as is, no need to change this question 2/27/02 Steam Tables, yes will provide steam tables. NO FACILITY COMMENT.
17	F	3												S ***	017K1.01, New, GWL No answer is designated, it looks like C should be the answer but need to discuss with the facility. Appears ok. January 30, 2002 Need to ask the facility 2/27/02 OVER AND ABOVE THE REQUIREMENTS OF AN OPERATOR, THIS WOULD BE DONE BY THE IC TECHS. KEN WILL REWRITE THIS QUESTION. 3/08/02 Facility rewrote question

/, 1											(-			Ĺ
Q#	1. LOK	2. LOD	3	Psyc	nometi	ric Flaw	s	4.	Job Cont	tent Fi	aws	່ປ	ther	6.	7.
0#	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRO Only	U/E/S	Explanation
18	F	2-3												S	022K4.05, New, GWL Changed the stem to add "directly" so that service water could not be an answer. Discuss with Gerry. January 30, 2002 OK as changed. 2/27/02 COULD JUSTIFY TWO ANSWERS, IF YOU ASSUMED THE INITIAL OR FINAL PHASES. Added words to the stem. Ok
19	F	3												S	025AK1.01, Bank, RLM Appears ok. Changed the stem to add sets of parameters because there are sets. January 30, 2002 OK NO FACILITY COMMENT
20	н	3				X								U? OK S	024AK1.04, New, GWL I would not have selected a or d because of the low temperature. Is there some significance of the 45 degrees? I think these need to be replaced. Discuss with Gerry. January 30, 2002 45 deg F. comes from the RWST temperature requirements. OK as is. NO FACILITY COMMENT

Q#	1. LOK	2. LOD	3	. Psycl	homet	ric Flaw	s	4.	Job Cont	tent Fl	aws	<u>.</u>	Other	6.	7.
Q#	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
21	F	3												E? S	026A1.01, Bank, RLM Mikes question was never answered. I also think that capacity should be capability. Discuss with RLM January 30, 2002 Added ability to the stem vice the other suggestions. OK as changed 2/27/02 UNDERLINED NOT.
22	Н	3												S	027AK3.01, New, GWL Appears ok. The attached reference material does not reflect this answer. The justifications of non correct answers stating they are not the correct answer is not a good justification. Discuss with GWL Disagree with LOK determination. Not sure this is a high level H more a high level M January 30, 2002 Understand it is a Higher level question. No changes necessary. 2/27/02 NO FACILITY COMMENT.
23	Н	3												S	028AK2.03, Modified, GWL Appears ok 2/27/02 MADE IT A UNIT 2 OK AS CHANGED.

•		2.	3.	Psyc	homet	ric Flaw	/s	4.	Job Cont	ent Fla	aws	J	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
24	H	3												E★★★ S	029A3.01, NEW, RLM Not sure why anyone would pick C. Is this a misconception of the operators? We may need to seek a different distractor. Discuss with RLM. Is there another Rad Monitor that can be substituted? Not sure I agree with LOK, could be a high level Memory. Otherwise appears ok. February 1, 2002 February 5, 2002 Distractor C was changed to be a rad monitor. Change is ok 2/27/02 CHANGED MODE 6 TO REFUELING SHUTDOWN. NO OTHER COMMENT
25	F	2-3												E OK S	032AK2.01, Modified, GWL This question was modified such that the stem did not ask the reason for the answer. Since the question would have two answers (B&C) if the reasons were removed. Leave the reasons in and then add back to the stem the basis or reason or why it is correct. Discuss with GWL January 30, 2002 OK as is, no change necessary. NO FACILITY COMMENT.
26	н	3			-									S	033K1.05, New, RLM Made minor changes to stem and fixed wording errors. Discuss with Bob January 30, 2002 Discussed with GWL 2/27/02 CHANGED ONE OF THE BULLETS TO REWORD WHAT WAS ACTUALLY HAPPENING. OK AS CHANGED.

~	1.	2.	3	. Psycl	homet	ric Flaw	s	4.	Job Cont	tent Fla	aws	ა. C	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
27	F	2-3												S	 034G2.1.27, New, RLM This question appears to be ok but I am not sure they stem talks abo the system the question is about. Is there a chance that there is ano system that has the same switch? Would like to add to the stem something like: WOOTF represents the purpose of the MCPLS in the fuel handling system? Discuss with BOB January 30, 2002 Discusses with GWL and added the recommended words to the stem OK as changed. 2/27/02 HAVE CHANGES TO QUESTION. DO NOT HAVE OPERATORS A FUEL HANDLERS . NOT SURE THE APPLICABILITY TO THE OPERATORS. NOT REQUIRED TO HAVE LICENSED OPERATOR ON THE FUEL TEAM. AS WRITTEN 2 CORRECT ANSWERS. Answer D is also correct, the is more than one micro switch. Changed distractor D. See exam for changes.
00		3												s	OK as changed.
28	H	0											-	s	035A1.01, New, RLM Made some minor changes, Appears ok January 30, 2002 Need to add the level transmitter and re arrange the stem initial conditions. February 5, 2002 Changed from channel 3 to the actual level transmitter. OK as chan- 2/27/02 Added 1 FW to mark numbers Added Channel 3,

											((
Q#	1. LOK	2. LOD	3	. Psycl	nomet	ric Flaw	s	4.	Job Cont	tent Fl	aws	<u></u>	ther	6.	7.
ω <i>π</i>	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
29	Н	3												S	038EK3.02. New, RLM Added the noun name for E-3 and underlined the word NEXT to ensure answer d was not considered a plausible answer. January 30, 2002 Ok as changed. 2/27/02 PORVS ARE SET AT 1035, NOW WE ARE TELLING THEM AT 1020. IF YOU LOOK AT INSTRUMENT AIR DOING NOTHING IS AN ANSWER. THERE IS NO CORRECT ANSWER AS IT SITS. CHANGED 1020 TO 980, NOW NEED TO TAKE AN ACTION. 3/8/02 Added parenthesis statement that all controllers are at the proper setpoint and changed to a unit 2 question.
30	Н	3						Ĩ		-				S	039A4.04, Bank, RLM Underlined sixty Also added the designation for the turbine driven afw pump. Appears ok. 2/27/02 NO FACILITY COMMENT

4															(
Q#	1. LOK	2. LOD	3	. Psycl	nomet	ric Flaw	s	4.	Job Cont	tent Fla	aws	<u></u>	ther	6.	7.
	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
31	F	2-3				X								U *** S	040AK2.02, Bank, RLM Have a question about the plausibility of distractors A and C, since they do not have remote indications any one that has this knowledge will be able to eliminate that particular distractor. May need to replace these. Why would D be wrong. Looks like it could be ok. Defer to Bob February 1, 2002 Distractor D is ok, no procedure to go to that would allow this. Going to look at changing either A or C. February 5, 2002 Changed distractor A, Change is ok 2/27/02 WANT TO CHANGE DISTRACTOR D. To outside service building, replace turbine building. OK as changed.
32	H	3												S	041K5.07, New, RLM Changed the stem to ask more of what the distractors were looking for. Discuss with Bob Otherwise appears ok. January 30, 2002 Discussed with GWL Changes ok 2/27/02 stm dmps in steam pressure mode, auto is not functional. Operate it in manual only. If the transmitter failed would not have an effect. 3/08/02 Change stem to indicate that operator made steam flow changes vice controller failure, acceptable to the facility.

Q#	1. LOK	2. LOD	3	. Psyc	homet	tric Flaw	/S	4.	Job Con	tent Fla	aws	<u>,</u>	ther	6.	7.
Q#	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
33	Μ	2-3												S	045A3.11, Bank, RLM Should we change distractor C to say 3 seconds rather than a short delay? Ask Bob Underlined immediately in answer b Otherwise appears ok January 30, 2002 Ask Bob February 1, 2002 Changed distractor C to add a 3 second time delay to make it look lik D. OK as changed. 2/27/02 UNIT 1 REPLACED LAST FALL, UNIT 2 WILL BE REPLACED NEX MONTH. OPERATORS HAVE NOT BEEN TRAINED ON THIS. FACILITY WILL COME UP WITH A NEW QUESTION. BASED ON N MATERIAL. 3/11/02 Facility submitted new question
34	Μ	2-3												S ***	051AK3.01, Bank, RLM No answer is marked, looks like it should be A? Appears ok. January 30, 2002 Need to look at distractor A again , it may be a correct answer also. Discuss with Bob February 1, 2002 We determined this is ok. NO changes are required. NO FACILITY COMMENT

~ #		2. LOD	3	. Psyc	homet	ric Flaw	/S	4.	Job Cont	tent Fla	aws	၂ ၁. ပိ	ther	6.	7.
Q#	LOK (F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
35	H	3	X											E ok S	054AA1.02, New, RLM Need the noun name for GOP-1.5. Done Do we need to add to the stem that the crew is in E-0. The stem son leads you to think you are in Ap-21. Discuss with Bob January 30, 2002 Added to the stem E-0 OK as changed 2/27/02 WANT TO MODIFY THIS QUESTION DELETED THE LAST BULLET BECAUSE THE PROCEDURE WE H WOULD NOT HAVE BEEN ENTERED BECAUSE OF THE RX TRIP OK AS CHANGED.
36	F	3												? S	069AA2.01, Bank, RLM This question has a line drawn thru it. I think it is a repeat from the S exam. ?? Discuss: February 1, 2002 055EK3.02, Bank, RLM The sheet had two questions on it, the correct one was below the firs question. The question is ok as changed.

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Q#	1. LOK	2. LOD	3	. Psyc	homet	ric Flaw	/S	4.	Job Con	tent Fl	aws	J. Č	ther	6.	7.
	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRO Only	U/E/S	Explanation
37	H	3	x											E	055G2.1.28, New, RLM Made minor typo changes. The stem of the question asks for the operation and purpose of the Steam Jet Air Ejector system. The question is really asking about one component, I think this could be clarified better. Based on the initial conditions WOOTF describes the operation and purpose of TSV-SV-1-102A? Stem focus January 30, 2002 Changed the stem and the distractors to be clearer. Discussed with GWL. OK as changed. 2/27/02 DELETED THE WORD THROTTLE IN THE STEM. OK AS CHANGED.
38	Н	2-3												S	056AK3.01, New, RLM Changed the stem slightly, More of a memory level question than a higher level question. Discuss changes with Bob. January 30, 2002 Discussed with GWL ok as a base line Higher level question. OK as changed 2/27/02 MORE THAN ONE ANSWER. D IS ALSO A CORRECT ANSWER. Changed the stem and distractors B and D. OK as changed.
39	н	3												s	056G2.1.32, New, RLM Appears ok. No FaCILITY COMMENT

ń											(
Q#	1. LOK	2. LOD	3.	. Psycl	nomet	ric Flaw	s	4.	Job Cont	ent Fla	aws	J J. C	Other	6.	7.
<u> </u>		(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
40	F	2-3												S	057AA1.06, New, RLM The reference material provided does not provide answer to this question. OK as is. 2/27/02 DO NOT EXPECT THE OPERATORS TO KNOW THIS. DO EXPECT THEM TO KNOW IMPLICATIONS OF LOSS OF POWER TO RACKS WANT IT REPLACED WANTS TO ADD INFORMATION "TO A LOSS RESULTING IN LOSS OF POWER TO THE CONTROL RACK AND THE MCR CONTROL STATION. THE VALVE SHIFTS TO AUTO HOLD AND MANUAL CONTROL IS LOST - FOR D? WILL ASK MIKE. 3/08/02 Rewrote question
41	F	2-3												E ****	059AK3.03, New, RLM Distractor C does not make sense to me. Discuss with Bob Look to replace distractor C. UPON further review it appears that Bob took the wrong path and went to the RNO. In order to go to the RNO you had to have a low failure. Discuss with Bob February 1, 2002 Seems as though the ARP 0-RM-P5, does not seem to work correctly. What do you do on a failure as we do in this question. Does not seem to address the detector failure. ******* 2/27/02 NO FACILITY COMMENT

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	1. LOK	2. LOD	3	. Psycl	hornet	ric Flaw	/S	4.	Job Con	tent Fl	aws	J. O	ther	6.	7.
Q#	(F/H)	(1-5)	Stem Focus		T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
42	Н	3												***	059G2.4.31, New, RLM Changed the stem a little, have Bob look at it. Do you expect the operators to know this from memory?? It is a stem in an ARP maybe beyond their scope of knowledge. Appears ok January 30, 2002 Why would steam flow be an indication of an electric pump trip? February 1, 2002 Changed steam flow to feed flow. Yes, Bob thinks this is required knowledge. OK as changed. Ask licensee if this is RO/SRO memory knowledge. **

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Q#	LOK (F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q≖ K/A	SRO Only	U/E/S	Explanation
43	F	2-3												E? ***	060AK2.02, Bank, RLM Is this something the applicants should know from memory?? Minor typo changes. The answer is obviously correct when the procedure is in front of you. But distractor B looks to be the next thing that needs to be done. Do need to clarify the stem to add ie. First or Next to make sure there is r doubt on what should be done? Discuss with Bob. January 30, 2002 Changed the stem to read more clearly. New Bob's input. February 1, 2002 Changed stem and changed distractor c. 2/27/02 WHAT IS THE FIRST ACTION AFTER THE IMMEDIATE ACTIONS I AN AP. SAY IT IS NOT REQUIRED KNOW FROM MEMORY. DISCUSS WITH MIKE 3/08/02 Facility rewrote question
44	H												-	U *** S	061K2.02, Modified, RLM This is a repeat question, very similar to Common Number 30. Discuss with Bob. One of them needs to be replaced. February 5, 2002 RLM made a modified question, changed a H to a F level Question is ok as proposed.

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Q#	1. LOK	2. LOD	3	. Psycl	homet	ric Flaw	s	4.	Job Con	tent Fla	aws	٥. ي	ther	6.	7.
Q#	(F/H)	(1-5)	Stern Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
45														S	063A2.01, NEW This question on the header indicates it is a common question, need to identify what test it is supposed to be on. While the question indicates there are problems with grounds the answers deal with TS requirements associated with the loss of power. I am not sure this meets the intent of the KA. Discuss. OK not a problem Why is distractor D incorrect, it is not a fully correct answer but the valve has to be closed prior to the power being removed. May need to change the stem to illicit the TOTAL answer. Not an answer. OK as is no changes necessary. January 25, 2002 2/27/02 GETTING DOWN TO THE SOLENOIDS TO THE PORVS. YES. DO NOT BELIEVE THERE IS ENOUGH INFORMATION TO DETERMINE THE PORV IS INOPERABLE. IN ADDITION DO NOT THINK THIS IS RO OR SRO KNOWLEDGE LEVEL. THIS IS NOT RESOLVED NEED TO EITHER REPLACE OR REWRITE. 3/08/02 Facility rewrote

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Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
46	н													1	062AA1.05, New, RLM. Is the correct terminology CCW or is it just CW? Need to determine this Otherwise appears ok. January 30, 2002 Discussed with GWL and removed the Water from the CC. 2/27/02 SHOULD HAVE DEBORATING DEMINS IN. HEAT UP WILL CAUSE INCREASE IN BORON. Changed the stem ok as changed.
47	F	3												S	063A4.02, Bank, GWL Appears ok 2/27/02 DEBATING VALIDITY OF THE QUESTION. TWO INDICATIONS ONE POSITIVE, OR NEGATIVE, IF A GROUND OCCURS IT GOES TO A BRIGHT LIGHT. HAVE A POSITIVE AND NEGATIVE LIGHT. NRC WILL WORK ON THIS. 3/08/02 GWL rewrote

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Q#	1. LOK (F/H)	2. LOD (1-5)	3	. Psyc	homet	ric Flaw	/s	4. Job Content Flaws				J. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
48	Н	3												ES	064A2.06, New, GWL Need to determine what needs to be done in accordance with Procedure XXX. Has to be added to the stem. Also, the requirement only comes about when shutting down the D/G. Need to add to the stem the DG is going to be shut down and what are the requirements. Discuss with Gerry January 30, 2002 Changed the stem, see question to see the changes. 2/27/02 THIS INFORMATION COMES OUT OF A OP. DON'T EXPECT THE OPERATORS TO KNOW THE TIME LIMIT FROM MEMORY. WANT THE OPERATORS TO KNOW BASIS NOT NUMBERS IN THE PROCEDURES. NEED TO DISCUSS WITH MIKE 3/11/02 Facility rewrote question
49	F	2-3												S	067AK1.02, Bank, GWL Appears ok 2/27/02 CHANGED THE STEM. SEE EXAM OK.
50	F	2-3												S	068AK2.03, Bank, GWL Appears ok. 2/27/02 A AND B ARE CORRECT ANSWERS. NOT SURE WHAT THE FIX IS, NEED TO GET RID OF A . BANK QUESTION IS IN ERROR. 3/08/02 Modified answer A to be incorrect.

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Q#	1. LOK (F/H)	2. LOD (1-5)	3	. Psyc	hornet	tric Flaw	/s	4. Job Content Flaws				ാ. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO U/E Only	U/E/S	Explanation
51	I	3												S	068K6.10, Bank, GWL What is RS, do we need to spell it out. Is this a question that an RO is supposed to know? Otherwise appears ok. January 30, 2002 Discussed with GWL No changes are necessary, will see if the licensee has a problem with it. 2/28/02 NO FACILITY COMMENT.
52	Н	3								-				S	071A4.07, New, RLM Appears ok. 2/28/02 VERY HIGH LEVEL QUESTION, GOOD ONE BECAUSE IT TESTS A LOT OF KNOWLEDGE NO FACILITY COMMENT, THINK IT IS A 5 LOK.
53	Н	3-4												E/U ***	072A2.02, New, RLM Is this something an RO or an SRO will have to know from memory? I don't think so. Discuss with BOB If it is appears ok. February 1, 2002 Ask Licensee if it is ok to test both. ★★★ 2/28/02 BOTH ANSWER B AND C MAKE THE FAIL ALARM COME ON. VERIFY IF THE DETECTOR OPERATES PROPERLY AND WRITE A WORK REQUEST. THIS IS ALL THEY ARE REQUIRED TO DO. OPERATORS ARE NOT REQUIRED TO KNOW THIS LEVEL OF DETAIL. PROCEDURE REQUIRES JUST A WORK REQUEST TO BE GENERATED. CHANGED DISTRACTOR C. OK AS CHANGED.

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_	1. LOK	2. LOD	3	. Psycl	nomet	ric Flaw	/S	4.	Job Con	tent Fla	aws	0	ther	6.	7.
Q#	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
54	H	3		-										S	072K5.02, New, RLM Did some word smithing, appears ok. Have Bob look at the changes. January 30, 2002 ok as is 2/28/02
															NO FACILITY COMMENT, TOUGH ONE.
55	F	3												S	073G2.1.32, New, RLM This is a backward logic question, these are not supposed to be used. Since there are not that many I think it is ok. However, I think the utility will have a problem with the requirement to know this information. It may be an SRO knowledge requirement but for an RO? We will see what they have to say. January 30, 2002 Will see what Surry has to say! 2/28/02 NO FACILITY COMMENT
56	귀	3												S	075K1.08, New, RLM Will have to ask the licensee if the wording for the answer is correct. Made some minor editorial changes to the question. Bob look at. Otherwise appears ok January 30, 2002 Check at facility CHANGED ANSWER D TO MAKE IT MORE CORRECT changes are ok.

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Q#	1. LOK	2. LOD	3	. Psyc	nomet	ric Flaw	s	4.	Job Cont	ent Fla	aws	J. C	ther	6.	7.
	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/\$	Explanation
57	F	3												S?	076AA1.04, Modified, GWL Changed the wording a little. Have Gerry look at. Also, could we change the High Radiation Alarm to something like when detecting high radiation? Discuss with Gerry. Otherwise appears ok. January 30, 2002 Changes appear to be ok. 2/28/02 NO FACILITY COMMENT.
58	Н	3												S? ***	079G2.4.49, Bank, RLM I am not convinced that there is not more than one answer. AP -40 requires you to trip the reactor so entry into AP 40 performs the trip the reactor part. What would cause you to trip the reactor prior to getting into AP 40? Discuss with RLM or licensee. January 30, 2002 There is no correct answer based on how we think the procedures work. Discuss with Bob February 1, 2002 Changed all the distractors. OK as changed. 2/28/02 MINOR WORD CHANGES OK 3/8/02 Enhanced answer

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Q#	1. LOК	2. LOD	3	. Psycl	nomet	ric Flaw	rs	4.	Job Cont	ent Fl	aws	J. U	ther	6.	7.
	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
59	F	3												S	G2.1.1, Bank, GWL Wording could be better but appears to be ok as is. January 30, 2002 With GWL reworded the stem to make it clearer. OK as changed 2/28/02 MINOR WORD CHANGE, OK
60	H	3												S	 G2.1.12, Modified, GWL Changed the stem a little, Appears to be ok. Is this allowable RO knowledge level? January 30, 2002 GWL thinks this is RO knowledge OK as is 2/28/02 LESSON PLAN WAS NOT UP DATED TO A RECENT CHANGE TO TECH SPECS. HAVE TWO CORRECT ANSWERS. ON THE COMMON NOT A FAIR QUESTION FOR AN RO. NEED TO LOOK TO HAVE AN SRO ONLY QUESTION. ***** ANSWER D IS CURRENTLY CORRECT BUT FOR AN OLD REVISION TO TSS. WANTED TO CHANGE ANOTHER INCORRECT ANSWER WITH THE NEW CORRECT ANSWER. FACILITY STATES IT WOULD BE UNFAIR TO DO SO. NEED TO DISCUSS WITH MIKE 3/08/02 Left the "Old" correct as a distractor and added new correct answer per a recent Tech Spec change. Moved this question to the SRO only test and exchanged with G2.1.4 from the SRO only test.

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Q#	1. LOK	2. LOD	3	. Psyc	homet	ric Flaw	s	4.	Job Cont	ent Fl	aws	<u>.</u> .0	ther	6.	7.
Cign 	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
61	F	2-3												S	G2.2.12, New, RLM The question is ok, it appears to be pretty basic. January 30, 2002 2/28/02 DISTRACTOR D IS NOT INCORRECT CHANGED D TO MAKE IT INCORRECT. OK AS CHANGED.
62	м	3				-								S	G2.2.13, Bank, RLM appears to be ok. January 30, 2002 2/28/02 NO FACILITY COMMENTS.
63	F	3												S	G2.2.30, New, RLM Appears to be ok. Another NOT question. January 30, 2002 2/28/02 HAVE SOME CONFLICTING STUFF. TS REQUIRES CONTAINMENT TO BE SET. CHANGED THE QUESTION TO NOT BE A NOT QUESTION. CHANGED THE QUESTION TO NOT BE A NOT QUESTION. CHANGED DISTRACTORS C AND A AND THE STEM. OK AS CHANGED.

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Q#	1. LOK	2. LOD	3	. Psycl	homet	tric Flaw	/S	4.	Job Cont	tent Fl	aws	<u>ບ.</u> C)ther	6.	7.
	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
64	F	3												S	G2.3.1, New, RLM The question is ok, however, could change the numbers to not be the same as the example in the lesson plan. Discuss with Bob January 30, 2002 Changed the numbers see the question. OK as changed 2/28/02 TOUGH QUESTION LEVEL OF DETAIL AND THE JOB LINK DO NOT THINK THIS IS A TOPIC THAT WOULD DIFFERENTIATE BETWEEN A COMPETENT OR NON COMPETENT OPERATOR HAVE NEVER DONE IT HERE, FROM MEMORY THINK IT IS UNFAIR. THIS WOULD BE DONE BY HP AND THEY, THE OPERATORS WOULD BE WALKED THRU IT. 10CFR 55.45(10) REQUIRES THE OPERATORS ON THE OPERATING TEST TO BE DEMONSTRATE KNOWLEDGE OF SIGNIFICANT RADIATION HAZARDS, INCLUDING PERMISSIBLE LEVELS IN EXCESS OF THOSE AUTHORIZED, FACILITY STATES THE KA IS 2.6 WHICH IS MARGINALLY HIGHER THAN 2.5. ASK MIKE 3/11/02 Replaced question
65	H	3												S	G2.3.2, Modified, GWL Word smithed Appears ok. January 30, 2002 GWL agrees 2/28/02 ADDED 20 FOOT, TO MAKE IT A VALID LINE SOURCE. OK AS CHANGED.

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Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
66	F	3												S	G2.3.4, Modified, GWL Appears ok. 2/28/02 CHANGE IN TERMINOLOGY OK AS CHANGED.
67	F	2-3												S	G2.4.39, Bank, GWL Can not tell what is the correct answer from material provided. The question is not modified. Appears ok. January 30, 2002 2/28/02 CHANGED D TO MAKE IT MORE INCORRECT. OK AS CHANGED.
68	F	3												S	G2.4.5, Bank, GWL Minor word smithing Appears ok January 30, 2002 2/28/02 CHANGED D TO MAKE IT MORE CORRECT AND CHANGED C TO MATCH THE LOOK OF D. OK AS CHANGED.
69	F	3												S	G2.4.14, New, GWL Minor Word smithing Appears OK. January 30, 2002 2/28/02 REMOVED THE WORD OF IN THE STEM. OK AS CHANGED

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Q#	1. LOK	2. LOD	3	. Psych	nomet	ric Flaw	/s	4.	Job Cont	ent Fl	aws	່ ມ. ປ	ther	6.	7.
0 #	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
70	н	3													G2.4.20, Modified, GWL Minor Word smithing Is this something an RO is required to know from memory?? Appears ok. January 30, 2002 Have facility determine RO applicability. ** 2/28/02 NO FACILITY COMMENT
71	F	3													G2.4.12, New, RLM Minor word smithing. I do not understand the answer. I read the attached material but need this explained to me. Distractor C on the hard copy is different from the one in LXR, which is correct? Discuss with Bob. January 30, 2002 Need to ask Bob and licensee, is this pay grade? February 1, 2002 Changed the distractors to be equal to 7 or 4. Appears ok. 2/28/02 NO FACILITY COMMENT.

•	1.	2.	3	. Psyc	homet	ric Flaw	/s	4.	Job Con	tent Fl	aws	J. C	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
72	H	3												E	 WE09G2.4.4, Modified, GWL Minor Word Smithing Two of the distractors have reasons why the action should be done and two do not. (A and C) They should be the same. Distractor B states "INITIATE" this procedure, should it say "Transition to"? Should we use a RVLIS value in the stem, rather than just saying it is < 78%? Do we need to put a rate at which pressurizer level is changing? Is this RO knowledge level? Discuss with Gerry. January 30, 2002 Changed A and C, Changed B Need to see what RVLIS level points are. ** Need to check if this is RO knowledge. ** 2/28/02 TOUGH QUESTION BUT CAN NOT FIND ANYTHING WRONG WITH IT. NO FACILITY COMMENT
73	H	3												S	WE11EA1.1, New, GWL Minor word smithing Appears ok. January 30, 2002 ok as changed 2/28/02 CHANGED THE THIRD BULLET TO MAKE IT CLEARER AND ADDED THE STEP. OK AS CHANGED.

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Q#	1. LOK	2. LOD	3	. Psyc	homet	ric Flaw	s	4.	Job Con	tent Fl	aws	J. O	ther	6.	7.
	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRO Only	U/E/S	Explanation
74	Μ	3												S	WE13G2.4.4, Modified, GWL Not modified, just rearranged. The answer based on material should be B vice C. Discuss with Gerry. Appears ok. January 30, 2002 GWL was correct, no change is necessary. 2/28/02 NO FACILITY COMMENT, TOUGH QUESTION. TYPO IN DISTRACTOR D. OK AS CHANGED 3/08/02 Facility asked that question be changed due to a KA mismatch. The original question asked "exit" conditions. The KA is for "entry" conditions. The facility proposed a replacement question which is acceptable.
75	Μ													S	WE16EK1.3, Bank, GWL Appears ok. 2/28/02 NEED TO CHANGE THIS IF WE GIVE THEM THE CSFTs. CHANGED THE STEM TO ADD AN, ALSO CHANGED C THE CORRECT ANSWER AND WILL ALLOW THE CSFTS TO BE USED ON THE EXAM.
	e e la constante Constante de la constante de la	na la com		5				l. di	y senderen s Li seren sener		SRO O	NLY Q	UEST	IONS	ne for a second seco The formation of the second
1	H?	2												S	001AA2.03 The answer is a partially correct answer. You have to attempt to stop the rod motion before you trip the reactor. Is it necessary to add this to the answer? This is a low CA level question at best. Answer: Rods are in manual during start up. Question is OK. No change is necessary. January 25, 2002

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Q#	1. LOK	2. LOD	3	. Psyci	nomet	ric Flaw	rs	4.	Job Cont	tent Fla	aws	J. C	ther	6.	7.
	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
2	H	3	X									r 		S*	005A2.03 NEW Change the stem of the question to have NOT been successful. I think it may read better. Capitalize NOT To ensure we expect the answer from AP-27, we need to change the question to In accordance with AP-27, Loss of Decay Heat Removal Capability," WOOTF is the correct course of action? Changed the stem and the question. January 25, 2002 OK as changed This question is similar to the JPM so it was replaced. Facility Oked the replacement.
3	H	2												S	008A2.01 NEW Question is not necessarily an SRO only question. Not sure why an RO would not be required to be able to determine this information. Discuss OK as is. January 25, 2002 Proposal on distractor D from facility Distractor D can be considered correct. Will change distractor D to the proposed distractor Will also have to electrical change to the stem.
4	н	3												S	008AA2.19, Bank Should put the distractors in order of size. Place C as A and shift the first two down. This will change the answer to C but that should be OK. Swapped A and C and left B as the answer. OK as is January 25, 2002 2/27/02 Facility comment. Add initial to the stem. OK

<u> </u>	1.	2.	3 3	. Psycl	homet	ric Flaw	rs	4.	Job Cont	ent Fl	aws	J.C	Other	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRO Only	U/E/S	Explanation
5	H	2												S	009EA2.04 Bank Distractor C describes injection flow as ECCS flow however, distractor only addresses injection flow. Should use the same terminology. Took out ECCS. Is D a viable answer? Would the procedure not have you isolate the accumulators during a small break LOCA? OK as is No further changes necessary. January 25, 2002 2/27/02 Concern that there are 2 correct answers. Add to the stem a pressure that is greater than accumulator pressure. This will ensure there is only one correct answer. Will add 750 psig to the stem. ok as changed no further changes are necessary.
6	Т	3												S	010A2.03, Bank Question appears to be ok. Mike had a comment that added to the stem, THE PRT remains intact Was this discussed and decided not to insert this? Should not be necessary. OK as is. January 25, 2002
7	Н	2-3												S	012A2.02, Bank, Reference material does not reflect why the answer is the one chosen. The question appears to be ok, could answer A also be a correct answer? A is not an answer ok as is. January 25, 2002 NEED TO LOOK AT THIS ONE TO SEE WHAT HAPPENED TO THE REPLACEMENT. 3/08/02 Facility ok'd

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Q#	1. LOK	2. LOD	3	. Psyc	homet	ric Flaw	/s	4.	Job Cont	tent Fla	aws	J. O	ther	6.	7.
4	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
8	Η	3	×											E	033G24.21, NEW The answer B is sort of confusing it starts out with a negative gamma- like it was a negative startup rate. As far as I can tell those words are not necessary. Is this true? In answer B removed the Decreasing and replaced it with trending. Added noun names to the procedure. Ask Gerry if OK. ?? January 31, 2002 Changed the distractors and stem a little more Ok as changed.
9	Н	3												E *** S	026AA2.01, Bank Can the stem be changed to state for the last bullet, that the CC surge tank level has increased. Other wise appears ok Changed to have the CCW surge tank trend up. OK This question is the same/similar as 008A1.04 on the RO only exam need to change one or the other. ***** February 1, 2002 Re-reviewed these and they are different enough to leave as is. NO change necessary
10	н	3												S	029G2.4.21, Bank Appears to be OK

^	1.	2.	3	. Psyc	homet	ric Flaw	rs	4.	Job Cont	ent Fla	aws	J. C	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/\$	Explanation
11	H	3												E?	037AA2.10, Modified In the stem, you state in two of the bullets that they were previously evaluated as permissible, is this necessary or is it just window dressing and can be thrown out. Discuss. OK as is no changes necessary. January 25, 2002 2/27/02
12														***	Facility requested to add TS in the stem of WOOTF. Agreed completed. 062A2.04, THIS IS A REPEAT OF 012A2.02 WHICH IS SRO NUMBER 7. ONE OF THESE NEEDS TO BE REPLACED. NEED to look at. February 5, 2002 New question developed, changed from memory to CA level. Question is ok as is. 2/27/02 A & B are both correct as written. Will look at the proposed question. ************************************

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Q#	1. LOK (F/H)	2. LOD (1-5)	3 Stem Focus	. Psyc: Cues	ric Flaw Cred. Dist.	rs Partial	4. Job- Link	Job Cont Minutia	 aws Back- ward	Q=	ther SRO Only	6. U/E/S	7. Explanation
13	н	3-4										S	065AA2.01, NEW Question appears to be ok. As stated in the question we still have some technical question about the way the system works. Is it this question a SRO would be expected to know from memory? Should we provide handouts? Discuss Look into giving them two ARPs to answer this question. January 25, 2002******* 2/27/02 Different pressure switches, have to re do this question. Also have to use Tubbine Building operator vice AO. 3/08/02 Jointly developed new question with facility
14	Н	3										E	103A2.05, NEW GWL Received is misspelled on the test. FIXED I think it would be better to change distractor A to add the VPAP Attachment 1 to the station manager. It would be more correct but not the oxygen concentration and then change B to the confined space entry permit. The Licensee may not like this question because it requires the SROs to know from memory the oxygen setpoint. Will have to see what they say. Review with Gerry. January 31, 2002 Changed distractors B and A . OK as changed

~ "	1.	2.	3	. Psyc	homet	tric Flaw	tric Flaw	s	4.	Job Cont	ent Fla	aws]	Other	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.		Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
15	F	2-3													S	 G2.1.4, BANK Change per to in accordance with. Done Place the parenthesis outside of the ? Done Are they required to know this from memory? They may want the TS provided. If this is true then the question is kind of trivial. Appears to be ok. See what the facility says about the use of TS. January 31, 2002 Will see what the utility has to say with or without Tech Specs. ** 2/27/02 FACILITY STATES PUSHING THE MEMORY OF THE QUESTION. WILL LEAVE IT THERE. 3/8/02 Shifted this question to combined test with reference available to RO' only. This question was exchanged for G2.1.12 on common test.
16	С	2-3													S	 G2.1.34, Bank Appears to be ok. Not sure why anyone would take distractor A as an answer. OK as is no change necessary. January 25, 2002 2/27/02 Facility believes that A, B and C are all correct answers. Not sure of procedure that would take care of this. Letdown Rad Hi alarm. Have purification in service. Would expect chemistry to tell the operators to something, but they do not expect operators to know the chemistry procedures. Need to rewrite or develop a new question. 3/08/02

<u> </u>	1.	2.	3	. Psycl	homet	ric Flaw	/s	4.	Job Con	tent Fl	aws	J. U. C	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
17	С	3							X					E/U	G2.2.6, NEW Is this something an SRO would be required to know from memor think it may not be. WE need to see what the facility has to say to determine if this is a fair question. I do not think they will like this question. OK as is January 25, 2002 2/27/02 OPERATIONAL VALIDITY OF QUESTION IS NOT THERE. MIN APPROVAL LEVELS DRIVEN BY THE PROCEDURES. WOULD EXPECT THEM TO KNOW THE REQUIREMENT OF CHANGE OF
18	С	2												S/E	NEED TO LOOK AT. G2.3.10, Bank This question appears to be ok. Not sure it is an SRO only knowle Is this something the facility expects the SRO to know from memory should be. If we use this question we need to under line the words acknowled and approve in order to key in on those words. Presently, it is har read and we don't want this to be a reading exercise. OK as changed, January 25, 2002 2/27/02 RP DEPARTMENT HAS TO GET THE SROS SIGNATURE _ FAC
						ļ									STATES THIS IS MINUTIA. NOT A STRONG JOB LINK. WILL NEED TO DO SOMETHING 3/08/02.

.	1.	2.	3	l. Psyc	homet	tric Flaw	/S	4.	Job Cont	ent Fl	aws	v. C	Other	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus		T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRO Only	U/E/S	Explanation
19	H	3												E	 WE02G2.4.6, Modified, GWL The distractors B (the answer) and D are the only two that provide the basis for the answer. Distractors A and C have procedural actions tha should be taken they do not contain basis for this action. Need to make them similar. In the bullets PZR level would be pegged hi or off scale hi being in an situation. Should we change this? Pressurizer is misspelled in distractor D. IS and ARE are used in the distractors after Termination Criteria, need make them all "Is met." January 31, 2002 NO need to change distractors ok as is. Changed is to are OK as changed 2/27/02 E-0 DO NOT HAVE CRITERIA FOR ADVERSE CONTAINMENT. NEED TO CHANGE THE STEM TO PLACE THE PLANT IN E-1, LOS OF REACTOR OR SECONDARY CONTAINMENT. WHY COMMIT FROM MEMORY THE ADVERSE NUMBERS. WILL ADD IN E-1

1															
	1.	2.	3	. Psycl	homet	ric Flaw	rs	4.	Job Coni	tent Fl	aws	U. C	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRÓ Only	U/E/S	Explanation
20	H	3												E	 WE03G2.4.6, Bank GWL In two distractors you use secured but another you use stopped. Should be the same. Either is OK. STOPPED is ok Place the distractors in order of pumps secured, one two then three and the last being all three RCPs remain running. Should we put in distractor A that it reduces the heat input? NO The reference material does not support produce effective heat transfer, where does this come from? January 31, 2002 Changed to stopped. Decided to leave in same order Do not need to add to A This distractor was used because it was a bank question. OK as changed.
21	H	3-4												E	WE04G2.4.5, Bank In the stem, add the noun name for AP-16 ****** Is it better to rearrange the stem to say something like, If the Leak was determined to be unisolable , upon exiting E-0, WOOTF is the correct procedure transitions for the event in progress. Changed , ok as is. January 25, 2002
22	н	3												S	WE05EA2.1, Bank See changes on the exam. Already made Appears to be ok. January 25, 2002

` ~"	1.	2.	3	. Psycl	homet	ric Flaw	/\$	4.	Job Cont	ent Fla	aws	J. O	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRO Only	U/E/S	Explanation
23	H	3												S	 WE06EA2.1, Bank, GWL Is it necessary to describe the rate at which the containment pressure is increasing. Will this require the use of the Safety Function Status Trees ? If it does this is a look up question. Otherwise appears ok. January 31, 2002 DO not need to add rate. See what the facility says about the use of CSFSTs★★ 2/27/02 DO WE INTEND GIVING THEM STATUS TREES? WILL NEED TO EVALUATE IF THESE ARE NECESSARY.
24 25	H	3												S	WE08EA2.1, BANK GWL This question while manipulative is not that difficult, you just have to plug the parameters given into the CSF status tree. I guess it is ok. January 31, 2002 OK Will not provide the CSFTS ** WE14EA2.1, BANK, GWL Are the CSF status trees going to be provided? If so, this is sort of like question number 25. It appears to be ok.
			-												January 31, 2002 Will see what utility says with or without CSFSTs★★

ے Q#	1. LOK	2.	3	. Psycl	nomet	ric Flaw	/S	4.	Job Cont	tent Fla	aws	<u> </u> ປ	ther	6.	7.
Q#	(F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
1	F	2-3												E	001A101, Modified, GWL Should the stem be changed to state Insertion Limit Computer to be more specific then rod insertion limit circuitry? Otherwise appears to be ok. January 31, 2002 Changed the stem to the above ok as changed. NO FACILITY COMMENT
2	F	2-3			~									S	003K4.07, Bank, GWL Appears to be ok. NO FACILITY COMMENT.
3	H	3												S	004K6.17, New, GWL Need to add the noun name for the breaker and the procedure Ap-3.0 Can you open 1350 from the control room? 1 think so, would this be wrong, need to look at the procedure. <u>Discuss</u> Otherwise appears ok January 31, 2002 Noun name for breaker still need this info. ★★★ The breaker that is tagged out is the breaker for the mov in the control room. 2/27/02 ADDED NOUN NAME. GWL WILL LOOK AT TO SEE IF CAN MAKE C NOT AN ANSWER 3/08/02 GWL fixed by making answer C to refer to FCV-1113B

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Q#	1. LOK	2. LOD	3	. Psycl	homet	ric Flaw	/S	4.	Job Cont	tent Fl	aws	<u></u>	ther	6.	7.
3	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
4	F	3												E	005K6.03, NEW, GWL The answer does seem obvious. IS there a failure mechanism in the CCW system that could be used vice stating manually. <u>Discuss</u> January 31, 2002 Discuss with facility to see if there is a valve that can be used to make it less obvious. February 1, 2002 OK as is, no change necessary. NO FACILITY COMMENT
5	н	3												S	007A2.02, NEW, RLM Underline the word and to ensure the readers realize it is a two part question, (DONE) Otherwise appears ok. January 31, 2002 ok NO FACILITY COMMENT
6	н	2-3										-		S	008A1.04, Bank, GWL In stem, should use numbers or spelling for the unit. Changed Unit one to Unit 1. (Done) Appears ok. January 31, 2002 NO FACILITY COMMENT

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Q#	1. LOK	2. LOD	3.	Psyc	nometi	ric Flaw	s	4.	Job Con	tent Fla	aws	<u></u> .	ther	6.	7.
Q#	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/S	Explanation
7	H	3												U *** S	010A2.03, Modified, GWL This event appears on the First Scenario. WE need to change this question to avoid the overlap between these two sections of the test. This is more like a memory level question. If you don't know it, the answer can not be determined. January 31, 2002 **** GWL will do this change February 5, 2002 New Question developed by GWL Changed to 1445 vice 1444. Change is ok. D IS THE CORRECT ANSWER NO FACILITY COMMENT
8	H	3												E *** S	012K4.06, Bank, GWL Mike had a comment what was the resolution? Change the stem to read, Which one of the following is the correct reactor protection system response to this event. DONE January 31, 2002 Need to change the last or first distractor, needs more work ★★★ February 1, 2002 Changed the distractor ok as changed. NO FACILITY COMMENT

Å.	1.	2.	3	. Psyc	homet	ric Flaw	's	4.	Job Cont	ent Fla	aws	ا د. ت	 Other	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
9	F	2-3												S	013K5.02, Bank, GWL Changed the Stem to read, If a valid plant condition requiring an automatic safety injection (SI) was generated, which one of the following will occur? Appears to be ok. January 31, 2002 OK as changed. 2/27/02 FACILITY HAS A PROBLEM WITH LEVEL OF DETAIL. WILL LOOK INTO THIS FURTHER. Testing the RO operator at instrument tech level. They expect the RO to know what inputs. Need to add to the stem we are talking about SI and not CLS ASK MIKE. 3/08/02 Tested as written
10	Н	2-3												S	015A3.03, Modified, GWL, The test item is designated as a modified, not sure how this is the case. <u>Discuss</u> with Gerry. Otherwise appears to be ok. January 31, 2002 This question was modified. Ok as is. 2/27/02 FACILITY STATES BEYOND THE SCOPE. DO NOT EXPECT THE ROS TO KNOW THE OVERLAP OF THE SOURCE RANGE AND INTERMEDIATE RANGE. WILL CHANGE THIS TO A SHUT DOWN VICE A START UP. N-32 AT 1 E 5 IS A TRIP SIGNAL. CRITICAL IN THE IR AND THE SOURCE RANGES AUTOMATICALLY TURN OFF ABOVE P-6, 1E-10. 3/08/02 Left question as is and will provide NI overlap handout

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Q#	1. LOK	2. LOD	3	. Psyci	nometi	ric Flaw	s	4.	Job Cont	ent Fla	aws	<u></u>	ther	6.	7.
	(F/H)	(1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward		SRO Only	U/E/\$	Explanation
11	М	2-3												S	016K4.03, Bank, RLM Appears to be ok. January 31, 2002 This question has been MODIFIED. See changes on the exm OK as changed. 2/27/02 NO CORRECT ANSWER. 2/3 OUT OF 2/3 S/Gs CHANGED THE STEM AND DISTRACTORS TO ADD 2/3 OR 1/3. MADE THE ANSWER CORRECT.
12	Μ	2-3												E/U	022A4.05, Modified, GWL This question states that it is modified. It has just been rearranged, nothing has changed. <u>Discuss</u> with Gerry. January 31, 2002 This question was modified, looked at the wrong initial questoin. OK as is. 2/27/02 TYPO IN STEM FIXED. NO CORRECT ANSWERS OK AS CHANGED
13	н	3-4												S	029G2.4.49, Modified, GWL, Appears to be ok. January 31, 2002

1]				
[3. Psychometric Flaws						Job Con	tent Fla	aws	J. U	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stern Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward	Q= K/A	SRO Only	U/E/S	Explanation
14	н	3													059K3.03, Modified, GWL The question states modified but the question it came from was not listed nor was it attached to the question. Could not determine if it was modified correctly. January 31, 2002 OK as is. 2/27/02 CHANGED THE STEM TO 90 % VICE 80 NOT SURE THE TRIP WOULD COME IN.
15	н	3-4												S	062K1.02, Bank, GWL Appears to be ok January 31, 2002 OK 2/27/02 NO FACILITY COMMENT

ا ہے	1.	2.	3	. Psyc	homet	ric Flaw	'S	4.	Job Cont	tent Fla	aws	J. Other		6.	7.	
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia		Back- ward	Q= K/A	SRO Only	U/E/S	Explanation	
16	Μ	2-3												S	069AA2.01, Bank, RLM Mike had a question about RO knowledge, should an RO know this information. Normally yes. See what the facility has to say. Otherwise appears ok. January 31, 2002 ok as is 2/27/02 FACILITY, WHAT IS THE EXPECTATION OF THE RO. DO NOT THINK IT IS A VALID RO RLM WILL MAKE IT EVIDENT THAT IT IS OPEN FOR A NORMAL EXIT OR ENTRANCE. SOME TYPE OF ACTIVITY THAT IS ALLOWABLE WOULD MAKE IT CLEARER. FIX THIS ONE. 3/08/02 Changed distractor to reflect a Maintenance entry, which is permissil	
17	Τ	3							-				r i s Automatic	S	071A2.09, Bank, GWL Appears to be ok. January 31, 2002 ok as is. 2/27/02 NO FACILITY COMMENT	
18	н	3												S	074EA2.01, Bank, RLM Appears to be ok. January 31, 2002 ok as is. 2/27/02 NO FACILITY COMMENTS	

1	1.	2.	3 3	. Psyc	hornet	ric Flaw	'S	4.	Job Cont	tent Fl	aws	J. Other		6.	7.	
⊋#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward	Q= K/A	SRO Only	U/E/S	Explanation	
19	Н	3												? ***	076K3.01, New, RLM Made some minor wording changes to the question. There is a question about using other indications to get the same answ has this been fully developed yet? Discuss with Bob	
														S	February 1, 2002 OK as is, see what licensee says. May need to provide the print we used to develop the question. $\star \star \star$	
															2/27/02 C COULD BE AN ANSWER. NEED TO LOOK AT THIS ONE TO CHANGE C	
															WILL PROVIDE THE ONE LINE DIAGRAM DURING THE EXAMINATION.	
															RLM WILL FIX.	
															3/08/02	
															Changed answer C to be backpressure vice air bound. Facility accepted. Also allowed the use of a handout.	
20	F	2-3												E	103A4.09, Bank, GWL Appears to be ok.	
															All the answers have the action to be taken and the reason that action was taken, however, the stem only asks the action to be taken. Shou change the stem to state something like - WOOTF is the action and reason for that action following a High Alarm Trip of Process Vent Ra Monitor R1-GW-101/102?	
															January 31, 2002 Changed the stem, rearranged the stem.	
															OK as changed. 2/27/02	

	1.	2.	3	. Psyc	homet	ric Flaw	rs	4.	Job Cont	ent Fl	aws	J. C	Other	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRO Only	U/E/S	Explanation
21	F	2-3												S	WE01G2.4.5, Bank, GWL Appears to be ok January 31, 2002 ok as is. 2/27/02
22	Н	3												S	NO FACILITY COMMENT WE03G2.4.4, Bank, GWL Are RO's required to have this knowledge memorized? Discuss with GWL. Minor editorial changes. Done See what the facility says about this question. January 31, 2002 As licensee if Ros have to know this. ** 2/27/02 NO FACILITY COMMENT
23	Н	3-4												S	 WE04G2.4.9, Bank, GWL This question states it is a bank question, but the bank question attached is quite a bit different. I think this is more modified. Need to add back in the noun names for the valves being manipulated i the stem. Is this an RO knowledge level question. It may not be. May be more like an SRO. Need to discuss with GWL and licensee. I made minor editorial and typographical changes. January 31, 2002 Ask licensee if RO knowledge. It is modified as stated in the question distrators.' OK as is. ADDED ECA NO FACILITY COMMENT

Ì.	1	2	3.	. Psycł	nometi	ric Flaw	s	4.	Job Cont	tent Fla	aws	د . ا	ther	6.	7.
Q#	LOK (F/H)	LOD (1-5)	Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job- Link	Minutia	#/ units	Back- ward		SRO Only	U/E/S	Explanation
24	F	2-3												S ***	WE05EK2.1, NEW, GWL. Some additions to the stem that are done. Need to add the noun name for ES-0.1 Otherwise appears ok. January 31, 2002 *** Need to ask facility if they do this locally or from the control room. 2/27/02 TYPOS CORRECTED. CHANGED DISTRACTOR D. SEE EXAM FOR CHANGE.
25	Н	3												S	WE08EK3.3, Bank, GWL Need to understand why answer A is not an additional correct answer. It seems that the left column of the procedure would allow this to be ok. Discuss this with Gerry. Otherwise appears ok. January 31, 2002 *** Need to ask the licensee what to do in this case. Not sure an RO needs to know this information. ASK 2/27/02 FACILITY BELIEVES THE LEVEL OF DETAIL IS MEMORIZATION OF THE PROCEDURE STEPS. WILL ASK MIKE. NEED TO REEVALUATE THIS 3/08/02 Replaced question with one more acceptable to facility

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Facility: Surr	y Power Station	Date of Exam: March 14, 2002	Exam L	evel: <u>R</u>	<u>O/SRO</u>
				Initials	i
	lte	m Description	а	b	с
1. Clean	answer sheets	copied before grading	RLM		Las
2. Answe docum	-	and question deletions justified and	RLM		15B
		ecked for addition errors < > 25% of examinations)	RLM		R\$B
4. Gradin detail	g for all border	line cases (80% +/- 2%) reviewed in	RLM		POB
5. All oth are jus	er failing exami stified	N/A		N/4	
deficie	mance on miss ncies and word ons missed by	RLM		NOB.	
		Printed Name / Signature		0	Date
a. Grader		Robert L. Monk Robert R. Monk		4	/3/02
b. Facility Re	viewer(*)	N/A			
c. NRC Chief	Examiner (*)	Richard S. Baldwin Michard E. E. E.		<u> 4/1-</u>	102
d. NRC Supe	ervisor (*)	Michael E. Ernstes		4/ 10	lor
	•	s signature is not applicable for examina nt NRC reviews are required.	ations grac	led by t	he

Surry Power Station

	Surry Power Station	
	Task Description	Date Complete
1.	Facility written exam comments or graded exams received and verified complete	4/3/02
2.	Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	4/3/02
3.	Operating tests graded by NRC examiners	4/12/02
4.	NRC Chief examiner review of written exam and operating test grading completed	4/12/02
5.	Responsible supervisor review completed	4/17/02
6.	Management (licensing official) review completed	4/25/02
7.	License and denial letters mailed	+/23/02
8.	Facility notified of results	4/23/02 4/19/02
9.	Examination report issued (refer to NRC MC 0610)	+/19/02
10.	Reference material returned after final resolution of any appeals	4/23/0-