Facility: VC Summer Date of Examination: 12/12/05

Examination Prepared By (Circle): Facility NRC

Written / Operating Test (DETAILS) Written ✓ / Operating Test (OUTLINE)

Target Date*	Task Description (Reference)	Chief Examiner's Initials
-180	1. Examination administration date confirmed (C.1.a; C.2.a and b)	7/12/05
-120	2. NRC examiners and facility contact assigned (C.1.d; C.2.e)	7/12/05
-120	3. Facility contact briefed on security and other requirements (C.2.c)	7/12/05
-120	4. Corporate notification letter sent (C.2.d)	7/13/05
[-90]	[5. Reference material due (C.1.e; C.3.c; Attachment 2)]	8/10/05
{-75}	6. Integrated examination outline(s) due, including Forms ES-201-2, ES-201-3, ES-301-1, ES-301-2, ES-301-5, ES-D-1's, ES-401-1/2, ES-401-3, and ES-401-4, as applicable (C.1.e and f; C.3.d)	N/A
{-70}	{7. Examination outline(s) reviewed by NRC and feedback provided to facility licensee (C.2.h; C.3.e)}	N/A
{-45}	8. Proposed examinations (including written, walk-through JPMs, and scenarios, as applicable), supporting documentation (including Forms ES-301-3, ES-301-4, ES-301-5, ES-301-6, and ES-401-6), and reference materials due (C.1.e, f, g and h; C.3.d)	N/A
-30	9. Preliminary license applications (NRC Form 398's) due (C.1.l; C.2.g; ES-202)	11/14/05
-14	10. Final license applications due and Form ES-201-4 prepared (C.1.l; C.2.i; ES-202)	11/29/05
-14	11. Examination approved by NRC supervisor for facility licensee review (C.2.h; C.3.f)	11/22/05
-14	12. Examinations reviewed with facility licensee (C.1.j; C.2.f and h; C.3.g)	11/28/05 12/1/05
-7	13. Written examinations and operating tests approved by NRC supervisor (C.2.i; C.3.h)	12/6/05 OP
-7	14. Final applications reviewed; 1 or 2 (if >10) applications audited to confirm qualifications / eligibility; and examination approval and waiver letters sent (C.2.i; Attachment 4; ES-202, C.2.e; ES-204)	12/5/05
-7	15. Proctoring/written exam administration guidelines reviewed with facility licensee (C.3.k)	11/30/05
-7	16. Approved scenarios, job performance measures, and questions distributed to NRC examiners (C.3.i)	12/8/05

* Target dates are generally based on facility-prepared examinations and are keyed to the examination date identified in the corporate notification letter. They are for planning purposes and may be adjusted on a case-by-case basis in coordination with the facility licensee.
[Applies only] {Does not apply} to examinations prepared by the NRC.

OPERATING TEST FINAL

ES-201 **Examination Outline Quality Checklist** **Form ES-201-2**

Facility: V.C. SUMMER 2005-301 Date of Examination: 12/12/05

Item	Task Description	Initials a	b*	c#
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	C	N/A	(SR)
	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.	C	N/A	(SR)
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	C	N/A	(SR)
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	C	N/A	(SR)
2. SIMULATOR	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	C	N/A	(SR)
	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, and ensure that 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 that scenarios will not be repeated on subsequent days.	C	N/A	(SR)
	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.	C	N/A	(SR)
3. W/T	a. Verify that the systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks distributed among the safety functions as specified on the form (2) task repetition from the last two NRC examinations is within the limits specified on the form (3) no tasks are duplicated from the applicants' audit test(s) (4) the number of new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	C	N/A	(SR)
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: (1) the tasks are distributed among the topics as specified on the form (2) at least one task is new or significantly modified (3) no more than one task is repeated from the last two NRC licensing examinations	C	N/A	(SR)
	c. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	C	N/A	(SR)
4. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	C	N/A	(SR)
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	C	N/A	(SR)
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	C	N/A	(SR)
	d. Check for duplication and overlap among exam sections.	C	N/A	(SR)
	e. Check the entire exam for balance of coverage.	C	N/A	(SR)
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	C	N/A	(SR)

	Printed Name/Signature	Date
a. Author	MARK A. CHITTY / Mark A. Chitty	12/07/05
b. Facility Reviewer (*)	N/A	N/A
c. NRC Chief Examiner (#)	STEVEN D. ROSE / Steve Rose	12/7/05
d. NRC Supervisor	Edwin Lea, Jr / Edwin Lea, Jr	12/8/2005

Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.

WRITTEN TEST FINAL

ES-201 **Examination Outline Quality Checklist** **Form ES-201-2**

Facility: VC Summer Date of Examination: 01/10/2006

Item	Task Description	Initials a	b*	c#
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	C	N/A	
	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.	C	N/A	
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	C	N/A	
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	C	N/A	
2. SIMULATOR	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	C	N/A	
	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, and ensure that 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 that scenarios will not be repeated on subsequent days.	C	N/A	
	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.	C	N/A	
3. W/T	a. Verify that the systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks distributed among the safety functions as specified on the form (2) task repetition from the last two NRC examinations is within the limits specified on the form (3) no tasks are duplicated from the applicants' audit test(s) (4) the number of new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	C	N/A	
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: (1) the tasks are distributed among the topics as specified on the form (2) at least one task is new or significantly modified (3) no more than one task is repeated from the last two NRC licensing examinations	C	N/A	
	c. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	C	N/A	
4. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	C	N/A	
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	C	N/A	
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	C	N/A	
	d. Check for duplication and overlap among exam sections.	C	N/A	
	e. Check the entire exam for balance of coverage.	C	N/A	
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	C	N/A	

	Printed Name/Signature		Date
a. Author	Mark Chitty	/	01/06/06
b. Facility Reviewer (*)	N/A	/ N/A	N/A
c. NRC Chief Examiner (#)	Steven Rose	/	1/6/06
d. NRC Supervisor	James H. Moorman, III	/	1-6-06

Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.

1. **Pre-Examination**

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12/12/05 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 (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). 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. **Post-Examination**

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 12/12/05. 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.	Doug Watson	Senior Instructor-Development	[signature]	10/27/05	[signature]	1/31/06	
2.	Michael J. Johnson	Control Room Supervisor Ops	[signature]	10/28/05	[signature]	1/30/06	
3.	Tom Howell	Simulator Operating Supervisor	[signature]	10/31/05	[signature]	1/26/06	
4.	Albert R. Koon, Jr	Operator Training Supervisor	[signature]	11/01/05	[signature]	1/26/06	
5.	Wanda P. Morris	Clerk	[signature]	11-9-05	[signature]	1-26-06	
6.	Karl D. Sease	Nuclear Instructor	[signature]	11/14/05	[signature]	1/31/06	
7.	Joey R. Brooks	Simulator Engineer	[signature]	11/14/05	[signature]	01/30/06	
8.	Glenn A. McEntyre	Instructor	[signature]	11/14/05	[signature]	1/26/06	
9.	W.H. Turkett	Sr. Process Control Analyst	[signature]	11/16/05	[signature]	1/30/06	
10.	W.R. Quick	Supervisor, Initial Training Pgms	[signature]	11/28/05	[signature]	1/26/06	
11.	L.A. Gilbertson	Super PSECG / SIPCS	L.A. GILBERTSON	12/5/05	[signature]	1-26-06	
12.	Gerald T. Lindler	Online Ops Scheduling Sup.	[signature]	12/6/05	[signature]	1-31-06	
13.	Michael Simpson	Shift Supervisor	[signature]	12/6/05	[signature]	1/26/06	
14.	George Lippard	Mgr, Operations	[signature]	12/7/05	[signature] FN BAL*	2/24/06	
15.	Gary Moffatt	Mgr Nuclear Training	[signature]	12-8-05	[signature]	1-30-06	

NOTES: *Via telecon

1. Pre-Examination

I acknowledge that I have acquired specialized knowledge about the NRC licensing examinations scheduled for the week(s) of 12/12/05 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 (e.g., acting as a simulator booth operator or communicator is acceptable if the individual does not select the training content or provide direct or indirect feedback). 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. Post-Examination

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 12/12/05. 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.	Riley R. Johnson	NUC INST.	Riley R. Johnson	11/28/05	Riley R. Johnson	1/30/06	
2.	LARRY R. WATKINS	NUC INST.		11/29/05		1/30/06	
3.	Liff Crider	NUC INST		12/12/05		1/29/06	
4.	JEFF ARCHER	SITE VP		12/12/05		2/22/06	
5.	L.R. CARTIN	Sr. ENGR - DE	L.R. Cartin	12/15/05	L.R. Cartin	2/22/06	
6.	Robert Ray	Ops Supervisor		1/4/06		1/30/06	
7.	M Kranendonk	SRO		1-4-06		2-22-6	
8.	~~Michael J. Johnson~~	~~Opr Exam Reviewers~~		To 1/30/06			
9.							
10.							
11.							
12.							
13.							
14.							
15.							

NOTES:

Facility: V.C. Summer Date of Examination: 12/12/05

Examination Level (circle one): (RO) ~~SRO~~ Operating Test Number: 2005-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	(N)	RO Only – Perform RCS leak rate calculation with plant in Mode 4 per STP-114.002 (K/A G2.1.7; 3.7/4.4)
Conduct of Operations	(N)	Calculate the Maximum allowable head venting time per EOP-18.2 Step 17 and Attachment 2. (K/A G2.1.25; 2.8/3.1)
Equipment Control	(N)	RO Only – Construct a tagout for SFP HEX 'A' (Construct without the use of pre-written tagouts or computerized tagging system) (K/A G2.2.13; 2.8/3.1)
Radiation Control	(N)	Perform a Shielding Calculation (K/A G2.3.2; 2.5/2.9)
Emergency Plan		N/A

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

* Type Codes & Criteria:
(C)ontrol room
(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes)
(N)ew or (M)odified from bank (≥ 1)
(P)revious 2 exams (≤ 1; randomly selected)
(S)imulator

Facility:	V.C. Summer	Date of Examination:	12/12/05
Examination Level (circle one):	~~RO~~ / (SRO)	Operating Test Number:	2005-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	(N)	SRO Only – Determine Overtime Availability. (K/A G2.1.4; 3.4)
Conduct of Operations	(N)	Calculate the Maximum allowable head venting time per EOP-18.2 Step 1 and Attachment 2. (K/A G2.1.25; 2.8/3.1)
Equipment Control	(D)	SRO Only – Review work package for SFP HEX 'A'; JPA-001 (K/A G2.2.13; 3.6/3.8)
Radiation Control	(N)	Perform a Shielding Calculation (K/A G2.3.2; 2.5/2.9)
Emergency Plan	(D)	SRO Only – Classification of an Emergency Event

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

* Type Codes & Criteria:
(C)ontrol room
(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes)
(N)ew or (M)odified from bank (≥ 1)
(P)revious 2 exams (≤ 1; randomly selected)
(S)imulator

Facility: V.C. Summer Date of Examination: 12/12-12/15/05
Exam Level (circle one): (RO) / ~~SRO-I / SRO-U~~ Operating Test No.: 2005-301

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

System / JPM Title	Type Code*	Safety Function
a. Start and load Diesel Generator "A" from the control room in the test start mode per SOP-306.16A. (The D/G will uncontrollably pickup load requiring an emergency STOP.) (K/A 062A1.01; 3.4/3.8)	(N) (S) (A)	6
b. JPSF-059, Alternate Isolation of Rutured S/G ('C' MSIV) (K/A 038EA1.32; 4.6/4.7)	(D) (S) (A)	3
c. JPSF-012, Dropped Rod Recovery. When Rod F2 is withdrawn to ~ 30 step position, the rod stops moving (stuck). When the ROD CNTRL BANK SEL switch is taken to manual per AOP-403.5, another rod within the same group drops requiring a manual trip. (K/A 003AA1.02; 3.6/3.4)	(M) (S) (A)	1
d. Secure Normal letdown per SOP-102 Section IV Part N and place Excess Letdown in service to the RCDT per SOP-102 Section IV Part C. (K/A 004A2.07; 3.4/3.7)	(N) (S)	2
e. JPS-068, Shift Component Cooling Water Trains. (K/A 008A4.01; 3.3/3.1)	(D) (S)	8
f. JPSF-083, Respond to Loss of Secondary Heat Sink. (K/A W/E05EA1.1; 4.1/4.0)	(D) (S) (A)	4S
g. JPSF-062, Respond to RHR Pump Vortexing during midloop operation. (K/A 025AA2.07; 3.4/3.7)	(N) (S) (A) (L)	4P
h. Respond to a Source Range Nuclear Instrument Malfunction (MODE 6 refueling activities in progress)	(N) (S) (L)	7
In-Plant Systems@ (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. JPP-055, Locally Start the Turbine Driven Emergency Feedwater Pump per FEP-4.0 Enclosure F and manually adjust flow. (K/A 061A2.04; 3.4/3.8)	(M) (E) (L)	4S
j. JPPF-166B, Establish Chilled Water Alternate Cooling to Charging Pumps. (K/A 026AA1.07; 2.9/3.0)	(D) (E) (R)	8
k. JPP-052, Startup a Battery Charger per SOP-311. (K/A 063A4.01; 2.8/3.1)	(D)	6

Facility: V.C. Summer Date of Examination: 12/12-12/15/05
Exam Level (circle one): ~~RO / SRO-I~~ / (SRO-U) Operating Test No.: 2005-301

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

System / JPM Title	Type Code*	Safety Function
a. Start and load Diesel Generator "A" from the control room in the test start mode per SOP-306.16A. (The D/G will uncontrollably pickup load requiring an emergency STOP.) (K/A 062A1.01; 3.4/3.8)	(N) (S) (A)	6
b. JPSF-059, Alternate Isolation of Rutured S/G ('C' MSIV) (K/A 038EA1.32; 4.6/4.7)	(D) (S) (A)	3
c. JPSF-012, Dropped Rod Recovery. When Rod F2 is withdrawn to ~ 30 step position, the rod stops moving (stuck). When the ROD CNTRL BANK SEL switch is taken to manual per AOP-403.5, another rod within the same group drops requiring a manual trip. (K/A 003AA1.02; 3.6/3.4)	(M) (S) (A)	1
d.		
e.		
f.		
g.		
h.		

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

i. JPP-055, Locally Start the Turbine Driven Emergency Feedwater Pump per FEP-4.0 Enclosure F and manually adjust flow. (K/A 061A2.04; 3.4/3.8)	(M) (E) (L)	4S
j. JPPF-166B, Establish Chilled Water Alternate Cooling to Charging Pumps. (K/A 026AA1.07; 2.9/3.0)	(D) (E) (R)	8
k.		

@ All control room (and in-plant) systems must be different and serve different safety functions; in-plant systems and functions may overlap those tested in the control room.

* Type Codes Criteria for RO / SRO-I / SRO-U

Facility: VC SUMMER Date of Examination: 12/12/05 Operating Test Number: 2005-301

	1. General Criteria	Initials a	b*	c#
a.	The operating test conforms with the previously approved outline; changes are consistent with sampling requirements (e.g., 10 CFR 55.45, operational importance, safety function distribution).		N/A	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.		N/A	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)		N/A	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.		N/A	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.		N/A	
	2. Walk-Through Criteria	--	--	--
a.	Each JPM includes the following, as applicable: • 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 • operationally important 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		N/A	
b.	Ensure that any changes from the previously approved systems and administrative walk-through outlines (Forms ES-301-1 and 2) have not caused the test to deviate from any of the acceptance criteria (e.g., item distribution, bank use, repetition from the last 2 NRC examinations) specified on those forms and Form ES-201-2.		N/A	
	3. Simulator Criteria	--	--	--
	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.		N/A	

		Printed Name / Signature	Date
a.	Author	STEVEN D. ROSE /	12/8/05
b.	Facility Reviewer(*)	N/A	
c.	NRC Chief Examiner (#)	RON ALELLO /	12/8/05
d.	NRC Supervisor	Edwin Lea, Jr / Edwin Lea Jr	12/8/2005

NOTE: * The facility signature is not applicable for NRC-developed tests.
Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.

Facility: V.C. Summer Date of Exam: 12/12/05 Scenario Numbers: 1 / 2 / 3 Operating Test No.: 2005-301

QUALITATIVE ATTRIBUTES		Initials a	b*	c#
1.	The initial conditions are realistic, in that some equipment and/or instrumentation may be out of service, but it does not cue the operators into expected events.	C	N/A	SN
2.	The scenarios consist mostly of related events.	C	N/A	SN
3.	Each event description consists of • the point in the scenario when it is to be initiated • the malfunction(s) that are entered to initiate the event • the symptoms/cues that will be visible to the crew • the expected operator actions (by shift position) • the event termination point (if applicable)	C	N/A	SN
4.	No more than one non-mechanistic failure (e.g., pipe break) is incorporated into the scenario without a credible preceding incident such as a seismic event.	C	N/A	SN
5.	The events are valid with regard to physics and thermodynamics.	C	N/A	SN
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	C	N/A	SN
7.	If time compression techniques are used, the scenario summary clearly so indicates. Operators have sufficient time to carry out expected activities without undue time constraints. Cues are given.	C	N/A	SN
8.	The simulator modeling is not altered.	C	N/A	SN
9.	The scenarios have been validated. Pursuant to 10 CFR 55.46(d), any open simulator performance deficiencies or deviations from the referenced plant have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	C	N/A	SN
10.	Every operator will be evaluated using at least one new or significantly modified scenario. All other scenarios have been altered in accordance with Section D.5 of ES-301.	C	N/A	SN
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	C	N/A	SN
12.	Each applicant will be significantly involved in the minimum number of transients and events specified on Form ES-301-5 (submit the form with the simulator scenarios).	C	N/A	SN
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	C	N/A	SN

Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes	–	–	–
1.	Total malfunctions (5–8)	6 / 6 / 6	C	N/A	SN
2.	Malfunctions after EOP entry (1–2)	2 / 2 / 1	C	N/A	SN
3.	Abnormal events (2–4)	5 / 3 / 4	C	N/A	SN
4.	Major transients (1–2)	1 / 1 / 1	C	N/A	SN
5.	EOPs entered/requiring substantive actions (1–2)	2 / 2 / 2	C	N/A	SN
6.	EOP contingencies requiring substantive actions (0–2)	0 / 0 / 0	C	N/A	SN
7.	Critical tasks (2–3)	3 / 2 / 3	C	N/A	SN

Facility: VC Summer | Date of Exam:12/12/05 | Operating Test No.:2005-301

APPLICANT	EVENT TYPE	Scenarios 1 CREW POSITION SRO	1 ATC	1 BOP	2 SRO	2 ATC	2 BOP	3 SRO	3 ATC	3 BOP	4 SRO	4 ATC	4 BOP	TOTAL	MINIMUM(*) R	I	U
(RO) SRO-I SRO-U	RX		5											1	1	1	0
	NOR		3				1							2	1	1	1
	I/C		1,3				2,3,9							5	4	4	2
	MAJ		8				7							2	2	2	1
	TS													0	0	2	2
(RO) SRO-I SRO-U	RX													0*	1	1	0
	NOR			5										1	1	1	1
	I/C			2,6, 7,9		4,5, 8								7	4	4	2
	MAJ			8		7								2	2	2	1
	TS													0	0	2	2
RO SRO-I (SRO-U)	RX	5												1	1	1	0
	NOR	5			1									2	1	1	1
	I/C	1,2, 3,6, 7,9			2,3, 4,5, 8,9									12	4	4	2
	MAJ	8			7									2	2	2	1
	TS	1,2, 3,4			2,4, 5									7	0	2	2
RO SRO-I SRO-U	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														0	2	2

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position.

2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.

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 requirements specified for the applicant's license level in the right-hand columns.

Facility: VC Summer | Date of Exam:12/12/05 | Operating Test No.:2005-301

APPLICANT	EVENT TYPE	Scenarios 1 CREW POSITION SRO	1 ATC	1 BOP	2 SRO	2 ATC	2 BOP	3 SRO	3 ATC	3 BOP	4 SRO	4 ATC	4 BOP	TOTAL	MINIMUM(*) R	I	U
(RO) SRO-I SRO-U	RX		5											1	1	1	0
	NOR		3				1							2	1	1	1
	I/C		1,3				2,3,9							5	4	4	2
	MAJ		8				7							2	2	2	1
	TS													0	0	2	2
(RO) SRO-I SRO-U	RX													0*	1	1	0
	NOR			5										1	1	1	1
	I/C			2,6, 7,9		4,5, 8								7	4	4	2
	MAJ			8		7								2	2	2	1
	TS													0	0	2	2
RO SRO-I (SRO-U)	RX	5												1	1	1	0
	NOR	5												2	1	1	1
	I/C	1,2, 3,6, 7,9												12	4	4	2
	MAJ	8												2	2	2	1
	TS	1,2, 3,4												7	0	2	2
RO SRO-I (SRO-U)	RX													0	1	1	0
	NOR				1									1	1	1	1
	I/C				2,3, 4,5, 8,9									6	4	4	2
	MAJ				7									1	2	2	1
	TS				2,4, 5									3	0	2	2

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position.

2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.

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 requirements specified for the applicant's license level in the right-hand columns.

Facility: VC Summer | Date of Exam:12/12/05 | Operating Test No.:2005-301

APPLICANT	EVENT TYPE	Scenarios												TOTAL	MINIMUM(*)		
		1			2			3			4						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP		R	I	U
(RO) SRO-I SRO-U	RX		5											1	1	1	0
	NOR		3				1							2	1	1	1
	I/C		1,3				2,3,9							5	4	4	2
	MAJ		8				7							2	2	2	1
	TS													0	0	2	2
RO SRO-I (SRO-U)	RX	5												1	1	1	0
	NOR	5			1									2	1	1	1
	I/C	1,2, 3,6, 7,9			2,3, 4,5, 8,9									12	4	4	2
	MAJ	8			7									2	2	2	1
	TS	1,2, 3,4			2,4, 5									7	0	2	2
RO SRO-I SRO-U	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														0	2	2
RO SRO-I SRO-U	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														0	2	2

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in the ATC position.

2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.

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 requirements specified for the applicant's license level in the right-hand columns.

Facility: VC Summer Date of Examination: 12/12/05 Operating Test No.: 2005-301

Competencies	APPLICANTS															
	☑ RO (1)(3)(5) ☐ SRO-I ☐ SRO-U				☑ RO (2)(4) ☐ SRO-I ☐ SRO-U				☐ RO ☐ SRO-I ☑ SRO-U (2)(3)				☐ RO ☐ SRO-I ☑ SRO-U (4)			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	1,3, 7,8	2,3, 6,7, 9			2,6, 7,8, 9	4,5, 6,7, 8,10			1,2, 3,4, 6,7, 8	2,3, 4,5, 6,7, 8,9, 10			2,6, 7,8, 9	2,3, 4,5, 6,7, 8,9, 10		
Comply With and Use Procedures (1)	1,3, 5,7, 8	1,2, 5,6, 7,9			2,5, 6,7, 8	4,5, 6,7, 8			1,2, 3,6, 7,8 5	1,2, 4,5, 6,7, 8,9			2,5, 6,7, 8	1,2, 4,5, 6,7, 8,9		
Operate Control Boards (2)	1,3, 4,5, 7,8	1,2, 3,5, 6,7, 9			2,5, 6,7, 8,9	4,5, 6,7, 8							2,5, 6,7, 7,8, 9			
Communicate and Interact	1,3, 4,5, 7,8	1,2, 3,6, 7,9			2,5, 6,7, 8,9	4,5, 6,7, 8,10			1,2, 3,4, 6,7, 8,9 5	1,2, 3,4, 5,6, 7,8, 9,10			2,5, 6,7, 8,9	1,2, 3,4, 5,6, 7,8, 9,10		
Demonstrate Supervisory Ability (3)									1,2, 3,5, 6,7, 8,9	1,2, 3,4, 5,6, 7,8, 9,10				1,2, 3,4, 5,6, 7,8, 9,10		
Comply With and Use Tech. Specs. (3)									1,2, 3,4	2,4, 5				2,4, 5		

Notes:
(1) Includes Technical Specification compliance for an RO.
(2) Optional for an SRO-U.
(3) Only applicable to SROs.

Instructions:

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

Facility: VC Summer	Date of Examination: 12/12/05	Operating Test No.: 2005-301

Competencies	APPLICANTS															
	☐ RO ☐ SRO-I ☑ SRO-U (1)				☐ RO ☐ SRO-I ☐ SRO-U				☐ RO ☐ SRO-I ☐ SRO-U				☐ RO ☐ SRO-I ☐ SRO-U			
	SCENARIO				SCENARIO				SCENARIO				SCENARIO			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Interpret/Diagnose Events and Conditions	1,2, 3,4, 6,7, 8	4,5, 6,7, 8,10														
Comply With and Use Procedures (1)	1,2,5 3,6, 7,8	4,5, 6,7, 8														
Operate Control Boards (2)		4,5, 6,7, 8														
Communicate and Interact	1,2,5 3,4, 6,7, 8,9	4,5, 6,7, 8,10														
Demonstrate Supervisory Ability (3)	1,2, 3,5, 6,7, 8,9															
Comply With and Use Tech. Specs. (3)	1,2, 3,4															

Notes:
(1) Includes Technical Specification compliance for an RO.
(2) Optional for an SRO-U.
(3) Only applicable to SROs.

Instructions:

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

ES-401 **Written Examination Quality Checklist** **Form ES-401-6**

Facility: VC SUMMER Date of Exam: 01/10/06 Exam Level: RO ☑ SRO ☐

Item Description				Initial a	Initial b*	Initial c#
1.	Questions and answers are technically accurate and applicable to the facility.			C	N/A	
2.	a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.			C	N/A	
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401			N/A	N/A	N/A
4.	The sampling process was random and systematic (If more than 4 RO or 2 SRO questions were repeated from the last 2 NRC licensing exams, consult the NRR OL program office).					†
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: __ the audit exam was systematically and randomly developed; or __ the audit exam was completed before the license exam was started; or ~ the examinations were developed independently; or __ the licensee certifies that there is no duplication; or __ other (explain)			C	N/A	
6.	Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank: 29/39%	Modified: 22/29%	New: 24/32%	C	N/A	
7.	Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/ analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	Memory: 31/41%	C/A: 44/59%		C	N/A	
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.				C	N/A	
9.	Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.				C	N/A	
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.				C	N/A	
11.	The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with the value on the cover sheet.				C	N/A	

	Printed Name / Signature	Date
a. Author	MARK A. CHITTY / Mark A. Chitty	01/06/06
b. Facility Reviewer (*)	N/A	
c. NRC Chief Examiner (#)	STEVEN D. ROSE / Steven D. Rose	1/6/06
d. NRC Regional Supervisor	James H. Moorman / James H. Moorman	1-6-06

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

† PROGRAM OFFICE CONTACTED ON 1/5/06 AND 1/6/06.

Facility: VC SUMMER Date of Exam: 01/10/06 Exam Level: RO ☐ SRO ☑

Item Description				Initial a	Initial b*	Initial c#
1.	Questions and answers are technically accurate and applicable to the facility.			C	N/A	
2.	a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.			C	N/A	
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401			C	N/A	
4.	The sampling process was random and systematic (If more than 4 RO or 2 SRO questions were repeated from the last 2 NRC licensing exams, consult the NRR OL program office).					
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: __ the audit exam was systematically and randomly developed; or __ the audit exam was completed before the license exam was started; or __ the examinations were developed independently; or __ the licensee certifies that there is no duplication; or __ other (explain)			C	N/A	
6.	Bank use meets limits (no more than 75 percent from the bank, at least 10 percent new, and the rest new or modified); enter the actual RO / SRO-only question distribution(s) at right.	Bank: 4 / 16%	Modified: 5 / 20%	New: 16 / 64%	C	N/A	
7.	Between 50 and 60 percent of the questions on the RO exam are written at the comprehension/ analysis level; the SRO exam may exceed 60 percent if the randomly selected K/As support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	Memory: 11 / 44%	C/A: 14 / 56%		C	N/A	
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.				C	N/A	
9.	Question content conforms with specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.				C	N/A	
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.				C	N/A	
11.	The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with the value on the cover sheet.				C	N/A	

	Printed Name / Signature	Date
a. Author	MARK A. CHITTY / Mark A. Chitty	01/06/06
b. Facility Reviewer (*)	N/A	
c. NRC Chief Examiner (#)	STEVEN D. ROSE / Steven D. Rose	1/6/06
d. NRC Regional Supervisor	James H. Moorman, III / James H. Moorman	1.6.06

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

RAFT RO EXAM

ES-401, Rev. 9 **Written Examination Review Worksheet** **Form ES-401-9**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation

Instructions

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. 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).
3. Check the appropriate box if a psychometric flaw is identified:
   - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
   - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
   - The answer choices are a collection of unrelated true/false statements.
   - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
   - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
4. Check the appropriate box if a job content error is identified:
   - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
   - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
   - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
   - The question requires reverse logic or application compared to the job requirements.
5. Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
6. Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

1	F	1										X		U	001A2.03: Question does not test the K/A. The question does not have a malfunction that has to be mitigated. LOD too low for this K/A in that there is no malfunction and the operator just needs to know that this condition is expected and no action is required.
	H	*2*												*S*	*Question replaced. The new question is satisfactory. The question test at the C/A level with a LOD=2.*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			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	2	X			X						X		U	002A4.08: Distractors A and B are not credible in that with a break of the high pressure tap (i.e. an SBLOCA) that continued plant operation would not be affected. The stem does not need to state that all RCPs are running at 90% power, that is a given for this power level. Suggest changing the stem to have the high pressure tap become clogged or modify the question to have a low pressure tap become clogged and ask what the indications would be. The question does not test the K/A in that the question asks what will happen with the plant vs the ability to operate and/or monitor the safety parameter display.
	H	*3*												S	*Question replaced. The new question is satisfactory. The question test at the C/A level with a LOD=3.*
3	H	3	X			X								E	003A4.01: Distractors A and B are essentially the same since a decrease in #1 seal D/P can only be caused by low RCS pressure or #1 seal failure. The stem should only state what is available to the operators, to state that the standpipe is verified high, how is this done? In the stem change "seal return flow" to "seal leakoff flow"," at VC Summer seal return flow is called seal leak off flow. In the stem state which annunciators have alarmed, this adds operational validity.
														S	*Question has been corrected. SAT*
4	F	4				X								E	003AK1.17: This question is testing the GFE knowledge of Rx Physics but is dead on the K/A. Suggest changing distractor B to be the opposite of answer A.
														S	*Question has been corrected. SAT*
5	H	2										X		U	004G2.4.49: The conditions established in this question do not REQUIRE immediate operator action which is required to be tested by the K/A. The question test what the system will do without operator action vice the required operator action.
	F	*2*												S	*Question has been replaced. New question is satisfactory. The new question tests at the memory level with a LOD=2. SAT*
6	H	3	X											E	005AA2.03: Stem needs to be changed to state that the rods did not move when bank D vs "any Rod Bank". The AOP for stuck rods does not allow going to any other banks other than the one the stuck rod is in.
														S	*Question has been corrected. SAT*

	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				er		6.	7.
			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												S	005K6.03: No reference material provided for verification of the correct answer.
8	H	3	X				X							E S	006K4.11: The wording in the stem, "Which ONE of the following is correct?" needs to be changed. Having the wording this way makes distractor B also correct, since the distractor B statement is true. "Which one of the following explains why the SI signal could not be reset?" *Question has been corrected. SAT*
9	H	3					X							E S	007A2.05: Distractor A is partially correct in that, the alarm is expected for the PRT conditions. *Question has been corrected. SAT*
10	F	2					X							E S	007EK1.05: Change distractors so all cover the same amount of time. Supporting information found states that SR should not energize until at least 15 minutes after a trip, therefore, change answer C to 15-17 minutes, and distractor D to 20-22 minutes. *Question has been corrected. SAT*
11	H	2					X							U S	007K1.01: There are two correct answers. Both B and C can be considered correct based on the facility reference material. The reference material states that the PRT rupture disc is set to release at 86-100 psig with a nominal release of 91 psig. This information makes two of the answer choices arguably correct with B being the best answer vice C as marked. *Question has been corrected. The stem has been modified to state the maximum pressure that could be reached in the PRT.*
12	H	3	X											E S	008A3.06: Suggest modifying the question to get a better K/A match. In the stem the CCW dicharge pressure to 40 psig and the amps are increasing (pump impeller binding). This will make distractor A correct and ensure that the question tests the automatic actions as required by the K/A. *Question has been corrected. SAT*
13	H *H*	2 *2*										X		U S	008AG2.4.49: Question does not test the K/A. The question does not test any aspects of operation of system components or controls. *008AG2.4.4: K/A was changed. New question was developed for this K/A. The new question is Satisfactory. The question tests at the C/A level with a LOD=2.*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
14	H *H*	2 *2*	X			X								U *S*	010G2.4.4: Distractors C and D are not credible. The detailed instrument readings provided in the stem (i.e. all pressure instruments reading and trending the same) makes C and D distractors implausible. Suggest changing the stem to state that one of the PZR pressure instruments is indicating a failed high channel. Adding this information to the stem adds credibility to distractors C and D and makes the question a C/A vs Mem. *Question has been replaced. The new question is Satisfactory. The question tests at the C/A level with a LOD=2.*
15	F	2	X											E *S*	011EK2.02: Stem provides teaching. Reword the stem to read that EOP-1.0 is in progress. "WOOF is the reason for RCP trip criteria under the above conditions?" With a Large Break LOCA, the RCS will depressurize to less than 1400 psig which is RCP trip criteria for the distractor D reason. Change the stem to state that a MS line break has occurred. *Question has been corrected. SAT*
16	H *F*	2 *2*										X		U *S*	012A4.03: Question does not match the K/A. The question does not address any aspects associated with RPS channels being blocked or bypassed. *Question has been replaced. New question from a previous NRC exam (year 2000). The new question is Satisfactory. The question tests at the memory level with a LOD=2.*
17	F	2				X								E *S*	012K2.01: Distractor D is not credible in that the loss of one power supply would result in the loss of P-6. Suggest changing distractor D to read "A low power rod block, C-1, signal with no change in reactor power." Could not find supporting reference material to verify the answer as correct. *Question has been corrected. SAT*
18	F *F*	1 *2*										X		U *S*	013K1.06: Question does not test the K/A. The question tests the operation characteristics of an MOV. The question LOD is too low to be included on a license operator exam, this is more of an NLO fundamentals question. *Question has been replaced. The new question is satisfactory. The question tests at the memory level with a LOD=2.*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
19	H	2	X				X							E S	015AK1.02: Conflicting information in the stem. The stem states that power is at 35% which makes distractor B correct. The stem also states that P-8 is not lit, indicating that power is above 38%, which makes A the correct answer. The applicant is forced to make a decision that one of these two pieces of information is incorrect. Nothing else in the stem indicates that which piece of information is correct, therefore, either can be argued as correct. *Question has been corrected. SAT*
20	F	2				X								E S	017K1.01: Distractor C is not credible. Remove the word "second" from distractor C. I believe this question is at the memory level, not C/A as labeled. *Question has been corrected. SAT*
21	F	2												S	022A1.04
22	H	3				X								E S	022AA1.08: Distractor C is not plausible. Suggest changing to read "VCT rate of level decrease would remain unchanged from preevent." *Question has been corrected. SAT*
23	F	2	X											E S	022K3.02: Add to the stem to solicit the reason why the parameter changes. *Question has been corrected. SAT*
24	F *H*	2 *2*	X											E S	024AG2.4.6: Stem lacks credibility, in that, why are the PORV block valves shut? How would they have been shut under these conditions? Need to provide reference material that supports the correct answer. *Question has been modified. The question now tests at the C/A level with a LOD=2. The question is Satisfactory.*
25	F	2				X								E S	025AG2.1.32: Distractor D is not credible. The loss of CCW flow to the HX would never affect the SI flow path. Suggest replacing this distractor with something about heat added to the system from the RHR pump could cause boiling on the CCW side of the RHR HX. *Question has been corrected. SAT*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
26	H *F*	2 *3*	X				X							U *S*	026AA1.01: The question stem is confusing. Has the RCP A CCW TEMP HI annunciator been in for 5 days without the plant fixing the problem? Not sure it can be said that the CCW HX outlet temperature will decrease due to lower flow. The lower flow through the cooled components would cause the CCW HX inlet temp to be higher. Suggest this question be replaced. *Question replaced. Question now tests at the memory level with a LOD=3. SAT*
27	H	3	X											E *S*	026K2.02: Stem needs to state "Under the above conditions when the RWST LO-LO level annunciator is received which one of the following correctly describes the affect on valves MVG-3004?" *Question has been corrected. SAT*
28	F *H*	2 *2*										X		U *S*	026K3.02: Question does not match the K/A. Question asks about loss of the RWST suction source to the SI pumps. K/A requires testing for the loss of the Containment Spray System affect on the recirculation SPRAY system. *026K3.01: K/A was changed. Question was developed for this K/A. The Question is Satisfactory. The Question tests at the C/A level with a LOD=2.*
29	H	3	X											E *S*	027AK1.02: Add to the stem "associated with the above events?" *Question has been corrected. SAT*
30	H	3					X							E *S*	064K6.08: Distractor D can be considered partially correct. The EDG will run for an additional 30 at full load (per the reference material), however, 60 minutes of run time may be possible if the EDG is not fully loaded. A better distractor would be to have the crew immediately secure the EDG or perform actions to reduce the EDG load to increase the run time. *Question has been corrected. SAT*
31	F	3				X								E *S*	034A1.02: No reference provided for verification of correct answer or plausibility of distractors. T.S. basis has a different reason for minimum level in the refueling canal. *Question has been corrected. SAT*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
32	H *H*	3 *2*										X		U *S*	035K6.02: The question does not test the K/A. The K/A is the effect of a loss or malfunction OF A PORV on the Steam Generating System. This question has no malfunction of a PORV but rather an instrument that fails and has no effect on the PORV. NO correct answer is annotated. *Conditions in the stem have been changed to establish a K/A match. The LOD of the question has decreased to a LOD=2. Question is now SAT.*
33	H	2				X								E *S*	038EK3.08: Distractor A is not credible. RCPs are never secured due to subcooling decreasing below 50F. Subcooling has not even decreased below 50F, the lowest it will go is 52F even when the target temperature is reached. Suggest changing the reason for distractors A and B. *Question has been corrected. SAT*
34	H *H*	2 *2*	X				X						X	U *S*	039A1.10: Procedure transition knowledge may be argued as SRO only. I think the crew will enter AOP-112.2 first without going to AOP-101.1. However, this transition aspect of the question is not needed to match the K/A. There are some partially correct answers depending on the time frame. Eventually the plant will be shut down per the AOP and activity level will decrease. With continued operation eventually activity equilibrium will be reached and activity level will stabilize. These assumptions that need to be made, make other distractors partially correct. *Question has been replaced. The new question is satisfactory. The question tests at the C/A level with a LOD=2.*
35	F *H*	1 *2*												U *S*	040AK2.02: Level of difficulty is too low to provide any discriminatory value. *Question replaced. The new question tests at the C/A level with a LOD=2. SAT*
36	H	3	X											E *S*	045K5.17: This is primarily GFE knowledge. Stem modification necessary to ensure that power change is significant enough to cause the desired effect. *Question has been corrected. SAT*
37	H	3					X							E *S*	051AA1.04: Reference material contradicts the answer. Rewording of the distractors may be helpful. *Question has been corrected. SAT*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
38	H	2				X								E *S*	054AK3.01: Suggest rewording one of the distractor to have the trip breakers open so that the answer is not the only one that has this. *Question has been corrected. SAT*
39	H *F*	2 *2*	X											U *S*	055EA2.05: Stem is not credible. The facility would not take a battery OOS for maintenance at 100% power, this is a 2 hour T.S. Material reference is a total loss of all AC power, however the B EDG is not addressed therefore, you have to assume it started. Are the DC trains cross connectable? I do not think that the loss of one of the batteries makes the other battery discharge twice as fast. *Question has been replaced. New question is satisfactory. The new question tests at the memory level with a LOD=2. SAT*
40	H	3					X							E *S*	056G2.1.28: Wording of distractor C should be changed to state "starts only A." Currently it is a subset of distractor D. This is not a memory level question as stated, since it requires multiple pieces of information to answer. *Question has been corrected. SAT*
41	H	3					X							E *S*	057AG2.4.4: Currently this question provides information that aids in the answering of Question #39, K/A 055EA2.05. Suggest removing the voltage values from the distractors B and C. *Question has been corrected. SAT*
42	H	3 *2*					X							U *S*	058AA2.01: There are two correct answers. Both A and B are correct for the conditions in the stem. *Question has been corrected. Question now test at a LOD=2. SAT*
43	F	2												S	059G2.1.23: Question is marked as C/A but question test at the memory level.
44	H	3				X								E *S*	061K5.03: Suggest changing distractors C and D to add more credibility. Mark this question as C/A, currently it is not marked. *Question has been corrected. SAT*
45	H	3												S	062A2.06: Misspelling in distractor B.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
46	F	3				X								E S*	062A3.04: Distractor A does not seem plausible, change distractor A the read "It should light immediately and indicates charged capacitors." Could not definitively identify from the reference material provided that C is the correct answer. Need the facility to determine. *Question has been corrected. Still need the facility to verify answer.*
47	F	2												S	062AA1.07: If need this question can be modified by changing the answer to be a low CST level within 60 second of an ESFAS actuation.
48	F	2	X			X								E S	063K4.01: Distractor A is not credible since the physical connection does not exist. Suggest changing "1DA2X" to "1DB2Y." Add to the stem assume no operator action. *Question has been corrected. SAT*
49	H *H*	1 *2*												U S	064K6.07: The LOD of this question is too low and therefore, provides no discriminating value. This is due mostly to the wording of the correct answer. The answer needs to be reworded to be not so obvious. It would also help to change at least one of the distractors to include another air related choice. *Question has been corrected. LOD=2. SAT*
50	H *F*	2 *2*										X		U S	065AK3.04: The question does not match the K/A. The K/A tests the reason the question only tests what happens. *Question has been corrected. The question stem was changed to include the reason. Question now tests at the memory level with a LOD= 2. SAT*
51	F	2												S	071K3.05: Distractors should be reworded to be more consistent with each other.
52	H	3				X								E S	072K4.03: Some work needed to increase plausibility of the distractors and to make the distractors more uniform and balanced. *Question has been corrected. SAT*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
53	F	3	X			X								E S	073K5.03: Need correct annunciator nomenclature in the stem. Change to the stem to read "primary reason." Distractor C is not credible. Change distractor C to read: "Surveys are used to determine the extent of the failed fuel." This is actually done through RCS sampling. The question is currently marked as C/A but tests at the memory level. This question can be considered modified vs bank. *Question has been corrected. SAT*
54	H *F*	3 *3*										X		U S	075K2.03: Question does not match the K/A. The question test Component Cooling Water power supplies, the K/A requires testing Circ Water System Service Water Pump power supplies. *Question has been replaced with a satisfactory question that meets the K/A. This question now test at the memory level with a LOD=3. SAT.*
55	H	3	X											U S	076A1.02: Question stem does not follow the procedures and plant functions. There is no procedure guidance that directs having to establish flow through the idle RBCU in the A train only training guidance. At step 4 of EOP-17.0, as long as there is flow in at least one train, which the stem states there is, no additional action is needed by the crew in this area. *Question has been corrected. SAT*
56	H	3	X									X		U S	076A3.02: Question does not really meet the K/A in that the K/A requires testing the ability to monitor automatic actions and there are no automatic actions that occur. Currently the stem provides too definate of a cue to the correct answer in stating that A train SW is inoperable. This information is not pertinent therefore, remove it and state that the train has been returned to service following maintenance. *Question has been corrected. SAT*
57	H	2	X									X		E S	078K4.01: The question does not test the K/A in that the questions tests the automatic function but not the interlock that which provides for the manual/automatic transfer of control. This question can be easily corrected by modifying the stem to state that the operator has taken the 'A' IA Comp switch to NORMAL-AFTER-STOP when the breaker trips. This will defeat the auto start function and the compressors must be manually started. The stem should have the switch positions in all caps. *Question has been corrected. SAT*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
58	F	2				X								E S	103K3.02: The answer is not credible in that with the plant in Mode 4 the facility would not allow removing the equipment hatch to inspect the O-ring. Removing the equipment hatch alone is a loss of containment integrity. *Question has been corrected. SAT*
59	F	3	X											E S	G2.1.1: The stem should state that the plant has stabilized at 200F. The question is marked as a C? But tests at the Memory level. *Question has been corrected. SAT*
60	F *F*	1 *2*	X			X								U S	G2.1.17: The question difficulty level is too low. Stem focus is needed to ensure that the communications required are IAW facility procedures. The distractors are not credible, A is the only distractor that lists the S/G pressures and trends. *G2.1.3: K/A was changed. New question was developed for this K/A. The new question is Satisfactory. The question tests at the memory level with a LOD=2.*
61	F *H*	2 *2*	X				X							U S	G2.1.29: The stem should state that this is being performed as part of a "Routine system lineup verification." Currently there are two correct answers, distractor B is correct in that this is an acceptable way per SAP-153. *Question has been corrected. The question now tests at the C/A level with a LOD=2. SAT*
62	F	3	X				X							E S	G2.2.11: Stem should be modified to state IAW SAP-139. Distractor B is partially correct since the 30 day approval is within 90 days. Add "to occur anytime" to each of the distractors. This question can be easily modified to create better distractors. *Question has been corrected. SAT*
63	H	3					X							E S	G2.2.25: Distractors need to be changed to be more consistent with the wording in the TS bases and avoid being partially correct. Question is currently marked as a Memory level question but tests at the C/A level. *Question has been corrected. SAT*
64	F	2												S	G2.2.28
65	H	3	X											E S	G2.3.1: Add to the stem "approval/notification" vice "approval." *Question has been corrected. SAT*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
66	H	4												S	G2.3.10
67	H	2					X							E S	G2.4.15: Distractor C is partially correct in that the reference material does not state to not to cool down at the max rate if communications are not available. The reference material states that a slower rate is acceptable based on available communications therefore, since the stem does not provide amplifying information, C can be considered as correct. *Question has been corrected. SAT*
68	F *H*	2 *2*											X	U S	G2.4.32: This question requires a knowledge level beyond that of the RO with the determination that EAL thresholds have been exceeded. *G2.4.2: K/A was changed. The new question is Satisfactory. The question tests at the C/A level with a LOD=2.*
69	H *H*	2 *2*	X				X							U S	W/E04EA2.1: The stem does not represent a logical sequence of the progression through EOP-1.0. Why would the crew be positioning valves in Attachment 3 when the transition is made to EOP-15. EOP-15 can not be entered until EOP-1.0 is completed. If this is a LOCA outside containment the crew would most likely have transitioned to EOP-2.5 at step 23 of EOP-1.0 (I would think the crew would have transitioned to EOP-2.5 at this step answer D). Why are only one Charging pump and one RHR pump running? Was there a problem with the SI actuation? K/A statement wording is incorrect. *Question replaced. The new question is satisfactory. The question test at the C/A level with a LOD=2.*
70	F	3	X											E S	W/E07EK3.2: Redundant information in the stem, remove "assuming the crew made the correct decision" from the stem. In answer B, change "verifying" to "verifying/establishing." K/A statement wording is incorrect. *Question has been corrected. SAT*
71	F	2				X								U S	W/E09EG2.4.49: Distractors C and D are not plausible. Distractor C is not a reference page action for EOP-1.3 or any other EOP, therefore it is not plausible. The is no information in the stem that would indicate distractor D as a reasonable choice, therefore distractor D is not plausible. *Question has been corrected. SAT*
72	H	2												S	W/E10EK2.2: K/A statement wording is incorrect.

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
73	H	3				X								E S	W/E12EK2.1: Distractors A, B and C lack some credibility in verifying adequate core flow and wide range S/G level. Modify these distractors to include SI termination criteria from EOP-1. *Question has been corrected. SAT*
74	H	4												S	W/E13EK2.2
75	H	3	X											E S	W/E15EK3.3: Not enough information in the stem to definitively state that there is a leak vs a pump trip. Need to provide a time line for increase sump level rise or provide RBCU flow readings. *Corrections have been made to the stem. The information added to the stem allows the applicant to figure out that the RB sump should not be increasing. Question is SAT.*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
1	H	2	X				X							E	002A2.04: Change the stem to state that RWST level has decreased below 18% to ensure the transition is required. Currently with the RCS @ 18%, at this moment in time, a procedure transition is not required so distractor A could be argued as correct.
														S	*Question has been corrected. SAT*
2	H	2	X									X		E	003A2.03: In the stem add IAW AOP-117.1. Stronger tie to the K/A (use procedures to correct/control/mitigate) if add "Initiate a reactor plant shut down per GOP-4."
	H	*3*												*S*	*Question replaced. New question is Satisfactory. The question tests at the C/A level with a LOD=3.*
3	H	3	X				X							U	005G2.1.27: Distractor B is correct, per reference material page 22. In order for C to be the correct answer the time needs to be changed to 0400 hrs the next day (RHRS designed to cool the RCS to less than 140F 24hrs after the RCS is at 350F, not from post trip). In the stem the crew would not perform a controlled S/D with a LOCA, should also state that the RHRS is in service.
	F	*2*												*S*	*Question replaced. New question is Satisfactory. The question tests at the memory level with a LOD=2.*
4	H	2												S	007A2.03: Minor wording changes to the distractors to include procedure and titles.
5	H	2	X			X								E	007EA2.01: Currently question marks B as correct, I believe that D is correct. The stem needs to provide information as to which procedure is in effect in order to make distractors A and C credible. Re-word distractor C to be consistent with distractor A.
														S	*Question has been corrected. SAT.*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6. U/E/S	7. Explanation
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only		
6	H	2				X							X	U	008A2.04: Currently not SRO in that only system knowledge is required to answer the question. Need to add some procedures to go to so the question has some SRO value. Distractors C and D are not plausible in that excessive RCP seal leakoff would be the cause of the CCW radiation problems.
	H	*2*												*S*	*Question replaced. New question is Satisfactory. The question tests at the C/A level with a LOD=2.*
7	F	3	X											E	009EG2.4.30: Stem need to be changed in order to have a correct answer. Currently there is no correct answer. Distractor A is a 1 hour notification per 10CFR50.72(a)(3) not 10CFR50.72(b)(1). None of the events listed require a 1 hour notification per 10CFR50.72(b)(1). Suggest the stem be changed to state per EPP-002 vice per 10CFR50.72(b)(1).
		2												*S*	*Question has been corrected LOD=2. SAT*
8	H	3	X				X					X		U	022AG2.4.49: Stem needs to be consistent with procedures. With an ATWT in progress the crew would be driving rods in therefore, power would not maintain at pre-event values. An RCS leak in excess charging is a SBLOCA. The answer B is not IAW AOP-106, per AOP 106 the crew would borate through the bender unless they can not get the BA XFER PP running due to not resetting the lock outs. The question can better address the K/A if actions are listed in the distractors.
	H	*2*												*S*	*Question replaced. New question is Satisfactory. The question tests at the C/A level with a LOD=2.*
9	F	2												S	032AA2.08
10	H	2												S	035G2.4.31: Could not write a question at the SRO level for this K/A. K/A randomly reselected.
11	H	2												S	054AA2.03
12	H	2											X	U	068G2.1.30: Question does not test at the SRO level. This K/A is not conducive to testing the SRO knowledge level.
	H	*2*												*S*	*New K/A was randomly selected 068G2.1.20. New question was generated and is Satisfactory. The new question tests at the C/A level with a LOD=2.*

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
13	F	3												S	103G2.1.30
14	F	2												S	G2.1.13
15	H *H*	1 *3*											X	U *S*	G2.1.34: Question does not test at the SRO level. LOD is too low. *Question has been corrected. The question noe tests at the C/A level with a LOD=3. SAT*
16	F	3												S	G2.2.20: Question taken from Licensee exam bank. Insufficient references provided by the Licensee for question verification. Licensee will verify answer and distractors.
17	F	2												S	G2.2.7
18	F	3												S	G2.3.2
19	F	2												S	G2.4.33: Question taken from Licensee exam bank. Insufficient references provided by the Licensee for question verification. Licensee will verify answer and distractors.
20	F	2				X								E *S*	G2.4.38: Distractors A and C are not plausible. Procedures do not reference the Fairfield Pump Facility as an evacuation assembly area. *Question has been corrected. SAT*
21	H	2												S	W/E02EG2.4.6
22	H	3				X								E	W/E05EA2.1: Distractor D is not plausible. EOP-16 does not direct transitions and EOP-15 is only entered from the Safety Function Status tree. *Question has been correct. SAT*
23	H	3												S	W/E09EA2.2: Minor wording changes to make distractors similar in appearance.
24	H	3												S	W/E12EG2.4.4: Minor wording changes to make distractors similar in appearance.
25	F	2												S	W/E13EG2.2.25

FACILITY COMMENTS

ES-401, Rev. 9 **Written Examination Review Worksheet** **Form ES-401-9**

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation

Instructions

[Refer to Section D of ES-401 and Appendix B for additional information regarding each of the following concepts.]

1. Enter the level of knowledge (LOK) of each question as either (F)undamental or (H)igher cognitive level.
2. 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).
3. Check the appropriate box if a psychometric flaw is identified:
   - The stem lacks sufficient focus to elicit the correct answer (e.g., unclear intent, more information is needed, or too much needless information).
   - The stem or distractors contain cues (i.e., clues, specific determiners, phrasing, length, etc).
   - The answer choices are a collection of unrelated true/false statements.
   - The distractors are not credible; single implausible distractors should be repaired, more than one is unacceptable.
   - One or more distractors is (are) partially correct (e.g., if the applicant can make unstated assumptions that are not contradicted by stem).
4. Check the appropriate box if a job content error is identified:
   - The question is not linked to the job requirements (i.e., the question has a valid K/A but, as written, is not operational in content).
   - The question requires the recall of knowledge that is too specific for the closed reference test mode (i.e., it is not required to be known from memory).
   - The question contains data with an unrealistic level of accuracy or inconsistent units (e.g., panel meter in percent with question in gallons).
   - The question requires reverse logic or application compared to the job requirements.
5. Check questions that are sampled for conformance with the approved K/A and those that are *designated SRO-only* (K/A and license level mismatches are unacceptable).
6. Based on the reviewer's judgment, is the question as written (U)nsatisfactory (requiring repair or replacement), in need of (E)ditorial enhancement, or (S)atisfactory?
7. At a minimum, explain any "U" ratings (e.g., how the Appendix B psychometric attributes are not being met).

1	*H*	*2*													001A2.03:
2	*H*	*3*													002A4.08: Need to add additional annunciator (XCP-621 Point 1-5) to the stem. Need to add that generator MW are not changing to the stem. This is required to ensure only one correct answer. *Comment Incorporated.* Need to add that one bistable light is lit and that no other bistable lights are illuminated. This is required to ensure only one correct answer. *Comment Incorporated.*
3	H	3													003A4.01:

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
4	F	4													003AK1.17: Need to indicate in the stem that the effect required to be evaluated is in the area of the dropped rod. Too difficult to determine the effect on the entire core. *Comment Incorporated.*
5	F	2													004G2.4.49: Need to add wording to the stem that the TCV-144 valve is in its normal 100% power position to ensure the applicants know that the conditions in the stem are not due to this valve being mispositioned. Also need to add to distractors C and D that TCV-144 needs to be manually open to provide more cooling. *Comments Incorporated.*
6	H	3													005AA2.03: Requested changing Answer D to the action that is taken to ensure that the shutdown margin is maintained. *Comment Incorporated. Changed answer D to state that a 30 gpm boration is initiated until the plant is in MODE 3.* Requested that the stem annotate that Rods B8 and K6 are in Control Bank D. *Comment Incorporated.*
7	F	2													005K6.03: Incorrect nomenclature for valve in distractor B. *Corrected the valve nomenclature.*
8	H	3													006K4.11:
9	H	3													007A2.05: Corrections needed to the stem to ensure that the conditions present would unmistakenly cause water to go to the PRT. Crew should be in GOP-6 instead of SOP-115. Requested RCS temperature in the stem to be increased to 305. *Comment Incorporated. Stem was modified to state that the GOP-6 was in progress .vs. SOP-115 to swap to the protected train. Removed unneeded information from the stem that supported sop-115. Changed RCS temperature to 305 .vs. 300.*
10	F	2													007EK1.05: Requested distractor time frames be changed to better reflect when SR comes on scale, since Sr may come on scale earlier that 15 minutes. *Comment Incorporated. Distractor time frames changed.*
11	H	2													007K1.01:

FACILITY COMMENTS

12	H	3													008A3.06: Requested changing the CCW pump discharge pressure from 40 psig to 45 psig to show that the auto start of the standby pump has yet to occur .vs. has failed to occur. Requested adding "subsequent and/or current status" to the stem. *Comment Incorporated. Changed the stem to reflect that CCW pump discharge pressure is 45 psig and decreasing added "subsequent and/or current status" to the stem.* Requested removing bulleted statement from the stem about CCW low flow on the essential load. This is not a pertinant condition needed in the stem and indicates that the essential and non-essential CCW headers are/were cross-connected. *Comment Incorporated.*
13	H	2													008AG2.4.49:
14	H	2													010G2.4.4: Requested rearranging the bulleted information to show more of a time line of the events other than just the status. *Comment Incorporated.*
15	F	2													011EK2.02:
16	*F*	2													012A4.03: Nomenclature in the answer needs to be corrected. *Comment Incorporated. Changed "MSIV isolation signal"* to *"Main Steam Isolation signal."*
17	F	2													012K2.01:
18	F	*2*													013K1.06:
19	H	2													015AK1.02: Nomenclature for P-8 is not correct. Suggested changing the wording of distractor C to be consistent with answer A. *Comment Incorporated.*
20	F	2													017K1.01:
21	F	2													022A1.04: Need to change that sump was pumped to the "waste holup tank" .vs. "floor drain tank in the stem. *Comment Incorporated*
22	H	3													022AA1.08: Requested changing VCT level in the stem from 50% to 38% to be consistent with normal makeup levels. *Comment Incorporated.*
23	F	2													022K3.02: Nomenclature change required in the stem. *Comment Incorporated. Changed "Containment Fan Cooler Unit" to "Reactor Building Cooling Unit"*

FACILITY COMMENTS

24	H	2													024AG2.4.6: Stated that the stem is hard to read. *Comment Incorporated. The stem was split into sections for easier reading.* Under the current conditions, the breaker for the PORV would not need to be opened to satisfy TS. Requested removing the reference to the PORV beaker in the stem. *Comment Incorporated.*
25	F	2													025AG2.1.32:
26	*F*	*3*													026AA1.01: LOD too high for knowing the temperature for the charging pump oil cooler is above the limit, this value is usually checked in the field. Suggest changing to the Spent Fuel Pool limit has been exceeded. *Comment incorporated. Stem was changed to have the SFP limit being exceeded.*
27	H	3													026K2.02: Answer A is correct answer for power loss on A train .vs. D as annotated. *Comment Incorporated. Question corrected to annotate A as the correct answer.*
28	*H*	2													026K3.02: Events in the stem should be sequenced to show a time line. Requested that "actually providing cooling" be stressed in the stem *Comment Incorporated.*
29	H	3	X												027AK1.02: Requested that distractors indicate that the parameter change is from its initial steady sate value. *Comment Incorporated. Added "from its steady state value" to each distractor.*
30	H	3													064K6.08: There are two possible answers to this question. Distractors need to be modified in order for there to be only one correct answer. *Comment Incorporated. Added time estimates to distractors C and D for credibility and ensuring only one correct answer.*
31	F	3													034A1.02: Distractor A could also be considered correct due to procedure specification of limit of 461' 6" and trying not to exceed this value. *Comment Incorporated. Changed limit in distractor A to 461' 3.5", which is the low level alarm setpoint.*
32	H	2													035K6.02: Distractor A is the correct answer. Distractor B is not correct since the reactor trip will not cause the B/S to reset to allow shutting the PORV. The reactor trips and P-12 is received in conjunction to causing to PORV closing. *Comment Incorporated. Distractor A has been annotated as the correct answer.*

FACILITY COMMENTS

33	H	2													038EK3.08: VC Summer station does not perform depressurization of RCS at the same time as performing the cooldown associated with the mitigation of a SGTR. *Comment Incorporated. Removed the information in the stem and distractors that stated that an RCS depressurization was also in progress.*
34	H	2													039A1.10: Requested format change to a fill in the blank type question due amount of repeat material in each distractor. *Comment Incorporated.*
35	*H*	*2*													040AK2.02:
36	H	3													045K5.17:
37	H	3													051AA1.04: Requested information be added in the stem to eliminated the complication due to feedwater preheating affects. *Comment Incorporated. Added in the stem that feedwater temperature is unaffected.*
38	H	2													054AK3.01:
39	H	2													055EA2.05: Typo in the answer. *Comment Incorporated. Changed "VCD" to "VDC".*
40	H	3													056G2.1.28: Nomenclature change needed, "DST" should be "DAST". Remove 11' 0" level to sate "HI-HI" level alarm. This is more recognizable to the Control Room then actual level. *Comment Incorporated.*
41	H	3													057AG2.4.4: Needs Minor word changes. *Minor word changes made to the stem. Changed "are" to "is"; and "meet" to "mitigate"*
42	H	2													058AA2.01: Need to add additional annunciator that is received under the conditions specified in the stem due to where voltage is sensed. *Comment Incorporated. Added "INV 1/2 AC INPUT LOSS" to the stem.*
43	F	2													059G2.1.23: Need to add wording to the stem to specify the question is soliciting the MINIMUM actions required. *Comment Incorporated.*
44	H	3													061K5.03: Requested adding the noun name for IFV-3536 to the stem. *Comment Incorporated.*

FACILITY COMMENTS

45	H	3													062A2.06: Stem is too wordy. Requested splitting the stem in to sections for easier reading. *Comment Incorporated. Stem wording rearranged for easier reading, adding clarity to the stem.*
46	F	3													062A3.04: Requested that "Step 2.1" be changed to "Step III.N.2.1" in stem. Distractors should state "within 10 seconds" .vs. "within 5 to 10 seconds" since light will light within 10 seconds, but not immediately. *Comment Incorporated.*
47	F	2													062AA1.07: Requested wording change to the stem to be consistent with the wording that the applicants are use to seeing for this type of question. *Comment Incorporated.*
48	F	2													063K4.01:
49	H	2													064K6.07:
50	F	2													065AK3.04:
51	F	2													071K3.05: Requested format change to fill in the blank since many of the same words were in each distractor. *Comment incorporated. Changed the stem to reflect fill in the blank format. Moved distractor wording into the stem and shorted the distractors appropriately.*
52	H	3													072K4.03: Request adding the nomenclature for RM-G17A annunciator to the stem. *Comment Incorporated.*
53	F	3													073K5.03: Requested changing "Radiation Protection" to "Health Physics" in the stem. *Comment Incorporated.*
54	F	3													075K2.03:
55	H	3													076A1.02: This question addresses a situation in the plant that is not in plant procedures to mitigate. Request the question be re-written. *Question was replaced. The facility lesson plans addressed this as a possibility with the suggested mitigation strategy. The facility was unclear as to why this was addressed in the lesson plans.*
56	H	3													076A3.02: Need to state in the stem that a procedure violation has occurred to support the initial conditions of having both A and C SW pumps racked up at the same time on the same train. *Comment Incorporated.*

FACILITY COMMENTS

57	H	2													078K4.01:
58	F	2													103K3.02:
59	F	3													G2.1.1: Remove "ACA" from the stem since this is not normally used as a designation for "Area of Continuous Attention." *Comment Incoporated.*
60	F	2													G2.1.3: Requested change 30 minutes to 15 minutes in the stem. *Comment Incorporated.*
61	*H*	2													G2.1.29: Requested that "Routine System Lineup Verification" not be capitalized. *Comment Incorporated.*
62	F	3													G2.2.11: Need to annotate in distractor B and D the qualified reviewer is a member of the plant management staff. *Comment Incorporated.*
63	H	3													G2.2.25:
64	F	2													G2.2.28
65	H	3													G2.3.1:
66	H	4													G2.3.10: The applicants are not required to know the DAC-hour airborn exposure equvalents. *Agreed to provide the applicants with a conversion on the formula sheet reference.* Need to state in the stem that the shielding will remain installed. *Comment Incorporated.*
67	H	2													G2.4.15: Requested distractor A be changed to state that max ccoldown has to be stopped if head voiding occurs. Requested stopping criteria be added to Answer B. Requested that distractor D be changed since it is not credible. *Comment Incorporated. Stopping criteria added to answer B. Distractor A reworded to state that cooldown must be stopped if head voiding occurs. Distractor D changed to state the TS limit of 100 F/hr cooldown limit must not be exceeded until local communications are established.*
68	*H*	*2*													G2.4.32:
69	H	2													W/E04EA2.1: Need to annotate that Pressurizer pressure is decreasing .vs. stable to ensure proper procedural path through EOP-1.0. *Comment Incorporated.*
70	F	3													W/E07EK3.2:

FACILITY COMMENTS

71	F	2												S	W/E09EG2.4.49: LOD too high. Applicants are not required to know the procedure reference pages from memory. The applicants are unlikely to know that the loss of RCS subcooling in EOP-1.3 is SI initiation criteria. *Compromised with the facility to change the SI initiating parameter of Pressurizer level being below the limit also be added to the stem. Facility agreed to this change since the PZR level is a parameter that is more recognizable for SI initiation.*
72	H	2												S	W/E10EK2.2:
73	H	3													W/E12EK2.1: Facility comment that the applicant will not distinguish between SI termination criteria under normal LOCA conditions and that of an Uncontrolled Depressurization of ALL Steam Generators. Facility requested that the question be changed. *Comment NOT Incorporated. The NRC believes that the applicants should know that with an uncontrolled depressurization of ALL Steam Generators that the existence of a "secondary heat sink" is NOT required for SI flow reduction. Facility stated that they will verify this with operations management. Facility had no further comments to dispute having this question on the test.*
74	H	4													W/E13EK2.2
75	H	3													W/E15EK3.3:

FACILITY COMMENTS

FACILITY COMMENTS SRO TEST

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
1	H	2													002A2.04:
2	H	3													003A2.03: Stem should solicit that the sequence of events is required. The distractors need to reflect more of the sequence of events needed from AOP-17.1. Currently distractor C can also be considered correct in that stopping 2 RCPs is not prohibited. *Comment Incorporated. The stem was reworded to solicit the sequence of events. The distractors were modified to contain more of the events from AOP-17.1.*
3	F	2													005G2.1.27:
4	H	2													007A2.03: In the stem, RCS temperature should be lower than 180F with a solid PZR, suggest 140F. Stem should state that ALL PORV's are in AUTO. Distractor A should state that the controlling channel has failed instead of just stating the B/S has failed. *Comments Incorporated.*
5	H	2													007EA2.01: Stem needs to be clarified to state that both MFWPs were running when they tripped. State in the stem that one of the trip breakers failed to open to add credibility to the power level still being above 5%. Distractors C and D should state that the transition is from EOP-1.0. Stem should also state that the crew is performing the immediate actions of EOP-1.0. *Comments Incorporated. Discussions with the facility resulted in also changed the stem to a higher power level to ensure a more warranted transition to EOP-13.0.*
6	H	2													008A2.04: The annunciator listed as bullet #1 would not be received under these conditions and annunciator LTDN/SL WTR HX FLO LO TEMP HI would. Stem should state that all associated automatic actions have occurred, this will ensure that distractor A is incorrect. Requested that the distractors be rearranged to be consistant with the sequence of events in the SOP. *Comments Incorporated.*
7	F	2													009EG2.4.30:

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
8	H	2													022AG2.4.49: Request words to be added to the stem to indicate that the problem is definitely with the CCP. *Comment Incorporated. Added to the stem that the CCP amps and flow are "fluctuating" and the pressure is "oscillating."*
9	F	2													032AA2.08: Distractors C and D should state "detector" .vs. "monitor." *Comment Incorporated.* Stem needs to state that SR monitor N33 is out-of-service, this ensures that action must be taken. *Comment Incorporated.*
10	H	2													035G2.4.20: In the stem " actions" should be changed to "sets of actions (not all inclusive)." *Comment Incorporated.*
11	H	2													054AA2.03: Stem should state that SG levels are decreasing. The stem does not need to designate the ARP, this adds confusion. Request that distractor be worded to indicate that the pumps should have a start signal .vs. should have started. This will prevent confusion in thinking that there may be a problem with the pumps. *Comments Incorporated.*
12	H	2													068G2.1.30: Distractors B and C should reference RM-L5 .vs. RM-L9. Request that the word "second" be emphasized in the stem. *Comments Incorporated. The word "second" in the stem was underlined.*
13	F	3													103G2.1.30: Corrections needed to the air lock door nomenclature. *Comment Incorporated. Nomenclature for the doors corrected.*
14	F	2													G2.1.13:
15	*H*	*3*													G2.1.34: LOD is too high. *Stem and distractors were reworded to decrease the level of difficulty to a level that was acceptable to the facility. RCS temperature decreased to 200F in the stem so a mode change has not occurred. Distractor worded to stop the heatup to prevent non-compliance.*
16	F	3													G2.2.20: LOD is too high. *Discussions with the facility on the LOD resulted in changing distractor C to make it less attractive. This resulted in an acceptable LOD for the facility.*

FACILITY COMMENTS

Q#	1. LOK (F/H)	2. LOD (1-5)	3. Psychometric Flaws					4. Job Content Flaws				5. Other		6.	7.
			Stem Focus	Cues	T/F	Cred. Dist.	Partial	Job-Link	Minutia	#/ units	Back-ward	Q= K/A	SRO Only	U/E/S	Explanation
17	F	2													G2.2.7:
18	F	3													G2.3.2: The wind directions in distractors B and D are too close to the correct direction. Request that they be changed from "South-Southeast." *Comment Incorporated. The wind direction in distractors B and D changed to "West-Southwest."*
19	F	2													G2.4.33: Requested that 96 hours be added to the stem to place to correct frame of reference for the applicants. *Comment Incorporated.*
20	F	2													G2.4.38:
21	H	2													W/E02EG2.4.6: Facility not content with the wording of the distractors. *Discussions lead to rewording the distractors for clarification.*
22	H	3													W/E05EA2.1:
23	H	3													W/E09EA2.2:
24	H	3													W/E12EG2.4.4:
25	F	2													W/E13EG2.2.25:

FACILITY COMMENTS

Facility: VC Summer Date of Exam: 1/10/06 Exam Level (RO)/SRO

Item Description		Initials a	Initials b	Initials c
1.	Clean answer sheets copied before grading	(a)	N/A	[illegible]
2.	Answer key changes and question deletions justified and documented	(a)	N/A	[illegible]
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	(a)	N/A	[illegible]
4.	Grading for all borderline cases (80 +/- 2% overall and 70 or 80, as applicable, +/- 4% on the SRO-only) reviewed in detail	(a)	N/A	[illegible]
5.	All other failing examinations checked to ensure that grades are justified	(a)	N/A	[illegible]
6.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	(a)	N/A	[illegible]

	Printed Name / Signature	Date
a. Grader	Steven D. Rose / [signature]	5/8/06
b. Facility Reviewer(*)	N/A	
c. NRC Chief Examiner (*)	Richard S. Brown / [signature]	5/8/06
d. NRC Supervisor (*)	James H. Moorman III / [signature]	5/8/06

(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.

Post-Examination Check Sheet	
Facility: V.C. Summer **Date of Examination: 12/12-12/16/05 & 1/10/06**	
Task Description	**Date Complete**
1. Facility written exam comments or graded exams received and verified complete	1/26/06
2. Facility written exam comments reviewed and incorporated and NRC grading completed, if necessary	5/08/06
3. Operating tests graded by NRC examiners	5/11/06
4. NRC chief examiner review of operating test and written exam grading completed	5/11/06
5. Responsible supervisor review completed	5/12/06
6. Management (licensing official) review completed	5/12/06
7. License and denial letters mailed	5/12/06
8. Facility notified of results	5/12/06
9. Examination report issued (refer to NRC MC 0612)	6/19/06
10. Reference material returned after final resolution of any appeals	N/A