

Ops Branch Assignment Check Sheet:
(Includes ES-201-1 & ES-501-1 Rev. 8 information)

as of: 12/03/99

Chief: T MCKERNON

Facility/Task: DC IN

Task Start Date: 04/10/00

ITEM DESCRIPTION	DUE DATE	INIT	DATE
0 Exam Schedule Agreement (C.1.a;C.2.a&b)	10/13/99	JLP	12/03/99
1 NRC Staff & Fac. Contact Assigned (C.1.c;C.2.e)	10/13/99	JLP	12/03/99
2 Fac. contact briefed on security & other issues (C.2.c)	10/13/99	JLP	12/03/99
3 Corp. Notification Ltr Sent (C.2.d) (Also for PIR/CAP)	10/13/99	JLP	10/15/99
4 Task Expectations, Issues, & Standards Discussed w/ BC	01/11/00	JLP	11/18/99
5 [Reference Material Due (C.1.d;C.3.c)]	01/15/00	JLP	1/13/00
6 Integrated Exam Outlines Due (C.1.d&e;C.3.d)	12/12/99	JLP	12/16/99
7 Outlines reviewed by NRC & Feedback Sent (c.2.h;C.3.e)	12/26/99	JLP	12/22/99
8 Preliminary Appl. Due (C.1.j;C.2.g;ES202)	03/11/00	JLP	3/15/00
9 Draft Exams w/ Doc./Ref. Due (C.1.d/e/f;C.3.d)	02/10/00	JLP	2/24/00
10 Peer Reviewer Initials As Reviewed All Parts	02/20/00	JLP	3/15/00
11 NRC Suprv. Initials Approving for Fac. Rev. (C.2.h;C.3.f)	02/20/00	JLP	3/16/00
12 Exams Reviewed w/ Fac. (C.1.h;C.2.f&h;C.3.g)	02/20/00	JLP	3/23/00
13 Final Appl. Due & Assign. Sheet Prep'd (C.1.j;C.2.h;ES202)	03/27/00	JLP	3/26/00
14 NRC Suprv. Initials For Final Exams Approved (C.2.i;C.3.h)	04/03/00	JLP	4/5/00
15 Final Appl. Rec'd & Waivers Sent (C.2.g)	04/03/00	JLP	4/3/00
16 Proctor Rules Rev'd w/ Fac. & Written Authorized (C.3.k)	04/03/00	JLP	4/3/00
17 Exam/Insp Mat'l to Team (C.3.i)	04/03/00	JLP	4/2/00
18 Fac. graded exam & Comments Rec'd	04/22/00	JLP	4/19/00
19 NRC Written Grading Completed	04/25/00	JLP	5/6/00
20 Examiners Finished Grading Op. Tests	04/25/00	JLP	5/2/00
21 NRC Ch. Ex. Review Completed	05/05/00	JLP	5/2/00
22 NRC BC Review Completed	05/06/00	JLP	5/4/00
→ 23 RPS/IP # Examinees Updated Before Report Issued	05/11/00	JLP	5/4/00 *
24 Lic./Denials Signed & Report Issued	05/11/00	JLP	5/10/00
25 Package Closed Out - Lessons Learned Debriefed & Filed - Final Inspection Report Issued - Exam Package to OLA - Fac. Contact Notified of Results	06/01/00	JLP	5/22/00

- PG

- SP

SP

* Note Supv/Peer initials required.

New edition for PIR/CAP as of 9/28/99

[] Req'd NRC-auth. exams only.

When complete, for exams, add

to pkg & fwd copy to BC, for

insp, fwd orig'l to BC.

Facility: Diablo Canyon Power Plant		Date of Examination: 4/10/2000		
Item	Task Description	Initials		
		a	b*	c
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model per ES-401.	DB	NA	Tom
	b. Assess whether the outline was systematically prepared and whether all knowledge and ability categories are appropriately sampled.	DB	NA	Tom
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	DB	NA	Tom
	d. Assess whether the repetition from previous examination outlines is excessive.	DB	NA	Tom
2. S I M	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, and major transients.	DB	RJ	Tom
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity; ensure each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s)*, and scenarios will not be repeated over successive days.	DB	NY	Tom
	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.	DB	NY	Tom
3. W / T	a. Verify that: (1) the outline(s) contain(s) the required number of control room and in-plant tasks, (2) no more than 30% of the test material is repeated from the last NRC examination, (3)* no tasks are duplicated from the applicants' audit test(s), and (4) no more than 80% of any operating test is taken directly from the licensee's exam banks.	DB	NY	Tom
	b. Verify that: (1) the tasks are distributed among the safety function groupings as specified in ES-301, (2) one task is conducted in a low-power or shutdown condition, (3) 40% of the tasks require the applicant to implement an alternate path procedure, (4) one in-plant task tests the applicant's response to an emergency or abnormal condition, and (5) the in-plant walk-through requires the applicant to enter the RCA.	DB	NY	Tom
	c. Verify that the required administrative topics are covered, with emphasis on performance-based activities.	DB	NY	Tom
	d. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on successive days.	DB	NY	Tom
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam section.	DB	NA	Tom
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	DB	NA	Tom
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	DB	NA	Tom
	d. Check for duplication and overlap among exam sections.	DB	NA	Tom
	e. Check the entire exam for balance of coverage.	DB	NA	Tom
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	DB	NA	Tom
Printed Name / Signature		Date		
a. Author	DAVID BURNS / David Burns	2-23-2000		
b. Facility Reviewer(*)	ROGER JETT / Roger Jett	2/23/00		
c. Chief Examiner	T.O. McKERNON / T.O. McKernon	3/11/00		
d. NRC Supervisor	JL Pellet / John Pellet	3/17/00		

(*) Not applicable for NRC-developed examinations.

Comments on DC Exam Outlines

1. Scenarios; not all malfunctions applicable to DC. Licensee will revise and submit with proposed exam package.
2. Op test 1, Section A.1; there should be two JPMs which discriminate at the RO/SRO levels.
3. OP test 1, Section A.3, Need to have either 2 questions for the RO & SRO that discriminate between the two or a JPM both are required to perform in the RCA.
4. OP test 1, Section A.4: Should have the SRO perform a task in the JPM such as determine the EAL and fill out the notification form. (Distinction between a question and a task at the SRO level). Since, the RO applicants don't have much responsibility in the EP area; they should have 2 questions instead.

Facility: <u>DC</u>		Date of Exam: <u>4/00</u>		Exam Level: <u>RO/SRO</u>		
Item Description				Initial		
				a	b	c*
1. Questions and answers technically accurate and applicable to facility				<u>Tom</u>	<u>Y</u>	<u>mp</u>
2. a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available				<u>Tom</u>		<u>mp</u>
3. RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401				<u>Tom</u>		<u>mp</u>
4. No more than 25 questions are duplicated from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right				NRC	Other	N/A
4. [No (Less than 5 percent) Question duplication from the license screening/audit exam (if independently written)] 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 licensee certifies that there is no duplication; or ☒ the license exam was prepared by the NRC				<u>Tom</u>		<u>mp</u>
5. Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right				Bank <u>45</u>	Modified <u>0</u>	New <u>55</u>
6. Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right				Memory <u>47</u>	C/A <u>53</u>	<u>Tom</u>
7. References/handouts provided do not give away answers				<u>Tom</u>		<u>mp</u>
8. Question content conforms with specific K/A statements in the distribution meets previously approved examination outline; deviations are justified				<u>Tom</u>		<u>mp</u>
9. Question psychometric quality and format meet ES, Appendix B, guidelines				<u>Tom</u>		<u>mp</u>
10. The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet				<u>Tom</u>		<u>mp</u>
Printed Name / Signature				Date		
a. Author <u>T.O. McKERNON</u>				<u>3/9/00</u>		
b. Facility Reviewer(*) <u>N/A</u>						
c. NRC Chief Examiner(*) <u>J Pellet For</u>				<u>3/9/00</u>		
d. NRC Regional Supervisor(*) <u>J Pellet</u>				<u>3/9/00</u>		
Note: * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required. # See special instructions (Section E.2.c) for Items 1, 4, 5, and 68. [] The items in brackets do not apply to NRC-prepared examinations.						

Facility: DCRP		Date of Exam: 4/10/00		Exam Level: RO/SRO		
Item Description				Initial		
				a	b*	c#
1.	Questions and answers technically accurate and applicable to facility			<i>[Signature]</i>	<i>70m</i>	—
2.	a. NRC K/As referenced for all questions b. Facility learning objectives referenced as available			<i>[Signature]</i>	<i>70m</i>	—
3.	RO/SRO overlap is no more than 75 percent, and SRO questions are appropriate per Section D.2.d of ES-401			<i>[Signature]</i>	<i>70m</i>	—
4.	No more than 25 questions are duplicated from [practice exams, quizzes, and] the last two NRC licensing exams; enter the actual number of duplicated questions at right	NRC	Other	<i>[Signature]</i>	<i>70m</i>	—
		10				
5.	[No (Less than 5 percent) question duplication from the license screening/audit exam (if independently written)]			<i>[Signature]</i>	<i>70m</i>	—
6.	Bank use meets limits (no more than 50 percent from the bank, at least 10 percent new, and the rest modified); enter the actual question distribution at right	Bank	Modified	New	<i>[Signature]</i>	—
		49	16	35		
7.	Between 50 and 60 percent of the questions on the exam (including 10 new questions) are written at the comprehension/analysis level; enter the actual question distribution at right	Memory	C/A		<i>[Signature]</i>	—
		42	58			
8.	References/handouts provided do not give away answers			<i>[Signature]</i>	<i>70m</i>	—
9.	Question distribution meets previously approved examination outline; deviations are justified			<i>[Signature]</i>	<i>70m</i>	—
10.	Question psychometric quality and format meet ES, Appendix B, guidelines			<i>[Signature]</i>	<i>70m</i>	—
11.	The exam contains 100, one-point, multiple choice items; the total is correct and agrees with value on cover sheet			<i>[Signature]</i>	<i>70m</i>	—
Printed Name / Signature				Date		
a. Author	<i>Paul Gage / Paul Gage</i>			<i>3/16/00</i>		
b. Facility Reviewer(*)	<i>NA</i>					
c. NRC Chief Examiner(*)	<i>T.O. McKERNON / 70m</i>			<i>3/16/00</i>		
d. NRC Regional Supervisor(*)	<i>JL Pellet / 70m</i>			<i>3/16/00</i>		
Note: * The facility reviewer's signature is not applicable for NRC-developed examinations; two independent NRC reviews are required. # See special instructions (Section E.2.c) for Items 1, 4, 5, and 6. [] The items in brackets do not apply to NRC-prepared examinations.						

Facility: Diablo Canyon Power Plant		Date of Examination: 4/10/2000		Operating Test Number: 1	
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).	DB	M	JOM	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	DB	M	JOM	
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	DB	M	JOM	
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	-	-	JOM	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	DB	M	JOM	
2. WALK-THROUGH (CATEGORY A & B) CRITERIA			-	-	-
a.	Each JPM includes the following, as applicable: - initial conditions - initiating cues - references and tools, including associated procedures - validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee - specific performance criteria that include: - detailed expected actions with exact criteria and nomenclature - system response and other examiner cues - statements describing important observations to be made by the applicant - criteria for successful completion of the task - identification of critical steps and their associated performance standards - restrictions on the sequence of steps, if applicable	DB	M	JOM	
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	DB	M	JOM	
c.	Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.	DB	M	JOM	
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	DB	M	JOM	
3. SIMULATOR (CATEGORY C) CRITERIA			-	-	-
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.	DB	M	JOM	
Printed Name / Signature		Date			
a.	Author <u>DAVID BURNS / David Burns</u>	<u>2/23/2000</u>			
b.	Facility Reviewer(*) <u>ROGER JETT / Roger Jett</u>	<u>2/23/00</u>			
c.	NRC Chief Examiner (*) <u>T.O. McKernon / T.O. McKernon</u>	<u>3/11/00</u>			
d.	NRC Supervisor (*) <u>JL Pellet / John Pellet</u>	<u>3/17/00</u>			
(*) The facility signature is not applicable for NRC-developed tests; two independent NRC reviews are required.					

Facility: Diablo Canyon Power Plant Date of Exam: 4/1/2000 Scenario Numbers: 2 / 6 / 10 Operating Test No.: 1					
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.	DB	NY	Tom	
2.	The scenarios consist mostly of related events.	DB	NY	Tom	
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)	DB	NY	Tom	
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.	DB	NY	Tom	
5.	The events are valid with regard to physics and thermodynamics.	DB	NY	Tom	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	DB	NY	Tom	
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.	DB	NY	Tom	
8.	The simulator modeling is not altered.	DB	NY	Tom	
9.	The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	DB	NY	Tom	
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.4 of ES-301.	DB	NY	Tom	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	DB	NY	Tom	
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).	DB	NY	Tom	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	DB	NY	Tom	
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes	--	--	
1.	Total malfunctions (5-8)	7 / 7 / 6	DB	NY	Tom
2.	Malfunctions after EOP entry (1-2)	4 / 2 / 2	DB	NY	Tom
3.	Abnormal events (2-4)	2 / 4 / 4	DB	NY	Tom
4.	Major transients (1-2)	1 / 1 / 1	DB	NY	Tom
5.	EOPs entered/requiring substantive actions (1-2)	1 / 2 / 2	DB	NY	Tom
6.	EOP contingencies requiring substantive actions (0-2)	3 / 0 / 1	DB	NY	Tom
7.	Critical tasks (2-3)	3 / 1 / 4	DB	NY	Tom

OPERATING TEST NO.:1 Group 1

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			2 RO	6	10 BOP	
As RO	Reactivity	1	1		0	
	Normal	0	0		0	
	Instrument	1	1		0	
	Component	1	2		2	
	Major	1	1		1	
SRO-I ₁				SFM		
As SRO	Reactivity	0		1		
	Normal	1		1		
	Instrument	1		2		
	Component	1		3		
	Major	1		1		
As RO	Reactivity	1	0	1		
	Normal	0	1	0		
	Instrument	1	2	2		
	Component	1	2	1		
	Major	1	1	1		
SRO-I ₂					SFM	
As SRO	Reactivity	0			1	
	Normal	1			1	
	Instrument	1			1	
	Component	1			4	
	Major	1			1	
SRO-U ₁	Reactivity	0	1	1	1	
	Normal	1	1	0	0	
	Instrument	1	2	1	1	
	Component	1	4	2	3	
	Major	1	1	1	1	

- Instructions: (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
 (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.

Author:

David Burns

Chief Examiner:

Z. M. Khan

OPERATING TEST NO.:1 Group 2

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			2 BOP	6 RO		
RO ₁	Reactivity	1	0	1		
	Normal	1	1	0		
	Instrument	2	2	2		
	Component	2	2	1		
	Major	1	1	1		
As RO SRO-I ₃ As SRO			RO			
	Reactivity	1	1			
	Normal	0	0			
	Instrument	1	1			
	Component	1	2			
	Major	1	1			
				SFM		
	Reactivity	0		1		
	Normal	1		1		
	Instrument	1		2		
Component	1		3			
Major	1		1			
SRO-U ₂			SFM	BOP		
	Reactivity	0	1			
	Normal	1	1			
	Instrument	1	2			
	Component	1	4			
Major	1	1				

- Instructions: (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.

Author:

David Bunn

Chief Examiner:

JMK

Group 1

Competencies	Applicant #1 SRO-U ₁				Applicant #2 SRO-I ₁				Applicant #3 SRO-I ₂			
	SCENARIO				SCENARIO				SCENARIO			
	SFM 2	BOP 6	RO 10		RO 2	SFM 6	BOP 10		BOP 2	RO 6	SFM 10	
Understand and Interpret Annunciators and Alarms	3,5,6,7,8	1,3,4,5	3,4,5,7		3,5,6,7,8	1,3,4,5	3,4,5		3,5,6,7,8	3,4,5	3,4,5,7	
Diagnose Events and Conditions	3,4,5,6,7,8,9	3,4,5,6,7	2,3,4,5,6,7		3,4,5,6,7,8	3,4,5,6,7,8	3,4,5		3,4,5,6,7,8,9	3,4,5,6,8	2,3,4,5,6,7	
Understand Plant and System Response	3,4,5,6,7,8,9	1,2,3,4,5,6,7	1,2,3,4,5,6,7		1,2,3,4,5,6,7,8	1,2,3,4,5,6,7,8	3,4,5		3,4,5,6,7,8,9	2,3,4,5,6,8	1,2,3,4,5,6,7	
Comply With and Use Procedures (1)	1,2,3,5,6,7,8	1,2,3,4,5,6	1,2,4,5,6,7		1,2,3,5,6,7,8	1,2,3,4,5,6	4,5		1,3,5,6,7,8	2,3,4,5,6	1,2,3,4,5,6,7	
Operate Control Boards (2)		1,3,5,6,7	1,2,3,4,5,6,7		1,2,3,5,7,8		4,5		1,4,5,6,7,8	2,3,4,5,6,8		
Communicate and Interact With the Crew	1,2,3,4,5,6,7,8,9	1,2,3,4,5,6,7	1,2,3,4,5,6,7		1,2,3,4,5,6,7,8	1,2,3,4,5,6,7,8	3,4,5		1,2,3,4,5,6,7,8,9	2,3,4,5,6,8	1,2,3,4,5,6,7	
Demonstrate Supervisory Ability (3)	1,2,3,4,5,6,7,8					1,2,3,4,5,6,7,8					1,2,3,4,5,6,7	
Comply With and Use Tech. Specs. (3)	4					1,3,4,7					4	

Notes:

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

Instructions:

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

Author:

Chief Examiner:

David Bunn
J. DeMott

Group 2

Competencies	Applicant #1 SRO-U ₂				Applicant #2 SRO-I ₃				Applicant #3 RO ₁			
	SCENARIO				SCENARIO				SCENARIO			
	SFM 2	BOP 6			RO 2	SFM 6			BOP 2	RO 6		
Understand and Interpret Annunciators and Alarms	3,5, 6,7,8	1,3,4, 5			3,5,6, 7,8	1,3,4, 5			3,5, 6,7,8	3,4, 5		
Diagnose Events and Conditions	3,4,5, 6,7,8, 9	3,4,5, 6,7			3,4,5, 6,7,8	3,4,5, 6,7,8			3,4,5, 6,7,8, 9	3,4, 5,6, 8		
Understand Plant and System Response	3,4,5, 6,7,8, 9	1,2,3, 4,5,6, 7			1,2,3, 4,5,6, 7,8	1,2,3, 4,5,6, 7,8			3,4, 5,6, 7,8,9	2,3, 4,5, 6,8		
Comply With and Use Procedures (1)	1,2,3, 5,6,7, 8	1,2,3, 4,5,6			1,2,3, 5,6,7, 8	1,2,3, 4,5,6			1,3, 5,6, 7,8	2,3, 4,5, 6		
Operate Control Boards (2)		1,3,5, 6,7			1,2,3, 5,7,8				1,4, 5,6, 7,8	2,3, 4,5, 6,8		
Communicate and Interact With the Crew	1,2,3, 4,5,6, 7,8,9	1,2,3, 4,5,6, 7			1,2,3, 4,5,6, 7,8	1,2,3, 4,5,6, 7,8			1,2,3, 4,5,6, 7,8,9	2,3, 4,5, 6,8		
Demonstrate Supervisory Ability (3)	1,2,3, 4,5,6, 7,8					1,2,3, 4,5,6, 7,8						
Comply With and Use Tech. Specs. (3)	4					1,3, 4,7						

Notes:

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

Instructions:

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

Author:

Chief Examiner:

David Byn
70 m

Facility: Diablo Canyon Power Plant		Date of Examination: 4/10/2000		Operating Test Number: 2	
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).	DB	M	Q	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	DB	M	Q	
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).	DB	M	Q	
d.	Overlap with the written examination and between operating test categories is within acceptable limits.	-	-	-	2000
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	DB	M	Q	
2. WALK-THROUGH (CATEGORY A & B) CRITERIA			-	-	-
a.	Each JPM includes the following, as applicable: - initial conditions - initiating cues - references and tools, including associated procedures - validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee - specific performance criteria that include: - detailed expected actions with exact criteria and nomenclature - system response and other examiner cues - statements describing important observations to be made by the applicant - criteria for successful completion of the task - identification of critical steps and their associated performance standards - restrictions on the sequence of steps, if applicable	DB	M	Q	
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.	DB	M	Q	
c.	Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.	DB	M	Q	
d.	At least 20 percent of the JPMs on each test are new or significantly modified.	DB	M	Q	
3. SIMULATOR (CATEGORY C) CRITERIA			-	-	-
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.	DB	M	Q	
Printed Name / Signature		Date			
a.	Author	DAVID BURNS / David Burns			2/23/2000
b.	Facility Reviewer(*)	ROGER JETT / Roger Jett			2/23/00
c.	NRC Chief Examiner(*)	T.O. McKERNON / T.O. McKernon			3/17/00
d.	NRC Supervisor (*)	JL Pellet / John Pellet			3/17/00
(*) The facility signature is not applicable for NRC-developed tests; two independent NRC reviews are required.					

Facility: Diablo Canyon Power Plant		Date of Exam: 4/1/2000		Scenario Numbers: 5 / 8 / 9		Operating Test No.: 2	
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.	DB	N	Q			
2.	The scenarios consist mostly of related events.	DB	N	Q			
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)	DB	N	Q			
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.	DB	N	Q			
5.	The events are valid with regard to physics and thermodynamics.	DB	N	Q			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	DB	N	Q			
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.	DB	N	Q			
8.	The simulator modeling is not altered.	DB	N	Q			
9.	The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	DB	N	Q			
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.4 of ES-301.	DB	N	Q			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	DB	N	Q			
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).	DB	N	Q			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	DB	N	Q			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes		-	-	-	
1.	Total malfunctions (5-8)	6 / 7 / 7		DB	N	Q	
2.	Malfunctions after EOP entry (1-2)	3 / 4 / 2		DB	N	Q	
3.	Abnormal events (2-4)	3 / 3 / 4		DB	N	Q	
4.	Major transients (1-2)	2 / 2 / 2		DB	N	Q	
5.	EOPs entered/requiring substantive actions (1-2)	3 / 4 / 3		DB	N	Q	
6.	EOP contingencies requiring substantive actions (0-2)	0 / 1 / 0		DB	N	Q	
7.	Critical tasks (2-3)	2 / 4 / 4		DB	N	Q	

OPERATING TEST NO.:2 Group 3

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			5 BOP	8 BOP	9 RO	
RO ₂	Reactivity	1	0	0	1	
	Normal	1	1	0	0	
	Instrument	2	2	1	1	
	Component	2	2	2	2	
	Major	1	1	1	2	
As RO				RO		
	Reactivity	1		1		
	Normal	0		0		
	Instrument	1		1		
	Component	1		5		
	Major	1		1		
	SRO-I ₄					
			SFM		SFM	
	Reactivity	0	1		1	
	Normal	1	1		0	
As SRO	Instrument	1	2		2	
	Component	1	3		3	
	Major	1	1		2	
As RO			RO		BOP	
	Reactivity	1	1		0	
	Normal	0	0		0	
	Instrument	1	2		1	
	Component	1	3		1	
	Major	1	1		2	
	SRO-I ₅					
				SFM		
	Reactivity	0		0		
	Normal	1		1		
As SRO	Instrument	1		1		
	Component	1		5		
	Major	1		1		

- Instructions: (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.

Author:

Chief Examiner:

David B...

Tom K...

OPERATING TEST NO.:2 Group 6

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			5 BOP	8 RO		
RO ₃	Reactivity	1	0	1		
	Normal	1	1	0		
	Instrument	2	2	1		
	Component	2	2	5		
	Major	1	1	1		

As RO	Reactivity	1	1			
	Normal	0	0			
	Instrument	1	2			
	Component	1	3			
	Major	1	1			
SRO-I ₈						
				SPM		
	Reactivity	0		0		
	Normal	1		1		
	Instrument	1		1		
As SRO	Component	1		5		
	Major	1		1		

SRO-U ₄	Reactivity	0	1	0		
	Normal	1	1	0		
	Instrument	1	2	1		
	Component	1	3	2		
	Major	1	1	1		

- Instructions: (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.

Author:

David Bruner

Chief Examiner:

JOM/K

Group 3

Competencies	Applicant #1 SRO-I ₄				Applicant #2 SRO-I ₅				Applicant #3 RO ₂			
	SCENARIO				SCENARIO				SCENARIO			
	SFM 5	RO 8	SFM 9		RO 5	SFM 8	BOP 9		BOP 5	BOP 8	RO 9	
Understand and Interpret Annunciators and Alarms	3,4, +5,7	2,3,4, 5	1,4,5, 6,7,8		3,4,5, 7	2,3, 4,5	1,4, 5,6, 7,8		1,3, 4,5,7	2,3, 4,5	1,4,5, 6,7,8	
Diagnose Events and Conditions	3,4,5, 6,7,8	2,3,4, 5,6,7, 8	1,2,4, 5,6,7, 8		3,4,5, 6,7,8	2,3, 4,5, 6,7,8	1,4, 5,6, 7,8		3,4, 5,6,7	2,3, 4,5, 6,7	1,4,5, 6,7,8	
Understand Plant and System Response	2,3,4, 5,6,7, 8	1,2,3, 4,5,6, 7,8	1,2, 3,4,5, 6,7,8		2,3,4, 5,6,7, 8	1,2, 3,4, 5,6, 7,8	1,2, 3,4, 5,6, 7,8		2,3, 4,5, 6,7	2,3, 4,5, 6,7	1,2,3, 4,5,6, 7,8	
Comply With and Use Procedures (1)	1,2,3, 4,5,6, 7,8	1,2,3, 4,5,6, 7,8	1,2,4, 5,6,7, 8		2,3,4, 5,6,7	1,2, 3,4, 5,6, 7,8	1,2, 4,5, 6,7, 8		1,2, 4,5, 6,7,8	1,2, 3,4,6	1,2,3, 4,5,6, 7,8	
Operate Control Boards (2)		1,2,3, 4,5,6, 7,8			2,4,5, 6,7,8		1,2, 4,5, 6,7,8		1,3, 4,5,7	4,6	1,2,3, 4,5,6, 7,8	
Communicate and Interact With the Crew	1,2,3, 4,5,6, 7,8	1,2,3, 4,5,6, 7,8	1,2,3, 4,5,6, 7,8		2,3,4, 5,6,7, 8	1,2, 3,4, 5,6, 7,8	1,2, 3,4, 5,6, 7,8		1,2, 3,4, 5,6,7	1,2, 3,4, 5,6,7	1,2,3, 4,5,6, 7,8	
Demonstrate Supervisory Ability (3)	1,2,3, 4,5,6, 7,8		1,2,3, 4,5,6, 7,8			1,2, 3,4, 5,6, 7,8						
Comply With and Use Tech. Specs. (3)	3,4		2,4,5			2,3						

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

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

Author:

Chief Examiner:

David Bunn
Tommy

Group 6

Competencies	Applicant #1 SRO-U ₄				Applicant #2 SRO-I ₈				Applicant #3 RO ₃			
	SCENARIO				SCENARIO				SCENARIO			
	SFM 5	BOP 8			RO 5	SFM 8			BOP 5	RO 8		
Understand and Interpret Annunciators and Alarms	3,4, +5,7	2,3,4, 5			3,4,5, 7	2,3, 4,5			1,3, 4,5,7	2,3, 4,5		
Diagnose Events and Conditions	3,4,5, 6,7,8	2,3,4, 5,6,7, 8			3,4,5, 6,7,8	2,3, 4,5, 6,7,8			3,4, 5,6,7	2,3, 4,5, 6,7		
Understand Plant and System Response	2,3,4, 5,6,7, 8	1,2,3, 4,5,6, 7,8			2,3,4, 5,6,7, 8	1,2, 3,4, 5,6, 7,8			2,3, 4,5, 6,7	2,3, 4,5, 6,7		
Comply With and Use Procedures (1)	1,2,3, 4,5,6, 7,8	1,2,3, 4,5,6, 7,8			2,3,4, 5,6,7	1,2, 3,4, 5,6, 7,8			1,2, 4,5, 6,7,8	1,2, 3,4,6		
Operate Control Boards (2)		1,2,3, 4,5,6, 7,8			2,4,5, 6,7,8				1,3, 4,5,7	4,6		
Communicate and Interact With the Crew	1,2,3, 4,5,6, 7,8	1,2,3, 4,5,6, 7,8			2,3,4, 5,6,7, 8	1,2, 3,4, 5,6, 7,8			1,2, 3,4, 5,6,7	1,2, 3,4, 5,6,7		
Demonstrate Supervisory Ability (3)	1,2,3, 4,5,6, 7,8					1,2, 3,4, 5,6, 7,8						
Comply With and Use Tech. Specs. (3)	3,4					2,3						

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

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

Author:

Chief Examiner:

Facility: Diablo Canyon Power Plant		Date of Examination: 4/10/2000		Operating Test Number: 3		
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).			DB	M	Q
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.			DB	M	Q
c.	The operating test shall not duplicate items from the applicants' audit test(s) (see Section D.1.a).			DB	M	Q
d.	Overlap with the written examination and between operating test categories is within acceptable limits.			-	-	DOM
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.			DB	M	Q
2. WALK-THROUGH (CATEGORY A & B) CRITERIA				-	-	-
a.	Each JPM includes the following, as applicable: - initial conditions - initiating cues - references and tools, including associated procedures - validated time limits (average time allowed for completion) and specific designation if deemed to be time critical by the facility licensee - specific performance criteria that include: - detailed expected actions with exact criteria and nomenclature - system response and other examiner cues - statements describing important observations to be made by the applicant - criteria for successful completion of the task - identification of critical steps and their associated performance standards - restrictions on the sequence of steps, if applicable			DB	M	Q
b.	The prescribed questions in Category A are predominantly open reference and meet the criteria in Attachment 1 of ES-301.			DB	M	Q
c.	Repetition from operating tests used during the previous licensing examination is within acceptable limits (30% for the walk-through) and do not compromise test integrity.			DB	M	Q
d.	At least 20 percent of the JPMs on each test are new or significantly modified.			DB	M	Q
3. SIMULATOR (CATEGORY C) CRITERIA				-	-	-
a.	The associated simulator operating tests (scenario sets) have been reviewed in accordance with Form ES-301-4 and a copy is attached.			DB	M	Q
Printed Name / Signature				Date		
a.	Author	DAVID BURNS / David Burns		2/23/2000		
b.	Facility Reviewer(*)	ROGER JETT / Roger Jett		2/23/00		
c.	NRC Chief Examiner (*)	T.O. McKERNON / Tom McKernon		3/17/00		
d.	NRC Supervisor (*)	JL Pellet / John Pellet		3/17/00		
(*) The facility signature is not applicable for NRC-developed tests; two independent NRC reviews are required.						

Facility: Diablo Canyon Power Plant Date of Exam: 4/1/2000 Scenario Numbers: 1 / 4 / 11 Operating Test No.: 3		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.	DB	NY	SP			
2.	The scenarios consist mostly of related events.	DB	NY	SP			
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)	DB	NY	SP			
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.	DB	NY	SP			
5.	The events are valid with regard to physics and thermodynamics.	DB	NY	SP			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	DB	NY	SP			
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.	DB	NY	SP			
8.	The simulator modeling is not altered.	DB	NY	SP			
9.	The scenarios have been validated. Any open simulator performance deficiencies have been evaluated to ensure that functional fidelity is maintained while running the planned scenarios.	DB	NY	SP			
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.4 of ES-301.	DB	NY	SP			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	DB	NY	SP			
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).	DB	NY	SP			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	DB	NY	SP			
TARGET QUANTITATIVE ATTRIBUTES (PER SCENARIO; SEE SECTION D.4.D)		Actual Attributes		-	-	-	
1.	Total malfunctions (5-8)	8 / 7 / 8		DB	NY	SP	
2.	Malfunctions after EOP entry (1-2)	2 / 3 / 4		DB	NY	SP	
3.	Abnormal events (2-4)	4 / 4 / 3		DB	NY	SP	
4.	Major transients (1-2)	2 / 3 / 2		DB	NY	SP	
5.	EOPs entered/requiring substantive actions (1-2)	4 / 4 / 1		DB	NY	SP	
6.	EOP contingencies requiring substantive actions (0-2)	1 / 1 / 1		DB	NY	SP	
7.	Critical tasks (2-3)	3 / 3 / 4		DB	NY	SP	

OPERATING TEST NO.:3 Group 5

Applicant Type	Evolution Type	Minimum Number	Scenario Number			
			1	4	11	
As RO	Reactivity	1	RO		BOP	
	Normal	0	1		0	
	Instrument	1	1		2	
	Component	1	1		2	
	Major	1	2		2	
SRO-I ₆				SFM		
As SRO	Reactivity	0		1		
	Normal	1		1		
	Instrument	1		2		
	Component	1		4		
	Major	1		1		
As RO	Reactivity	1	BOP	RO		
	Normal	0	0	1		
	Instrument	1	1	1		
	Component	1	1	2		
	Major	1	2	1		
SRO-I ₇					SFM	
As SRO	Reactivity	0			0	
	Normal	1			1	
	Instrument	1			2	
	Component	1			4	
	Major	1			2	
SRO-U ₃	Reactivity	0	SFM	BOP	RO	
	Normal	1	1	1	0	
	Instrument	1	2	1	1	
	Component	1	3	2	3	
	Major	1	2	1	2	

- Instructions: (1) Enter the operating test number and Form ES-D-1 event numbers for each evolution type.
- (2) Reactivity manipulations may be conducted under normal or controlled abnormal conditions (refer to Section D.4.d) but must be significant per Section C.2.a of Appendix D.

Author:

David Bunn

Chief Examiner:

Jim K

Group 5

Competencies	Applicant #1 SRO-U ₃				Applicant #2 SRO-I ₆				Applicant #3 SRO-I ₇			
	SCENARIO				SCENARIO				SCENARIO			
	SFM 1	BOP 4	RO 11		RO 1	SFM 4	BOP 11		BOP 1	RO 4	SFM 11	
Understand and Interpret Annunciators and Alarms	1,2,4,6,7	2,3,4,5,6	2,3,4,6		1,2,4,6,7	2,3,4,5,6	2,3,4,6		1,2,4,6,7	2,3,4,5,6	2,3,4,6	
Diagnose Events and Conditions	1,2,4,5,6,7,8	2,3,4,5,6	2,3,4,5,6		1,2,4,5,6,7,8	2,3,4,5,6,7,8	2,3,4,5,6		1,2,4,5,6,7,8	2,3,4,5,6,7,8	2,3,4,5,6	
Understand Plant and System Response	1,2,4,5,6,7,8	1,2,3,4,5,6	1,2,3,4,5,6		1,2,4,5,6,7,8	1,2,3,4,5,6,7,8	1,2,3,4,5,6		1,2,4,5,6,7,8	1,2,3,4,5,6,7,8	1,2,3,4,5,6	
Comply With and Use Procedures (1)	1,2,3,4,6,7	1,2,3,4,5,6	1,3,4,5,6		1,2,3,4,6,7	1,2,3,4,5,6	1,3,4,5,6		1,2,3,4,6,7	1,2,3,4,5,6	1,3,4,5,6	
Operate Control Boards (2)		1,3,4,5,6	1,3,4,5,6		1,2,3,4,6,7,8		1,2,3,4,5,6		2,3,5,6,7	1,2,3,4,5,6,7,8		
Communicate and Interact With the Crew	1,2,3,4,5,6,7,8	1,2,3,4,5,6	1,2,3,4,5,6		1,2,3,4,5,6,7,8	1,2,3,4,6,7,8	1,2,3,4,5,6		1,2,3,4,5,6,7	1,2,3,4,5,6,7,8	1,2,3,4,5,6	
Demonstrate Supervisory Ability (3)	1,2,3,4,5,6,7,8					1,2,3,4,5,6,7,8					1,2,3,4,5,6	
Comply With and Use Tech. Specs. (3)	1,5					2					2,4	

Notes:

(1) Includes Technical Specification compliance for an RO.

(2) Optional for an SRO-U.

(3) Only applicable to SROs.

Instructions:

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

Author:

Chief Examiner:

David B. [Signature]

[Signature]

Facility: Diablo Canyon 1 & 2		Date of Exam: 4/10/2000		Exam Level: RO/SRO	
Item Description		Initials			
		a	b	c	
1.	Answer key changes and question deletions justified and documented	DB	N	ZOM	
2.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	DB	N	ZOM	
3.	Grading for all borderline cases (80% +/- 2%) reviewed in detail	DB	N	ZOM	
4.	All other failing examinations checked to ensure that grades are justified	N/A	N/A	N/A	
5.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	DB	N	ZOM	
Printed Name / Signature		Date			
a. Grader	DAVID BURNS / <u>David Burns</u>	4/18/2000			
b. Facility Reviewer(*)	ROGER JETT / <u>Roger Jett</u>	4/18/00			
c. NRC Chief Examiner (*)	T.O. MCKERNON / <u>T.O. McKernon</u>	5/1/00			
d. NRC Supervisor (*)	J. Pellet / <u>John Pellet</u>	5/3/00			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					

Facility: Diablo Canyon 1 & 2		Date of Exam: 4/10/2000		Exam Level: RO/SRO	
Item Description		Initials			
		a	b	c	
1.	Answer key changes and question deletions justified and documented	DB	M	Tom	
2.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	DB	M	Tom	
3.	Grading for all borderline cases (80% +/- 2%) reviewed in detail	DB	M	Tom	
4.	All other failing examinations checked to ensure that grades are justified	N/A	N/A	N/A	
5.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	DB	M	Tom	
Printed Name / Signature		Date			
a. Grader	DAVID BURNS / <u>David Burns</u>	4/10/2000			
b. Facility Reviewer(*)	ROGER JETT / <u>Roger Jett</u>	4/19/00			
c. NRC Chief Examiner (*)	T.O. MCKERNON / <u>T.O. McKernon</u>	5/1/00			
d. NRC Supervisor (*)	J. Pellet / <u>John Pellet</u>	5/3/00			
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC; two independent NRC reviews are required.					