

**2009 DAVIS-BESSE NUCLEAR PLANT**

**INITIAL EXAMINATION**

**PROPOSED EXAM FILES**

1

Facility: <u>Davis - Besse</u>		Date of Examination: <u>July 2009</u>		Operating Test Number: <u>2009-1</u>	
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).	RKW	N/A	BP	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	RKW	N/A	BP	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	RKW	N/A	BP	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	RKW	N/A	BP	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	RKW	N/A	BP	
2. Walk-Through Criteria		--	--	--	
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> <li>initial conditions</li> <li>initiating cues</li> <li>references and tools, including associated procedures</li> <li>reasonable and validated time limits (average time allowed for completion) and specific designation if deemed to be time-critical by the facility licensee</li> <li>operationally important specific performance criteria that include: <ul style="list-style-type: none"> <li>detailed expected actions with exact criteria and nomenclature</li> <li>system response and other examiner cues</li> <li>statements describing important observations to be made by the applicant</li> <li>criteria for successful completion of the task</li> <li>identification of critical steps and their associated performance standards</li> <li>restrictions on the sequence of steps, if applicable</li> </ul> </li> </ul>	RKW	N/A	BP	
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	BP	
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.		RKW	N/A	BP	
Printed Name / Signature		Date			
a. Author	<u>Raynal Keith Walter / Raymond Keith Walter</u>				
b. Facility Reviewer(*)	<u>N/A</u>				
c. NRC Chief Examiner (#)	<u>Bruce Palagi / Bruce Palagi</u>	<u>6-11-09</u>			
d. NRC Supervisor	<u>Hironori Peterson / Hironori Peterson</u>	<u>7-9-09</u>			
NOTE:	* The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.				

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Facility: <i>Davis-Besse</i>		Date of Exam: <i>July 2009</i>	Scenario Numbers: <i>11213</i>	Operating Test No.: <i>2009-1</i>	
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.	<i>RW</i>		<i>BP</i>	
2.	The scenarios consist mostly of related events.	<i>RW</i>		<i>BP</i>	
3.	Each event description consists of <ul style="list-style-type: none"> <li>the point in the scenario when it is to be initiated</li> <li>the malfunction(s) that are entered to initiate the event</li> <li>the symptoms/cues that will be visible to the crew</li> <li>the expected operator actions (by shift position)</li> <li>the event termination point (if applicable)</li> </ul>	<i>RW</i>		<i>BP</i>	
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.	<i>RW</i>		<i>BP</i>	
5.	The events are valid with regard to physics and thermodynamics.	<i>RW</i>		<i>BP</i>	
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	<i>RW</i>		<i>BP</i>	
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.	<i>RW</i>		<i>BP</i>	
8.	The simulator modeling is not altered.	<i>RW</i>		<i>BP</i>	
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.	<i>RW</i>		<i>BP</i>	
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.	<i>RW</i>		<i>BP</i>	
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).				
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).			<i>BP</i>	
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	<i>RW</i>		<i>BP</i>	
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes	-	-	-
1.	Total malfunctions (5-8)	<i>5 1, 2, 1, 1</i>	<i>RW</i>		<i>BP</i>
2.	Malfunctions after EOP entry (1-2)	<i>1 2, 1</i>	<i>RW</i>		<i>BP</i>
3.	Abnormal events (2-4)	<i>3 3, 2</i>	<i>RW</i>		<i>BP</i>
4.	Major transients (1-2)	<i>1 1, 1, 1</i>	<i>RW</i>		<i>BP</i>
5.	EOPs entered/requiring substantive actions (1-2)	<i>1 1, 1, 1</i>	<i>RW</i>		<i>BP</i>
6.	EOP contingencies requiring substantive actions (0-2)	<i>1 2, 1</i>	<i>RW</i>		<i>BP</i>
7.	Critical tasks (2-3)	<i>4 4, 3</i>	<i>RW</i>		<i>BP</i>

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

Facility: Davis Besse U1		Date of Exam: 07/20/2009		Exam Level: RO <input checked="" type="checkbox"/> SRO <input checked="" type="checkbox"/>														
Item Description	Initial																	
	a	b*	c*															
1. Questions and answers are technically accurate and applicable to the facility.	DM		GP															
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	DM		GP															
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	DM		GP															
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).	DM		GP															
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)	DM	NA	GP															
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	Modified	New	DM	GP													
	33 / 7	8 / 2	34 / 16															
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	C/A		DM	GP													
	30 / 10	45 / 15																
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	DM		GP															
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.	DM		GP															
10. Question psychometric quality and format meet the guidelines in ES Appendix B.	DM		GP															
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.	DM		GP															
<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%;"></td> <td style="width:70%; text-align: center;">Printed Name / Signature</td> <td style="width:20%; text-align: center;">Date</td> </tr> <tr> <td>a. Author</td> <td>D. McNeil / <i>[Signature]</i></td> <td>06/12/09</td> </tr> <tr> <td>b. Facility Reviewer (*)</td> <td>n/a</td> <td></td> </tr> <tr> <td>c. NRC Chief Examiner (#)</td> <td>B. Palagi / <i>[Signature]</i></td> <td>06/12/09</td> </tr> <tr> <td>d. NRC Regional Supervisor</td> <td>H. Peterson / <i>[Signature]</i></td> <td>7/9/09</td> </tr> </table>					Printed Name / Signature	Date	a. Author	D. McNeil / <i>[Signature]</i>	06/12/09	b. Facility Reviewer (*)	n/a		c. NRC Chief Examiner (#)	B. Palagi / <i>[Signature]</i>	06/12/09	d. NRC Regional Supervisor	H. Peterson / <i>[Signature]</i>	7/9/09
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a. Author	D. McNeil / <i>[Signature]</i>	06/12/09																
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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.																		

as of 6/12/09



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Facility: Davis Besse Nuclear Power Plant		Date of Exam: July 20, 2009		Exam Level: RO <input checked="" type="checkbox"/> SRO <input checked="" type="checkbox"/>		
Item Description	Initial					
	a	b*	c*			
1. Questions and answers are technically accurate and applicable to the facility.	DM		BP			
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	DM		BP			
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	DM		BP			
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).	DM		BP			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input type="checkbox"/> the audit exam was systematically and randomly developed; or <input type="checkbox"/> the audit exam was completed before the license exam was started; or <input checked="" type="checkbox"/> the examinations were developed independently; or <input type="checkbox"/> the licensee certifies that there is no duplication; or <input type="checkbox"/> other (explain)	DM	NA	BP			
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	Modified	New	DM		BP
	35 / 9	7 / 1	33/15			
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	C/A		DM		BP
	31 / 7	44 / 18				
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	DM		BP			
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.	DM		BP			
10. Question psychometric quality and format meet the guidelines in ES Appendix B.	DM		BP			
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.	DM		BP			
Printed Name / Signature		Date				
a. Author	Dell R. McNeil / <i>Dell R. McNeil</i>	07/07/09				
b. Facility Reviewer (*)	n/a					
c. NRC Chief Examiner (#)	Bruce Palagi / <i>Bruce Palagi</i>	7/8/09				
d. NRC Regional Supervisor	Hironori Peterson / <i>Hironori Peterson</i>	7/9/09				
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