

2014 PALISADES NUCLEAR PLANT

INITIAL LICENSE EXAMINATION

PROPOSED EXAM FILES



Entergy Nuclear Operations, Inc.
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043
269.764.2000

Walter E. Nelson
Training Manager

PNP 2014-070

July 7, 2014

NUREG-1021

Mr. David Reeser
U.S. Nuclear Regulatory Commission
Region III
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352

Palisades Nuclear Plant
Dockets 50-255 and 72-07
License No. DPR-20

Subject: Initial Operator License Examination Materials

Dear Mr. Reeser:

Entergy Nuclear Operations, Inc. is submitting the initial license examination for the Palisades Nuclear Plant, in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. The initial license examination is scheduled for September 8 through September 19, 2014. The following materials are enclosed:

One CD with electronic copies of the following:

- ES 201-3, Examination Security Agreement (updated)
- ES 301-1, Administrative Topics Outline (updated) (2)
- ES 301-2, Control Room/In-Plant Outline (3)
- ES-301-5, Transient and Event Checklists (3)
- ES 301-6, Competencies Checklist (3)
- ES 401-2/3, PWR Examination Outline (updated)
- ES 401-4, Record of Rejected K/As (updated)

- ES 401-7, RO Written Examination Coversheet
- ES 401-8, SRO Written Examination Coversheet
- RO Written Examination
- RO Written Examination Modified Question Originals
- RO Written Examination Key
- SRO Written Examination
- SRO Written Examination Key
- System/Control Room Job Performance Measures (11)
- Administrative Job Performance Measures (9)
- Task Summary
- Scenarios (4)
- Scenario Outlines (4)
- Operating Test Schedule (updated)

One CD with electronic copies of the following:

Palisades NRC Initial License Exam References

Hard copies with signatures of the following forms:

- ES-301-3, Operating Test Quality Checklist
- ES-301-4, Simulator Scenario Quality Checklist
- ES-401-6, Written Examination Quality Checklist

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Mr. David Reeser
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In accordance with NUREG-1021, ES-201, Attachment 1, these materials shall be withheld from public disclosure until after the examinations are complete.

Please contact Steve Botimer at (269) 764-2975 if you have any questions regarding this submittal.

This letter contains no new commitments and no revisions to existing commitments.



WEN/bee

CC Administrator, Region III, USNRC (w/o enclosures)
Project Manager, Palisades, USNRC (w/o enclosures)
Resident Inspector, Palisades, USNRC (w/o enclosures)
Document Control Desk, USNRC (w/o enclosures)

Facility: <u>Palisades</u>		Date of Examination: <u>September 2014</u>		Operating Test Number: <u>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).	SB	BAB	JZ	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	SB	BAB	JZ	
c.	The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).	SB	BAB	JZ	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	SB	BAB	JZ	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	SB	BAB	JZ	
2. WALK-THROUGH CRITERIA			--	--	--
a.	Each JPM includes the following, as applicable: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> - 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 	SB	BAB	JZ	
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.	SB	BAB	JZ	
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.			SB	BAB	JZ
a.	Author	Steve Botimer / <u>[Signature]</u>	Date <u>07/02/2014</u>		
b.	Facility Reviewer (*)	Bret Baker / <u>[Signature]</u>	Date <u>7/2/2014</u>		
c.	NRC Chief Examiner (#)	<u>David Reesor</u> / <u>[Signature]</u>	Date <u>9/4/14</u>		
d.	NRC Supervisor	<u>BP</u> / <u>Hironori Peterson</u> / <u>[Signature]</u> For HP 9/2/14	Date <u>9/4/14</u>		
NOTE: * The facility signature is not applicable for NRC-developed tests # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence is required.					

Facility: Palisades		Date of Exam: September 2014		Scenario Numbers: 1/2/3		Operating Test Number: 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.	SB	BAB	JZ				
2.	The scenarios consist mostly of related events.	SB	BAB	JZ				
3.	Each event description consists of <ul style="list-style-type: none"> 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) 	SB	BAB	JZ				
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.	SB	BAB	OZ				
5.	The events are valid with regard to physics and thermodynamics.	SB	BAB	OZ				
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	SB	BAB	JZ				
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.	SB	BAB	OZ				
8.	The simulator modeling is not altered.	SB	BAB	JZ				
9.	The scenarios have been validated. Pursuant to 10CFR55.46(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.	SB	BAB	OZ				
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.	SB	BAB	OZ				
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	SB	BAB	JZ				
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).	SB	BAB	JZ				
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	SB	BAB	OZ				
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		--	--	--	--	
1.	Total malfunctions (5-8)	6 / 8 / 5		SB	BAB	JZ		
2.	Malfunctions after EOP entry (1-2)	2 / 3 / 2		SB	BAB	JZ		
3.	Abnormal events (2-4)	3 / 3 / 2		SB	BAB	JZ		
4.	Major transients (1-2)	1 / 1 / 1		SB	BAB	JZ		
5.	EOPs entered/requiring substantive actions (1-2)	1 / 1 / 1		SB	BAB	JZ		
6.	EOP contingencies requiring substantive actions (0-2)	0 / 1 / 0		SB	BAB	JZ		
7.	Critical tasks (2-3)	2 / 3 / 3		SB	BAB	JZ		

Facility: Palisades		Date of Exam: September 2014		Scenario Numbers: Spare		Operating Test Number: 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.	sb	BAB				2
2.	The scenarios consist mostly of related events.	sb	BAB				2
3.	Each event description consists of <ul style="list-style-type: none"> 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) 	sb	BAB				2
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.	sb	BAB				2
5.	The events are valid with regard to physics and thermodynamics.	sb	BAB				2
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	sb	BAB				2
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.	sb	BAB				2
8.	The simulator modeling is not altered.	sb	BAB				2
9.	The scenarios have been validated. Pursuant to 10CFR55.46(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.	sb	BAB				2
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.	sb	BAB				2
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	sb	BAB				2
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).	sb	BAB				2
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	sb	BAB				2
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		--	--	--	--
1.	Total malfunctions (5-8)	6		sb	BAB		dm
2.	Malfunctions after EOP entry (1-2)	2		sb	BAB		dm
3.	Abnormal events (2-4)	2		sb	BAB		dm
4.	Major transients (1-2)	1		sb	BAB		dm
5.	EOPs entered/requiring substantive actions (1-2)	1		sb	BAB		dm
6.	EOP contingencies requiring substantive actions (0-2)	1		sb	BAB		dm
7.	Critical tasks (2-3)	3		sb	BAB		dm

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 dm - for Dave Reiser per telecom 09/05/2015

Facility: Palisades		Date of Exam: September 2014		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.	SB	SMB	dm*			
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	SB	BAB	JR			
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	SB	BAB				
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 exam, consult the NRR OL program office).			JR			
5. Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: <input checked="" 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 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)	SB	BAB	JR			
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	SB	BAB	JR
	54 / 10	8 / 0	13 / 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 KAs support the higher cognitive levels; enter the actual RO / SRO question distribution(s) at right.	Memory		C/A	SB	BAB	JR
	30 / 12		46 / 13			
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	SB	BAB	JR			
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	SB	BAB	dm* (SFR)			
10. Question psychometric quality and format meet the guidelines in ES Appendix B.	SB	BAB	dm*			
11. The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet	SB	BAB	JR			
Printed Name / Signature		Date				
a. Author	Steve Botimer / <i>SBotimer</i>		07/02/2014			
b. Facility Reviewer (*)	Bret Baker / <i>BAB</i>		7/2/2014			
c. NRC Chief Examiner (#)	David W. Reeser / <i>D.W. Reeser</i>		9/05/2014			
d. NRC Regional Supervisor	<i>Heidi Peterson</i>		9/5/14			
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.						

* dm completed resolution of unsatisfactory questions. Initialed for Dave Reeser per telecon 09/05/2014