

**2013 FERMI POWER PLANT
INITIAL LICENSE EXAMINATION**

PROPOSED EXAM FILES



10 CFR 55.40

July 25, 2013
NRC-13-0041

Mr. Hironori Peterson
Chief, Operations Branch
Division of Reactor Safety
Region III
U. S. Nuclear Regulatory Commission
2443 Warrenville Road, Suite 210
Lisle, Illinois 60532-4352

- References: 1) Fermi 2
NRC Docket No. 50-341
NRC License No. NPF-43
- 2) NRC letter dated March 11, 2013, "Fermi Power
Plant Confirmation of Initial License Examination"

Subject: Fermi 2 Initial License Operator Examination

Enclosed please find the following examination material in preparation for the Fermi 2 Initial License Operator Examination scheduled to occur during the week of September 9, 2013:

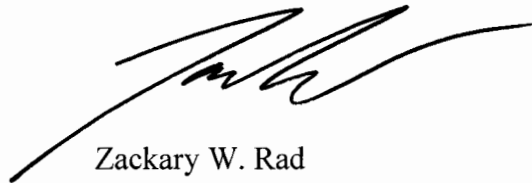
- Modified Examination Outlines (modified during the examination development process)
- Seventy-five (75) written examination items for the Reactor Operator examination
- Twenty-five (25) written examination items for the Senior Reactor Operator examination
- Eleven (11) Plant Systems related Job Performance Measures
- Eight (8) Administrative topic Job Performance Measures
- Two (2) Simulator Scenarios
- Supporting Reference Material
- Quality Verification Checklists from NUREG 1021, Revision 9.

RECEIVED JUL 26 2013

The examination material was developed using the appropriate guidance contained in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. The examination material shall be withheld from public disclosure until after the examinations are complete.

We look forward to working with you and your examination team during the examination development and administration process. If you have any questions or comments regarding the contents of the items listed above, please contact Mr. David G. Coseo, General Supervisor, Operations Training, at (734) 586-4055.

Sincerely,

A handwritten signature in black ink, appearing to read "Zackary W. Rad", with a long horizontal flourish extending to the right.

Zackary W. Rad

Enclosures

cc: [w/o Enclosures]
NRC Project Manager
Reactor Projects Chief, Branch 5, Region III
NRC Resident Office
Document Control Desk
Washington D C

bcc: [w/o Enclosures]

J. T. Conner

J. W. Davis

J. K. Ford

J. H. Plona

Z. W. Rad

K. C. Scott

G. A. Strobel

Electronic Licensing Library (ELL) (200 TAC) [w/o Enclosures]

Information Management (140 NOC) [w/o Enclosures]

NSRG Administrator (210 NOC) [w/o Enclosures]

NRR Chron File [w/o Enclosures]

D. G. Coseo [w/o Enclosures]

C. Aldridge-Nunn [w/o Enclosures]

Facility: Fermi 2		Date of Examination: 09/09/13		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).	BB	B	CLM	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	BB	B	CLM	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	BB	B	CLM	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	BB	B	CLM	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	BB	B	CLM	
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 	BB	B	CLM	
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.	BB	B	CLM	
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.			BB	B	CLM
Printed Name / Signature		Date			
a.	Author <u>TIMOTHY J. BARRETT / Timothy J. Barrett</u>	<u>8-19-13</u>			
b.	Facility Reviewer(*) <u>DAVID G. COSEW / David G. Cosew</u>	<u>8/23/13</u>			
c.	NRC Chief Examiner (#) <u>CARL MOORE / Carl Moore</u>	<u>8/29/13</u>			
d.	NRC Supervisor <u>Alicia Peterson / Alicia Peterson</u>	<u>8/29/13</u>			
NOTE: * The facility signature is not applicable for NRC-developed tests.					
# Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

THIS ES-301-3 OPERATING TEST QUALITY CHECKLIST WAS COMPLETED AFTER THE ONSITE VALIDATION OF THIS EXAMINATION.

Facility:		Date of Examination:		Operating Test Number:		
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).			T	D	CM
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.			T	D	CM
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)			T	D	CM
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.			T	D	CM
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.			T	D	CM
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 			T	D	CM
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.			T	D	CM
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.				T	D	CM
		Printed Name / Signature		Date		
a.	Author	Timothy J. Barrett / [Signature]		7/25/13		
b.	Facility Reviewer(*)	D. CASEO / [Signature]		7/28/13		
c.	NRC Chief Examiner (#)	CARL MOORE / [Signature]		8/6/13		
d.	NRC Supervisor	Hironori Peterson / [Signature]		8/29/13		
				8/6/13		
NOTE: * The facility signature is not applicable for NRC-developed tests.						
# Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.						

Facility: Fermi-2		Date of Exam: 9/9/13		Scenario Numbers: 1 / 2 /		Operating Test Number: 2013	
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	DB	CLM			
2.	The scenarios consist mostly of related events.	DB	DB	CLM			
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) 	DB	DB	CLM			
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	DB	CLM			
5.	The events are valid with regard to physics and thermodynamics.	DB	DB	CLM			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.	DB	DB	CLM			
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	DB	CLM			
8.	The simulator modeling is not altered.	DB	DB	CLM			
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.	DB	DB	CLM			
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.	DB	DB	CLM			
11.	All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).	DB	DB	CLM			
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	DB	CLM			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.	DB	DB	CLM			
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes		--	--	--	
1.	Total malfunctions (5-8)	12 / 9 /	DB	DB	CLM		
2.	Malfunctions after EOP entry (1-2)	3 / 3 /	DB	DB	CLM		
3.	Abnormal events (2-4)	2 / 3 /	DB	DB	CLM		
4.	Major transients (1-2)	2 / 2 /	DB	DB	CLM		
5.	EOPs entered/requiring substantive actions (1-2)	3 / 2 /	DB	DB	CLM		
6.	EOP contingencies requiring substantive actions (0-2)	1 / 1 /	DB	DB	CLM		
7.	Critical tasks (2-3)	4 / 3 /	DB	DB	CLM		

ORIGINAL 301-6 BEFORE RO WAS DROPPED FROM EXAM

ES-301

Competencies Checklist

Form ES-301-6

Facility: Fermi-2		Date of Examination: 9/9/2013								Operating Test No.: 2013							
Competencies	APPLICANTS																
	RO <input checked="" type="checkbox"/>				RO <input type="checkbox"/>				RO <input type="checkbox"/>				RO <input type="checkbox"/>				
	SRO-I <input type="checkbox"/>				SRO-I <input checked="" type="checkbox"/>				SRO-I <input checked="" type="checkbox"/>				SRO-I <input type="checkbox"/>				
	SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <input checked="" type="checkbox"/>				
	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	1,3,6,7,8,9,10	1,5,6,7,8			2,4					1,5,6,7,8							
Comply With and Use Procedures (1)	1,3,6	1,5,6,7,8			2,4,7,11	3,5,6,7,8,9			4,5,6,7,8,10	1,5,6,7,8			4,5,6,7,8,10	3,5,6,7,8,9			
Operate Control Boards (2)	2,3,5,6,7,8,9,10	1,5,6,7,8			2,7,8,11					1,5,6,7,8							
Communicate and Interact	2,3,5,6,7,8,9,10	1,5,6,7,8			2,4,7,8,11	1-9			1-10	1,5,6,7,8			1-10	1-9			
Demonstrate Supervisory Ability (3)						1-9			1-10				1-10	1-9			
Comply With and Use Tech Specs. (3)						1,3			3,5				3,5	1,3			
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																	

Instructions:

Check 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.

Facility: Fermi-2		Date of Examination: 9/9/2013								Operating Test No.: 2013							
Competencies	APPLICANTS																
	RO <input checked="" type="checkbox"/>				RO <input type="checkbox"/>				RO <input type="checkbox"/>				RO <input type="checkbox"/>				
	SRO-I <input type="checkbox"/>				SRO-I <input checked="" type="checkbox"/>				SRO-I <input type="checkbox"/>				SRO-I <input type="checkbox"/>				
	SRO-U <input type="checkbox"/>				SRO-U <input type="checkbox"/>				SRO-U <input checked="" type="checkbox"/>				SRO-U <input checked="" type="checkbox"/>				
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	1,3,6,7,8,9,10	1,5,6,7,8			2,4					2,3,5,9							
Comply With and Use Procedures (1)	1,3,6	1,5,6,7,8			2,4,7,11	3,5,6,7,8,9			4,5,6,7,8,10	2,3,4,5,6,9							
Operate Control Boards (2)	3,5,6,7,8,9,10	1,5,6,7,8			2,7,8,11					2,3,4,5,6							
Communicate and Interact	1,2,3,5,6,7,8,9,10	1,5,6,7,8			2,4,5,7,8,11	1-9			1-10	2,3,4,5,6,9							
Demonstrate Supervisory Ability (3)						1-9			1-10								
Comply With and Use Tech Specs. (3)						1,3			4,6								
Notes: (1) Includes Technical Specification compliance for an RO. (2) Optional for an SRO-U. (3) Only applicable to SROs.																	

Instructions:

Check 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.

Facility: Fermi-2		Date of Exam: 9/9/2013		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.	T	D	Chm							
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	T	D	Chm							
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	T	D	Chm							
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).	T	D	Chm							
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 <input checked="" type="checkbox"/> the licensee certifies that there is no duplication; or ___ other (explain)	T	D	Chm							
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.	<table border="1"> <tr> <th>Bank</th> <th>Modified</th> <th>New</th> </tr> <tr> <td>Chm 29/13 23/6 26/6</td> <td>Chm 29/13 4/0 1/0</td> <td>Chm 29/13 5/13 48/19</td> </tr> </table>	Bank	Modified	New	Chm 29/13 23/6 26/6	Chm 29/13 4/0 1/0	Chm 29/13 5/13 48/19	T	D	Chm
Bank	Modified	New								
Chm 29/13 23/6 26/6	Chm 29/13 4/0 1/0	Chm 29/13 5/13 48/19								
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.	<table border="1"> <tr> <th>Memory</th> <th>C/A</th> </tr> <tr> <td>Chm 29/13 31/3 32/2</td> <td>Chm 29/13 44/22 43/23</td> </tr> </table>	Memory	C/A	Chm 29/13 31/3 32/2	Chm 29/13 44/22 43/23	T	D	Chm		
Memory	C/A									
Chm 29/13 31/3 32/2	Chm 29/13 44/22 43/23									
8. References/handouts provided do not give away answers or aid in the elimination of distractors.	T	D	Chm							
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	T	D	Chm							
10. Question psychometric quality and format meet the guidelines in ES Appendix B.	T	D	Chm							
11. The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet	T	D	Chm							
Printed Name / Signature		Date								
a. Author	TIMOTHY J. BARRETT / <i>[Signature]</i>	7/25/13								
b. Facility Reviewer (*)	D. COSED / <i>[Signature]</i>	7/25/13								
c. NRC Chief Examiner (#)	CARL MOORE / <i>[Signature]</i>	8/6/13								
d. NRC Regional Supervisor	Hironen Peterson / <i>[Signature]</i>	8/24/13								
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. <i>[Signature]</i> 08/04/13										