

**2015 FERMI POWER PLANT
INITIAL LICENSE EXAMINATION**

PROPOSED EXAM FILES

DTE Energy Company
6400 North Dixie Highway
Newport, MI 48166



Confidential Material Enclosed – Withhold Under 10 CFR 2.390

June 23, 2015
NRC-15-0073

10 CFR 55.40

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

Reference: Fermi 2
NRC Docket No. 50-341
NRC Operating License No. NPF-43

Subject: Fermi 2 Initial Licensed Operator Examination Materials

Enclosed please find the proposed examination materials for the upcoming Fermi 2 Initial License Examination that is scheduled for the week of August 24, 2015. The following items are enclosed:

- 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
- Seven (7) Administrative topic Job Performance Measures
- Two (2) Simulator Scenarios
- Supporting Reference Material
- Quality Verification Checklists from NUREG 1021, Revision 10.

The enclosure to this letter contains confidential material.
Upon separation from the enclosure, this cover letter is
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- Generic Knowledge and Abilities Outline (K/As) (Form ES-401-3)
- Record of Rejected K/As (Form ES-401-4)

The examination materials were developed using the appropriate guidance contained in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," Revision 10. The examination materials 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. Bryan Crone, General Supervisor, Operations Training at (734) 586-4173.

Sincerely,



Christopher R. Robinson
Manager - Nuclear Licensing

Enclosures

cc: [w/o Enclosures]

NRC Project Manager
Reactor Projects Chief, Branch 5, Region III
NRC Resident Office
Document Control Desk, Washington D C

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Facility: <u>Fermi 2</u>		Date of Examination: <u>8/24/2015</u>		Operating Test Number: <u>2015</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).	MAD	mm	MCS	
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	MAD	m	MES	
c.	The operating test shall not duplicate items from the applicants' audit test(s). (see Section D.1.a.)	MAD	m	MES	
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	MAD	m	MES	
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	MAD	m	MES	
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 	MAD	mm	MES	
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.	MAD	m	MES	
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.		MAD	mm	MES	
Printed Name / Signature		Date			
a.	Author <u>Mike Donigian</u>	<u>6/25/15</u>			
b.	Facility Reviewer(*) <u>Dan D. Crona</u>	<u>6/25/15</u>			
c.	NRC Chief Examiner (#) <u>Michael E. Biello</u>	<u>7/23/15</u>			
d.	NRC Supervisor <u>Al Hironaka</u>	<u>8/24/15</u>			
NOTE: * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.					

Facility: <u>Fermi 2</u>		Date of Exam: <u>8/24/2015</u>		Scenario Numbers: <u>1 / 2 /</u>		Operating Test No.: <u>2015</u>	
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.			MAD	m	11/20/15		
2. The scenarios consist mostly of related events.			MAD	m	11/20/15		
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) or conditions 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) 			MAD	m	11/20/15		
4. The events are valid with regard to physics and thermodynamics.			MAD	m	11/20/15		
5. Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			MAD	m	11/20/15		
6. 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.			MAD	m	11/20/15		
7. The simulator modeling is not altered.			MAD	m	11/20/15		
8. 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.			MAD	m	11/20/15		
9. 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.			MAD	m	11/20/15		
10. All individual operator competencies can be evaluated, as verified using Form ES-301-6 (submit the form along with the simulator scenarios).			MAD	m	11/20/15		
11. The scenario set provides the opportunity for each applicant to be evaluated in each of the applicable rating factors. (Competency Rating factors as described on forms ES-303-1 and ES-303-3.)			MAD	m	11/20/15		
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).			MAD	m	11/20/15		
13. The level of difficulty is appropriate to support licensing decisions for each crew position.			MAD	m	11/20/15		
Target Quantitative Attributes (Per Scenario; See Section D.5.d)		Actual Attributes	--	--	--		
1. Malfunctions after EOP entry (1-2)		4 / 1 / 1	MAD	m	11/20/15		
2. Abnormal events (2-4)		2 / 3 / 1	MAD	m	11/20/15		
3. Major transients (1-2)		1 / 1 / 1	MAD	m	11/20/15		
4. EOPs entered/requiring substantive actions (1-2)		2 / 3 / 1	MAD	m	11/20/15		
5. EOP contingencies requiring substantive actions (0-2)		1 / 0 / 1	MAD	m	11/20/15		
6. EOP based Critical tasks (2-3)		5 / 2 / 1	MAD	m	11/20/15		
NOTE: <ul style="list-style-type: none"> * The facility signature is not applicable for NRC-developed tests. # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. 							

Facility: <u>Fermi 2</u>		Date of Exam: <u>8/24/2015</u>		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.	MAD	PM	MGB			
2. a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	MAD	PM	MGB			
3. SRO questions are appropriate in accordance with Section D.2.d of ES-401	MAD	PM	MGB			
4. The sampling process was random and systematic (If more than 4 RO or 2 SRO questions were repeated from the last two NRC licensing exams, consult the NRR/NRO OL program office).	MAD	PM	MGB			
5. Question duplication from the licensee 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)	MAD	PM	MGB			
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 25 21 / 7	Modified 2 6 / 3	New 48 / 15	MAD	PM	MGB
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 30 16 / 4	C/A 45 54 / 21		MAD	PM	MGB
8. References/handouts provided do not give away answers or aid in the elimination of distractors.				MAD	PM	MGB
9. Question content conforms to specific K/A statements in the previously approved examination outline and is appropriate for the tier to which they are assigned; deviations are justified.				MAD	PM	MGB
10. Question psychometric quality and format meet the guidelines in ES Appendix B.				MAD	PM	MGB
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.				MAD	PM	MGB
Printed Name / Signature				Date		
a. Author	<u>Mike Donigan / Mike Donigan</u>			<u>6/25/15</u>		
b. Facility Reviewer (*)	<u>Bryan D. Crone / Bryan D. Crone</u>			<u>6/25/15</u>		
c. NRC Chief Examiner (#)	<u>Michael E. Bielby / Michael E. Bielby</u>			<u>7/23/15</u>		
d. NRC Regional Supervisor	<u>Apprentice Peterson / Apprentice Peterson</u>			<u>8/20/15</u>		
Note: * The facility reviewer's initials or signature are not applicable for NRC-developed examinations. # Independent NRC reviewer initials items in Column "c"; chief examiner concurrence required.						