2010 DRESDEN NUCLEAR POWER STATION

INITIAL EXAMINATION

PROPOSED EXAM FILES

Exelon Generation Company, LLC
Dresden Nuclear Power Station
6500 North Dresden Road
Morris, IL 60450-9765

www.exeloncorp.com

Exelon Nuclear

10 CFR 55.40(b)

January 19, 2010

SVPLTR: #10-0001

U. S. Nuclear Regulatory Commission - Region III
ATTN: Operator Licensing Branch
2443 Warrenville Road – Suite 210
Lisle, IL 60532-4352

Dresden Nuclear Power Station, Units 2 and 3
Renewed Facility Operating License Nos. DPR-19 and DPR-25
NRC Docket Nos. 50-237 and 50-249

Subject: Submittal of Integrated Initial License Training Examination Materials

Enclosed are the examination materials in support of the Initial License Examination scheduled to begin the week of March 08, 2010, at the Dresden Nuclear Power Station. These examination materials have been developed in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. Please note that reference materials are attached to each individual examination question or item.

Some minor modifications have been made to the integrated examination outline in order to improve balance and content. These changes improve examination quality and are consistent with guidance in NUREG-1021, Revision 9, Supplement 1.

Some modifications or adjustments to the examination material may be required due to procedural changes that occur after this submittal.

In accordance with NUREG 1021, Revision 9, Supplement 1, Section ES-201, please ensure that these materials are withheld from public disclosure until after the examinations are complete.

Should you have any questions concerning this letter, please contact Ms. Marri Marchionda, Regulatory Assurance Manager, at (815) 416-2800. For questions concerning examination materials, please contact Frank Ferrero at (815) 416-2620.

Respectfully,

Tim Hanley
Site Vice President
Dresden Nuclear Power Station

JAN 19 2010

Enclosures: (Hand delivered Operations Branch, NRC Region III)

RO/SRO Composite Examination with references attached
Control Room Systems and Facility Walk-Through Job Performance Measures with references attached
Administrative Topic Job Performance Measures with references attached
Integrated Plant Operation Scenario Guides
Completed Checklists:

Administrative Topics Outline	(Form ES-301-1)
Operating Test Quality Checklist	(Form ES-301-3)
Simulator Scenario Quality Checklist	(Form ES-301-4)
Transient and Event Checklist	(Form ES-301-5)
Competencies Checklist	(Form ES-301-6)
Written Exam Quality Checklist	(Form ES-401-6)
Examination Security Agreements	(Form ES-201-3)
Control Room / In-Plant System Outline	(Form ES-301-2)
BWR Examination Outline	(Form ES-401-1)
Generic Knowledge and Abilities Outline (Tier 3)	(Form ES-401-3)
Record of Rejected K/As	(Form ES-401-4)
Scenario Outlines	(Form ES-D-1)

cc (w/o Enclosures):
NRC Document Control Desk
NRC Senior Resident Inspector

Facility: Dresden Date of Examination: 3/8/10 Operating Test Number: 2010-301

	1. GENERAL CRITERIA	Initials a	Initials b*	Initials 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).	✓	GKM	RKW
b.	There is no day-to-day repetition between this and other operating tests to be administered during this examination.	✓	GKM	RKW
c.	The operating test shall not duplicate items from the applicants' audit test(s)(see Section D.1.a).	✓	GKM	RKW
d.	Overlap with the written examination and between different parts of the operating test is within acceptable limits.	✓	GKM	RKW
e.	It appears that the operating test will differentiate between competent and less-than-competent applicants at the designated license level.	✓	GKM	RKW
	2. WALK-THROUGH CRITERIA	--	--	--
a.	Each JPM includes the following, as applicable: • 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: - 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	✓	GKM	RKW
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.	✓	GKM	RKW
	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.	✓	GKM	RKW

	Printed Name / Signature	Date
a. Author	FRANK FERRERO	1-7-10
b. Facility Reviewer (*)	GLEN K. MORROW	1-8-10
c. NRC Chief Examiner (#)	RAYMOND K. WALTER	1/20/2010
d. NRC Supervisor	HIRONORI PETERSON	3/2/10

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: Dresden	Date of Exam: 3/8/10	Scenario Numbers: 1 / 2 / 3	Operating Test Number: 2010-301

QUALITATIVE ATTRIBUTES		Initials a	Initials b*	Initials 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.			
2.	The scenarios consist mostly of related events.			
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)			
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.			
5.	The events are valid with regard to physics and thermodynamics.			
6.	Sequencing and timing of events is reasonable, and allows the examination team to obtain complete evaluation results commensurate with the scenario objectives.			
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.			
8.	The simulator modeling is not altered.			
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.			
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.			
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).			
13.	The level of difficulty is appropriate to support licensing decisions for each crew position.			

	Target Quantitative Attributes (Per Scenario; See Section D.5.d)	Actual Attributes	--	--	--
1.	Total malfunctions (5-8)	7 / 9 / 5			
2.	Malfunctions after EOP entry (1-2)	1 / 1 / 2			
3.	Abnormal events (2-4)	4 / 6 / 3			
4.	Major transients (1-2)	2 / 2 / 2			
5.	EOPs entered/requiring substantive actions (1-2)	2 / 1 / 2			
6.	EOP contingencies requiring substantive actions (0-2)	1 / 1 / 1			
7.	Critical tasks (2-3)	2 / 3 / 4			

ES-301 Transient and Event Checklist Form ES-301-5

Facility: Dresden		Date of Exam: 3/8/10						Operating Test Number: 2010-301										
APPLICANT	EVENT TYPE	Scenarios												TOTAL	MINIMUM(*)			
		1			2			3			4							
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION							
		SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP		R	I	U	
RO #1 ☒	RX		1											1	1	1	0	
	NOR													0	1	1	1	
	I/C		4, 6				3, 5, 6							5	4	4	2	
	MAJ		7, 8				7, 8							4	2	2	1	
	TS													0	0	2	2	
RO #2 ☒	RX													0	1	1	0	
	NOR			2										1	1	1	1	
	I/C			3, 5		1, 2, 4								5	4	4	2	
	MAJ			7, 8		7, 8								4	2	2	1	
	TS													0	0	2	2	
SRO-U ☒	RX	1												1	1	1	0	
	NOR	2												1	1	1	1	
	I/C	3, 4 5, 6			1, 2, 3 4, 5, 6									10	4	4	2	
	MAJ	7, 8			7, 8									4	2	2	1	
	TS	4, 5			3, 4									4	0	2	2	

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient in the ATC position. If an Instant SRO additionally serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.
2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.
3. Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirements specified for the applicant's license level in the right-hand columns.

ES-301 Transient and Event Checklist Form ES-301-5

Facility: Dresden | Date of Exam: 3/8/10 | Operating Test Number: 2010-301

APPLICANT	EVENT TYPE	Scenarios												TOTAL	MINIMUM(*)		
		1			2			3			4						
		CREW POSITION			CREW POSITION			CREW POSITION			CREW POSITION						
		SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP	SRO	ATC	BOP		R	I	U
SRO-I #1 #4 ☒	RX	1												1	1	1	0
	NOR	2												1	1	1	1
	I/C	3, 4 5, 6				1, 2, 4								7	4	4	2
	MAJ	7, 8				7, 8				7, 8				6	2	2	1
	TS	4, 5												2	0	2	2
SRO-I #2 #5 ☒	RX		1											1	1	1	0
	NOR							1						1	1	1	1
	I/C		4, 6				3, 5, 6	2, 4						7	4	4	2
	MAJ		7, 8				7, 8	5, 6						6	2	2	1
	TS							3, 4						2	0	2	2
SRO-I #3 #6 ☒	RX													0	1	1	0
	NOR			2					1					2	1	1	1
	I/C			3, 5	1, 2, 3 4, 5, 6				2, 4					10	4	4	2
	MAJ			7, 8	7, 8				5, 6					6	2	2	1
	TS				3, 4									2	0	2	2

Instructions:

1. Check the applicant level and enter the operating test number and Form ES-D-1 event numbers for each event type; TS are not applicable for RO applicants. ROs must serve in both the "at-the-controls (ATC)" and "balance-of-plant (BOP)" positions; Instant SROs must serve in both the SRO and the ATC positions, including at least two instrument or component (I/C) malfunctions and one major transient in the ATC position. If an Instant SRO additionally serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.
2. Reactivity manipulations may be conducted under normal or *controlled* abnormal conditions (refer to Section D.5.d) but must be significant per Section C.2.a of Appendix D. (*) Reactivity and normal evolutions may be replaced with additional instrument or component malfunctions on a 1-for-1 basis.
3. Whenever practical, both instrument and component malfunctions should be included; only those that require verifiable actions that provide insight to the applicant's competence count toward the minimum requirements specified for the applicant's license level in the right-hand columns.

Facility: Dresden	Date of Examination: 3/8/10	Operating Test No.: 2010-301

Competencies	APPLICANTS															
	RO #1 ☒				RO #2 ☒				SRO-U ☒				RO ☐ SRO-I ☐ SRO-U ☐			
	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 – 8	1 – 8			1 – 8	1 – 8			1 – 8	1 – 8						
Comply With and Use Procedures (1)	1 – 8	1 – 8			1 – 8	1 – 8			1 – 8	1 – 8						
Operate Control Boards (2)	1, 4, 5, 7, 8	3, 5, 6, 7, 8			2, 3, 6, 7, 8	1, 2, 4, 7, 8										
Communicate and Interact	1 – 8	1 – 8			1 – 8	1 – 8			1 – 8	1 – 8						
Demonstrate Supervisory Ability (3)									1 – 8	1 – 8						
Comply With and Use Tech Specs. (3)									4, 6	3, 4						

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: Dresden	Date of Examination: 3/8/10	Operating Test No.: 2010-301

Competencies	APPLICANTS															
	SRO-I ☒ #1 & #4				SRO-I ☒ #2 & #5				SRO-I ☒ #3 & #6				RO ☐ SRO-I ☐ SRO-U ☐			
	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 – 8	1 – 8	1 – 6		1 – 8	1 – 8	1 – 6		1 – 8	1 – 8	1 – 6					
Comply With and Use Procedures (1)	1 – 8	1 – 8	1 – 6		1 – 8	1 – 8	1 – 6		1 – 8	1 – 8	1 – 6					
Operate Control Boards (2)		1, 2, 4, 7, 8			1, 4, 5, 7, 8	3, 5, 6, 7, 8			2, 3, 6, 7, 8		1, 2, 4, 5, 6					
Communicate and Interact	1 – 8	1 – 8	1 – 6		1 – 8	1 – 8	1 – 6		1 – 8	1 – 8	1 – 6					
Demonstrate Supervisory Ability (3)	1 – 8						1 – 6			1 – 8						
Comply With and Use Tech Specs. (3)	4, 6						3, 4			3, 4						

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.

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

Facility: Dresden Date of Exam: 3/8/10 Exam Level: RO ☒ SRO ☒

	Item Description	Initial a	Initial b*	Initial c#
1.	Questions and answers are technically accurate and applicable to the facility.	✓	GM	RKW
2.	a. NRC K/As are referenced for all questions. b. Facility learning objectives are referenced as available.	✓	GM	RKW
3.	SRO questions are appropriate in accordance with Section D.2.d of ES-401	✓	GM	RKW
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).			RKW
5.	Question duplication from the license screening/audit exam was controlled as indicated below (check the item that applies) and appears appropriate: X 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)	✓	GM	RKW
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: 45 / 13; Modified: 4 / 0; New: 26 / 12	✓	GM	RKW
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: 34 / 6; C/A: 41 / 19	✓	GM	RKW
8.	References/handouts provided do not give away answers or aid in the elimination of distractors.	✓	GM	RKW
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	✓	GM	RKW
10.	Question psychometric quality and format meet the guidelines in ES Appendix B.	✓	GM	RKW
11.	The exam contains the required number of one-point, multiple choice items; the total is correct and agrees with value on cover sheet	✓	GM	RKW

	Printed Name / Signature	Date
a. Author	FRANK FERRERO / Frank Ferrero	1-7-10
b. Facility Reviewer (*)	GLEN K. MORROW / Glen K. Morrow	1-8-10
c. NRC Chief Examiner (#)	Raymond Watson / Raymond Keith Watson	1/27/2010
d. NRC Regional Supervisor	Hironori Peterson / Hironori Peterson	3/2/10

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.