

**2009 POINT BEACH NUCLEAR PLANT**

**INITIAL EXAMINATION**

**OUTLINE SUBMITTAL**



**FPL Energy**

**Point Beach Nuclear Plant**

FPL Energy Point Beach, LLC, 6610 Nuclear Road, Two Rivers, WI 54241

February 12, 2009

NRC 2009-0019

Mr. Hironori Peterson, Chief  
Operations Branch  
U. S. Nuclear Regulatory Commission  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352

Point Beach Nuclear Plant, Units 1 and 2  
Dockets 50-266 and 50-301  
Renewed License Nos. DPR-24 and DPR-27

Initial Operator License Examination Outline

Reference: NRC to FPL Energy Point Beach, LLC, Letter dated January 20, 2009

In accordance with the requirements listed in the referenced letter, FPL Energy Point Beach, LLC is submitting the initial license examination outline for the Point Beach Nuclear Plant. This submittal is made in accordance with the provisions of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9. The initial license examination is scheduled for May 11-16, 2009. The following materials are enclosed:

- One Form ES-201-2, Examination Outline Quality Checklist
- Three Forms QF-1071-01/02, Security Agreements (ES-201-3 equivalent)
- Two Forms ES-301-1, Administrative topics Outline (one each for Reactor Operator [RO] and Senior Reactor Operator [SRO])
- Three Forms ES-301-2, Control Room/In-Plant Systems Outline (RO, SRO-I and SRO-U)
- Three Forms ES-301-5, Transient and Event Checklist (one for each crew)
- Four Forms ES-D-1, Scenario Outline (one for each projected scenario)
- Two Forms ES-401-2, Pressurized Water Reactor (PWR) Examination Outline (one each for Reactor Operator [RO] and Senior Reactor Operator [SRO]), and one associated Form ES-401-3, Generic Knowledge and Abilities Outline (Tier 3)
- One Form ES-401-4, Record of Rejected Knowledge, Skills and Abilities
- One Description of Random Sampling Methodology, and Knowledge and Ability Suppression Report

**FEB 13 2009**

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**ENCLOSURE TO BE WITHHELD FROM PUBLIC DISCLOSURE UNTIL EXAMINATIONS ARE COMPLETE**

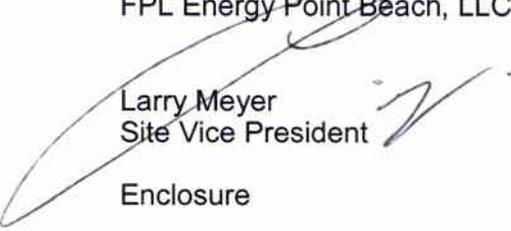
U. S. Nuclear Regulatory Commission  
Page 2

Pursuant to the provisions of NUREG-1021, Revision 9, these materials shall be withheld from public disclosure until after the examinations are complete.

Please contact Mr. Randall Amundson at 920/755-6860 if you have questions regarding this submittal.

Very truly yours,

FPL Energy Point Beach, LLC

  
Larry Meyer  
Site Vice President

Enclosure

**ENCLOSURE**

**FPL ENERGY POINT BEACH, LLC  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2**

**INITIAL OPERATOR LICENSE EXAMINATION OUTLINE**

Facility: Point Beach Nuclear Plant		Date of Examination: 5/11/2009		
Item	Task Description	Initials		
		a	b*	c#
1. W R I T T E N	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.	CS	TM	MGB
	b. Assess whether the outline was systematically and randomly prepared in accordance with Section D.1 of ES-401 and whether all K/A categories are appropriately sampled.	CS	TM	MGB
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.	CS	TM	MGB
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.	CS	TM	MGB
2. S I M U L A T O R	a. Using Form ES-301-5, verify that the proposed scenario sets cover the required number of normal evolutions, instrument and component failures, technical specifications, and major transients.	CS	TM	MGB
	b. Assess whether there are enough scenario sets (and spares) to test the projected number and mix of applicants in accordance with the expected crew composition and rotation schedule without compromising exam integrity, and ensure that each applicant can be tested using at least one new or significantly modified scenario, that no scenarios are duplicated from the applicants' audit test(s), and that scenarios will not be repeated on subsequent days.	CS	TM	MGB
	c. To the extent possible, assess whether the outline(s) conform(s) with the qualitative and quantitative criteria specified on Form ES-301-4 and described in Appendix D.	CS	TM	MGB
3. W / T	a. Verify that the systems walk-through outline meets the criteria specified on Form ES-301-2: (1) the outline(s) contain(s) the required number of control room and in-plant tasks distributed among the safety functions as specified on the form (2) task repetition from the last two NRC examinations is within the limits specified on the form (3) no tasks are duplicated from the applicants' audit test(s) * (4) the number of new or modified tasks meets or exceeds the minimums specified on the form (5) the number of alternate path, low-power, emergency, and RCA tasks meet the criteria on the form.	CS	TM	MGB
	b. Verify that the administrative outline meets the criteria specified on Form ES-301-1: (1) the tasks are distributed among the topics as specified on the form (2) at least one task is new or significantly modified (3) no more than one task is repeated from the last two NRC licensing examinations	CS	TM	MGB
	c. Determine if there are enough different outlines to test the projected number and mix of applicants and ensure that no items are duplicated on subsequent days.	CS	TM	MGB
4. G E N E R A L	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.	CS	TM	MGB
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.	CS	TM	MGB
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.	CS	TM	MGB
	d. Check for duplication and overlap among exam sections.	CS	TM	MGB
	e. Check the entire exam for balance of coverage.	CS	TM	MGB
	f. Assess whether the exam fits the appropriate job level (RO or SRO).	CS	TM	MGB
a. Author	Andrew K. Zimmers		Date: 2/10/09	
b. Facility Reviewer (*)	Thomas L. Linn		2/10/09	
c. NRC Chief Examiner (#)	Michael E. Bielby / Michael P. Bully		2/18/09	
d. NRC Supervisor	Amanda Petersen		2/19/09	
Note:	# Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required. * Not applicable for NRC-prepared examination outlines			

\* Audit exams not available at this time, will verify during validation week. 7/13 2/18/09

Facility: <u>Point Beach</u> Examination Level: <b>RO</b>		Date of Examination: <u>5/11/2009</u> Operating Test Number: <u>2009-01</u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	S, N	Return an Instrument to Service  2.1.20 (4.6/4.6) Ability to interpret and execute procedure steps
Conduct of Operations	S, D	Perform Pressurizer Heater Energy Input Test  2.1.25 (3.9/4.2) Ability to interpret reference materials, such as graphs, curves, tables, etc.
Equipment Control		None
Radiation Control	R, D, P	Perform and RCS Leak Rate Determination (2007 ILT Exam)  2.3.13 (3.4/3.8) Knowledge of radiological safety procedures pertaining to licensed operator duties, such as response to radiation monitor alarms, containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc.
Emergency Procedures/Plan	R, D	Supply The TSC With Emergency Power  2.4.35 (3.8/4.0) Knowledge of local auxiliary operator tasks during an emergency and the resultant operational effects.
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
* Type Codes & Criteria: (C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1; randomly selected)		

Facility: <u>Point Beach</u> Examination Level: <b>SRO</b>		Date of Examination: <u>5/11/2009</u> Operating Test Number: <u>2009-01</u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	S, N	Return an Instrument to Service 2.1.20 (4.6/4.6) Ability to interpret and execute procedure steps
Conduct of Operations	S, D	Perform Pressurizer Heater Energy Input Test 2.1.25 (3.9/4.2) Ability to interpret reference materials, such as graphs, curves, tables, etc.
Equipment Control	R, D	Review a Danger Tag Series For Accuracy 2.2.13 (4.1/4.3) Knowledge of tagging and clearance procedures
Radiation Control	R, N	Remove an RMS Channel from Service 2.3.13 (3.4/3.8) Knowledge of radiological safety procedures pertaining to licensed operator duties, such as response to radiation monitor alarms, containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc.
Emergency Procedures/Plan	R, M	Perform Required Notifications 2.4.38 (2.4/4.4) Ability to take actions called for in the facility emergency plan, including supporting or acting as emergency coordinator if required.
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
* Type Codes & Criteria: <ul style="list-style-type: none"> <li>(C)ontrol room, (S)imulator, or Class(R)oom</li> <li>(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs &amp; RO retakes)</li> <li>(N)ew or (M)odified from bank (≥ 1)</li> <li>(P)revious 2 exams (≤ 1; randomly selected)</li> </ul>		

Facility: <u>Point Beach</u>		Date of Examination: <u>5/11/2009</u>	
Examination Level: <u>RO</u>		Operating Test Number: <u>2009-01</u>	
Control Room Systems <sup>@</sup> (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)			
System / JPM Title		Type Code*	Safety Function
a. <b>Control Rod Drive System</b> / Perform Rod Exercise Test (2005 ILT Exam) 001.K4.02 (3.8/3.8), 001.A3.05 (3.5/3.5), 001.A4.03 (4.0/3.7)		A, D, S	1
b. <b>Engineered Safety Features Actuation System</b> / Respond to loss of sump recirc E11 EA2.2 (3./4.2)		A, D, EN, S	2
c. <b>Emergency Core Cooling System</b> / Drain SI Accumulator 006 K2.04 (3.6/3.8)		D, S	3
d. <b>Main Turbine Generator System</b> / Synchronize generator to grid 062 A4.07 (3.1/3.1)		D, L, S	4S
e. <b>Reactor Coolant Pump</b> / RCP Malfunction (2007 ILT Exam) 015/017.K3 (3.7/4.0)		A, D, S	4P
f. <b>Pressurizer Relief tank</b> / Purge the PRT 007 A1.01 (2.9/3.1)		L, N, S	5
g. <b>A.C. Electrical Distribution System</b> / Secure from Main Transformer Backfeed 062 A4.01 (3.3/3.1)		L, N, S	6
h. <b>Nuclear Instrumentation System</b> / Adjust Nuclear Instruments. (2005 ILT Exam) 015 A1.01 (3.5/3.8)		D, S	7
In-Plant Systems <sup>@</sup> (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)			
i. <b>A. C. Electrical Distribution System</b> / Locally Operate Gas Turbine APE 068 AA1.10 (3.7/3.9)		A, N, E	6
j. <b>Steam Generator System</b> / Locally isolate S/G per EOP 3 APE 040 AA1.03 (4.3/4.3)		D, E, R	4P
k. <b>Auxiliary Feedwater System</b> / Line up alternate bearing cooling 061 K4.13 (2.7/2.9), 2.4.34 (4.2/4.1)		A, D, E	4S
<p><sup>@</sup> All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.</p>			
* Type Codes		Criteria for RO / SRO-I / SRO-U	
(A)lternate path		4-6 / 4-6 / 2-3	
(C)ontrol room			
(D)irect from bank		≤ 9 / ≤ 8 / ≤ 4	
(E)mergency or abnormal in-plant		≥ 1 / ≥ 1 / ≥ 1	
(EN)gineered safety feature		- / - / ≥ 1 (control room system)	
(L)ow-Power / Shutdown		≥ 1 / ≥ 1 / ≥ 1	
(N)ew or (M)odified from bank including 1(A)		≥ 2 / ≥ 2 / ≥ 1	
(P)revious 2 exams		≤ 3 / ≤ 3 / ≤ 2 (randomly selected)	
(R)CA		≥ 1 / ≥ 1 / ≥ 1	
(S)imulator			

Facility: <u>Point Beach</u>		Date of Examination: <u>5/11/2009</u>	
Examination Level: <u>SRO-I</u>		Operating Test Number: <u>2009-01</u>	
Control Room Systems <sup>@</sup> (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)			
System / JPM Title		Type Code*	Safety Function
a. <b>Control Rod Drive System</b> / Perform Rod Exercise Test (2005 ILT Exam) 001.K4.02 (3.8/3.8), 001.A3.05 (3.5/3.5), 001.A4.03 (4.0/3.7)		A, D, S	1
b. <b>Engineered Safety Features Actuation System</b> / Respond to loss of sump recirc E11 EA2.2 (3./4.2)		A, D, EN, S	2
c. <b>Emergency Core Cooling System</b> / Drain SI Accumulator 006 K2.04 (3.6/3.8)		D, S	3
d. <b>Main Turbine Generator System</b> / Synchronize generator to grid 062 A4.07 (3.1/3.1)		D, L, S	4S
e. <b>Reactor Coolant Pump</b> / RCP Malfunction (2007 ILT Exam) 015/017.K3 (3.7/4.0)		A, D, S	4P
g. <b>A.C. Electrical Distribution System</b> / Secure from Main Transformer Backfeed 062 A4.01 (3.3/3.1)		L, N, S	6
h. <b>Nuclear Instrumentation System</b> / Adjust Nuclear Instruments. (2005 ILT Exam) 015 A1.01 (3.5/3.8)		D, S	7
In-Plant Systems <sup>@</sup> (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)			
i. <b>A. C. Electrical Distribution System</b> / Locally Operate Gas Turbine APE 068 AA1.10 (3.7/3.9)		A, N, E	6
j. <b>Steam Generator System</b> / Locally isolate S/G per EOP 3 APE 040 AA1.03 (4.3/4.3)		D, E, R	4P
k. <b>Auxiliary Feedwater System</b> / Line up alternate bearing cooling 061 K4.13 (2.7/2.9), 2.4.34 (4.2/4.1)		A, D, E	4S
<p><sup>@</sup> All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.</p>			
* Type Codes	Criteria for RO / SRO-I / SRO-U		
(A)lternate path (C)ontrol room (D)irect from bank (E)mergency or abnormal in-plant (EN)gineered safety feature (L)ow-Power / Shutdown (N)ew or (M)odified from bank including 1(A) (P)revious 2 exams (R)CA (S)imulator	<p>4-6 / 4-6 / 2-3</p> <p>≤ 9 / ≤ 8 / ≤ 4</p> <p>≥ 1 / ≥ 1 / ≥ 1</p> <p>- / - / ≥ 1 (control room system)</p> <p>≥ 1 / ≥ 1 / ≥ 1</p> <p>≥ 2 / ≥ 2 / ≥ 1</p> <p>≤ 3 / ≤ 3 / ≤ 2 (randomly selected)</p> <p>≥ 1 / ≥ 1 / ≥ 1</p>		

Facility: <u>Point Beach</u>		Date of Examination: <u>5/11/2009</u>
Examination Level: <b>SRO-U</b>		Operating Test Number: <u>2009-01</u>
Control Room Systems <sup>@</sup> (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
b. <i>Engineered Safety Features Actuation System</i> / Respond to loss of sump recirc E11 EA2.2 (3./4.2)	A, D, EN, S	2
d. <i>Main Turbine Generator System</i> / Synchronize generator to grid 062 A4.07 (3.1/3.1)	D, L, S	4S
h. <i>Nuclear Instrumentation System</i> / Adjust Nuclear Instruments. (2005 ILT Exam) 015 A1.01 (3.5/3.8)	D, S	7
In-Plant Systems <sup>@</sup> (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. <i>A. C. Electrical Distribution System</i> / Locally Operate Gas Turbine APE 068 AA1.10 (3.7/3.9)	A, N, E	6
j. <i>Steam Generator System</i> / Locally isolate S/G per EOP 3 APE 040 AA1.03 (4.3/4.3)	D, E, R	4P
<p>@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.</p>		
* Type Codes	Criteria for RO / SRO-I / SRO-U	
(A)lternate path	4-6 / 4-6 / 2-3	
(C)ontrol room		
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4	
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1	
(EN)gineered safety feature	- / - / ≥ 1 (control room system)	
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1	
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1	
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)	
(R)CA	≥ 1 / ≥ 1 / ≥ 1	
(S)imulator		

CREW A

Facility: Point Beach Nuclear Plant			Date of Exam: 5/11/2009			Operating Test No.: 2009-01												
A P P L I C A N T	E V E N T T Y P E	Scenarios												T O T A L	M I N I M U M (*)			
		1			2			3			4							
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N							
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P					
RO <input type="checkbox"/>	RX				4										1	1	1	0
SRO-I <input type="checkbox"/>	NOR	4						1							2	1	1	1
<input checked="" type="checkbox"/>	I/C	1,2			1,3			2							5	4	4	2
SRO-U <input type="checkbox"/>	MAJ	5			5			4							3	2	2	1
	TS	1,3						2,3							4	0	2	2
RO <input type="checkbox"/>	RX							1							1	1	1	0
SRO-I <input type="checkbox"/>	NOR		4	4											2	1	1	1
<input checked="" type="checkbox"/>	I/C		1,3,6,7	1,3,6				2							8	4	4	2
SRO-U <input type="checkbox"/>	MAJ		5	5				4							3	2	2	1
	TS			2,3											2	0	2	2
RO <input type="checkbox"/>	RX	4													1	1	1	0
SRO-I <input type="checkbox"/>	NOR					4			1						2	1	1	1
<input type="checkbox"/>	I/C		2,6		6,7			5,6							6	4	4	2
SRO-U <input type="checkbox"/>	MAJ		5		5			4							3	2	2	1
	TS															0	2	2
RO <input checked="" type="checkbox"/>	RX															1	1	0
SRO-I <input type="checkbox"/>	NOR															1	1	1
<input type="checkbox"/>	I/C															4	4	2
SRO-U <input type="checkbox"/>	MAJ															2	2	1
	TS															0	2	2
Instructions:																		
<ol style="list-style-type: none"> <li>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 <i>additionally</i> serves in the BOP position, one I/C malfunction can be credited toward the two I/C malfunctions required for the ATC position.</li> <li>Reactivity manipulations may be conducted under normal or <i>controlled</i> 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.</li> <li>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.</li> </ol>																		

**CREW B**

Facility: Point Beach Nuclear Plant      Date of Exam: 5/11/2009      Operating Test No.: 2009-01

A P P L I C A N T	E V E N T  T Y P E	Scenarios												T O T A L	M I N I M U M(*)					
		1			2			3			4				R	I	U			
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N									
		S R O	A T C	B O P																
RO	RX					4											1	1	1	0
<input checked="" type="checkbox"/>	NOR	4								1							2	1	1	1
SRO-I	I/C	1,2				1,3				5,6							6	4	4	2
<input type="checkbox"/>	MAJ	5				5				4							3	2	2	1
SRO-U	TS	1,3															2	0	2	2
RO	RX								1								1	1	1	0
<input type="checkbox"/>	NOR		4	4													2	1	1	1
SRO-I	I/C		1,3,6,7	1,3,6					2								8	4	4	2
<input checked="" type="checkbox"/>	MAJ		5	5					4								3	2	2	1
SRO-U	TS			2,3													2	0	2	2
RO	RX		4														1	1	1	0
<input type="checkbox"/>	NOR						4	1									2	1	1	1
SRO-I	I/C		2,6			6,7	2										5	4	4	2
<input type="checkbox"/>	MAJ		5			5	4										3	2	2	1
SRO-U	TS						2,3										2	0	2	2
<input checked="" type="checkbox"/>																				
RO	RX																	1	1	0
<input type="checkbox"/>	NOR																	1	1	1
SRO-I	I/C																	4	4	2
<input type="checkbox"/>	MAJ																	2	2	1
SRO-U	TS																	0	2	2
<input type="checkbox"/>																				

Instructions:

- 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.
- 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.
- 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.

**CREW C**

Facility: Point Beach Nuclear Plant		Date of Exam: 5/11/2009		Operating Test No.: 2009-01													
A P P L I C A N T	E V E N T  T Y P E	Scenarios												T O T A L	M I N I M U M(*)		
		1			2			3			4				R	I	U
		C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N			C R E W P O S I T I O N						
		S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P	S R O	A T C	B O P				
<input type="checkbox"/> RO	RX		4											1	1	1	0
<input type="checkbox"/> SRO-I	NOR					4								1	1	1	1
<input checked="" type="checkbox"/> SRO-U	I/C		2,6			6,7								4	4	4	2
<input type="checkbox"/> SRO-U	MAJ		5			5								2	2	2	1
<input type="checkbox"/> SRO-U	TS													0	0	2	2
<input type="checkbox"/> RO	RX					4								1	1	1	0
<input type="checkbox"/> SRO-I	NOR	4												1	1	1	1
<input checked="" type="checkbox"/> SRO-U	I/C	1,2				1,3								4	4	4	2
<input type="checkbox"/> SRO-U	MAJ	5				5								2	2	2	1
<input type="checkbox"/> SRO-U	TS	1,3												2	0	2	2
<input type="checkbox"/> RO	RX													0	1	1	0
<input type="checkbox"/> SRO-I	NOR		4	4										2	1	1	1
<input checked="" type="checkbox"/> SRO-U	I/C		1,3,6,7	1,3,6										7	4	4	2
<input type="checkbox"/> SRO-U	MAJ		5	5										2	2	2	1
<input type="checkbox"/> SRO-U	TS			2,3										2	0	2	2
<input type="checkbox"/> RO	RX														1	1	0
<input type="checkbox"/> SRO-I	NOR														1	1	1
<input type="checkbox"/> SRO-U	I/C														4	4	2
<input type="checkbox"/> SRO-U	MAJ														2	2	1
<input type="checkbox"/> SRO-U	TS														0	2	2

**Instructions:**

- 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.
- 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.
- 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 Name: Point Beach Nuclear Plant														Date of Exam: 5/11/2009			
Tier	Group	RO K/A Category Points											SRO-Only Points				
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A 2	G *	Total	
1. Emergency & Abnormal Plant Evolutions	1	3	3	3	N/A			3	3	N/A			3	18	3	3	6
	2	1	2	2	N/A			2	1	N/A			1	9	2	2	4
	Tier Totals	4	5	5	N/A			5	4	N/A			4	27	5	5	10
2. Plant Systems	1	3	2	3	2	2	1	2	2	3	4	4	28	2	3	5	
	2	1	0	1	1	0	1	1	2	1	1	1	10	1	1	1	3
	Tier Totals	4	2	4	3	2	2	3	4	4	5	5	38	4	4	8	
3. Generic Knowledge and Categories		Abilities			1	2	3	4	10				1	2	3	4	7
					3	2	3	2					2	1	2	2	

Note: 1. Ensure that at least two topics from every applicable K/A category are sampled within each tier of the RO and SRO-only outlines (i.e., except for one category in Tier 3 of the SRO-only outline, the "Tier Totals" in each K/A category shall not be less than two).

2. The point total for each group and tier in the proposed outline must match that specified in the table. The final point total for each group and tier may deviate by ±1 from that specified in the table based on NRC revisions. The final RO exam must total 75 points and the SRO-only exam must total 25 points.

3. Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems that are not included on the outline should be added. Refer to Section D.1.b of ES-401 for guidance regarding the elimination of inappropriate K/A statements.

4. Select topics from as many systems and evolutions as possible; sample every system or evolution in the group before selecting a second topic for any system or evolution.

5. Absent a plant-specific priority, only those K/As having an importance rating (IR) of 2.5 or higher shall be selected. Use the RO and SRO ratings for the RO and SRO-only portions, respectively.

6. Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.

7.\* The generic (G) K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system. Refer to Section D.1.b of ES-401 for the applicable K/As.

8. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IRs) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above; if fuel handling equipment is sampled in other than Category A2 or G\* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note #1 does not apply). Use duplicate pages for RO and SRO-only exams.

9. For Tier 3, select topics from Section 2 of the K/A catalog, and enter the K/A numbers, descriptions, IRs, and point totals (#) on Form ES-401-3. Limit SRO selections to K/As that are linked to 10 CFR 55.43.

ES-401		PWR Examination Outline							Form ES-401-2	
Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (RO)										
Q#	E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
RO1	000007 Reactor Trip - Stabilization - Recovery / 1						04. 02	Knowledge of system set points, interlocks and automatic actions associated with EOP entry conditions	4.5	1
RO2	000008 Pressurizer Vapor Space Accident / 3	0 1						Thermodynamics and flow characteristics of open or leaking valves	3.2	1
RO3	000009 Small Break LOCA / 3		0 3					S/Gs	3	1
RO4	000011 Large Break LOCA / 3			1 0				PTS limits on RCS pressure and temperature	3.7	1
	000015 RCP Malfunctions / 4									0
	000017 RCP Malfunctions (Loss of RC Flow) / 4									
RO5	000022 Loss of Rx Coolant Makeup / 2				0 4			Speed demand controller and running indicators (positive displacement pump)	3.3	1
RO6	000025 Loss of RHR System / 4					0 3		Increasing reactor building sump level	3.6	1
RO7	000026 Loss of Component Cooling Water / 8						01. 31	Ability to locate control room switches, controls, and indications, and to determine that they correctly reflect the desired plant lineup.	4.6	1
RO8	000027 Pressurizer Pressure Control System Malfunction / 3	0 1						Definition of saturation temperature	3.1	1
RO9	000029 ATWS / 1		0 6					Breakers, relays, and disconnects	2.9	1
RO10	000038 Steam Gen. Tube Rupture / 3			0 8				Criteria for securing RCP	4.1	1
	000040 Steam Line Rupture - Excessive Heat Transfer / 4									0
	WE12 Uncontrolled Depressurization of all Steam Generators / 4									
RO11	000054 (CE/E06) Loss of Main Feedwater / 4				0 3			AFW auxiliaries, including oil cooling water supply	3.5	1
	000055 Station Blackout / 6									0
RO12	000056 Loss of Off-site Power / 6					3 4		Rod bottom lights	4.1	1
RO13	000057 Loss of Vital AC Inst. Bus / 6						02. 42	Ability to recognize system parameters that are entry-level conditions for Technical Specifications.	3.9	1
	000058 Loss of DC Power / 6									0
	000062 Loss of Nuclear Svc Water / 4									0
RO14	000065 Loss of Instrument Air / 8			0 8				Actions contained in EOP for loss of instrument air	3.7	1
RO15	W/E04 LOCA Outside Containment / 3		0 2					Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems, and relations between the proper operation of these systems to the operation of the facility	3.8	1
RO16	W/E11 Loss of Emergency Coolant Recirc. / 4	0 2						Normal, abnormal and emergency operating procedures associated with Loss of Emergency Coolant Recirculation	3.6	1
RO17	BW/E04; W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4				0 2			Operating behavior characteristics of the facility	3.7	1
RO18	000077 Generator Voltage and Electric Grid Disturbances / 6					0 4		VARs outside the capability curve	3.6	1
K/A Category Totals:		3	3	3	3	3	3	Group Point Total:		18

ES-401		PWR Examination Outline							Form ES-401-2	
Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO)										
Q#	E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
RO19	000001 Continuous Rod Withdrawal / 1	21						Integral rod worth	2.9	1
	000003 Dropped Control Rod / 1									0
RO24	000005 Inoperable/Stuck Control Rod / 1			02				Rod insertion limits	3.6	1
RO20	000024 Emergency Boration / 1		01					Valves	2.7	1
	000028 Pressurizer Level Malfunction / 2									0
	000032 Loss of Source Range NI / 7									0
RO21	000033 Loss of Intermediate Range NI / 7			01				Termination of startup following loss of intermediate-range instrumentation	3.2	1
	000036 Fuel Handling Accident / 8									0
	000037 Steam Generator Tube Leak / 3									0
	000051 Loss of Condenser Vacuum / 4									0
	000059 Accidental Liquid RadWaste Rel. / 9									0
	000060 Accidental Gaseous Radwaste Rel. / 9									0
RO22	000061 ARM System Alarms / 7				01			Automatic actuation	3.6	1
	000067 Plant Fire On-site / 8									0
RO23	000068 Control Room Evac. / 8		07					ED/G	3.3	1
	000069 Loss of CTMT Integrity / 5									0
	W/E14 High Containment Pressure / 5									0
	000074 Inad. Core Cooling / 4									0
	W/E06 Degraded Core Cooling / 4									0
	W/E07 Saturated Core Cooling / 4									0
RO25	000076 High Reactor Coolant Activity / 9				04			Failed fuel-monitoring equipment	3.2	1
	W/E01 Rediagnosis / 3									0
	W/E02 SI Termination / 3									0
	W/E13 Steam Generator Over-pressure / 4									0
	W/E15 Containment Flooding / 5									0
	W/E16 High Containment Radiation / 9									0
	W/E03 LOCA Cooldown - Depress. / 4									0
RO26	W/E09 Natural Circulation Operations / 4					02		Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments	3.4	1
	W/E10 Natural Circulation with Steam Voide in Vessel with/without RVLIS / 4									0
RO27	W/E08 RCS Overcooling - PTS / 4						02. 25	Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits.	3.2	1
K/A Category Totals:		1	2	2	2	1	1	Group Point Total:		9

ES-401		PWR Examination Outline											Form ES-401-2		
Plant Systems - Tier 2/Group 1 (RO)															
Q#	System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
RO28	003 Reactor Coolant Pump									0	1		Seal injection flow	3.3	1
RO29	004 Chemical and Volume Control										0	4	Calculation of boron concentration changes	3.2	1
RO30	005 Residual Heat Removal											04.18	Knowledge of the specific bases for EOPs.	3.3	1
RO31	006 Emergency Core Cooling		0										Valve operators for accumulators	2.5	1
RO32	007 Pressurizer Relief/Quench Tank	0	3										RCS	3	1
RO33	008 Component Cooling Water			0	1								Loads cooled by CCWS	3.4	1
RO34	010 Pressurizer Pressure Control				0	1							Spray valve warm-up	2.7	1
RO35	012 Reactor Protection					0	1						DNB	3.3	1
RO36	013 Engineered Safety Features							0	0				Sensors and detectors, RWST level	2.7;	2
RO37	Actuation							1	6				3.6		
RO38	022 Containment Cooling							0	0				Containment humidity; Major leak in CCS	3.1;	2
RO39								3	5				3.1		
	025 Ice Condenser														0
RO40	026 Containment Spray								0	0			Loss of containment spray pump suction when in recirculation mode, possibly caused by clogged sump screen, pump inlet high temperature exceeded cavitation, voiding), or sump level below cutoff (interlock) limit; Pump starts and correct MOV positioning	3.6;	2
RO41									7	1			4.3		
RO42	039 Main and Reheat Steam									0	0		Isolation of the MRSS; Steam dump valves	3.1;	2
RO43										2	7		2.8		
RO44	059 Main Feedwater										1	04.45	Initiation of automatic feedwater isolation; Ability to prioritize and interpret the significance of each annunciator or alarm.	3.4;	2
RO45											2		4.1		
RO46	061 Auxiliary/Emergency Feedwater	0	4									02.36	RCS; Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions for operations.	3.9;	2
RO47													3.1		
RO48	062 AC Electrical Distribution	0	0										ED/G; Major system loads	4.1;	2
RO49		2	1										3.3		
RO50	063 DC Electrical Distribution			0	2								Components using DC control power	3.5	1
RO51	064 Emergency Diesel Generator				0	5							Incomplete-start relay	2.8	1
RO52	073 Process Radiation Monitoring					0	1						Radiation theory, including sources, types, units, and effects	2.5	1
RO53	076 Service Water										0	4	Emergency heat loads	3.5	1
RO54	078 Instrument Air											04.11	Knowledge of abnormal condition procedures.	4	1
RO55	103 Containment			0	1								Loss of containment integrity under shutdown conditions	3.3	1
															0
K/A Category Totals:		3	2	3	2	2	1	2	2	3	4	4	Group Point Total:	28	

ES-401		PWR Examination Outline											Form ES-401-2			
		Plant Systems - Tier 2/Group 2 (RO)														
Q#	System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#	
	001 Control Rod Drive														0	
	002 Reactor Coolant														0	
RO56	011 Pressurizer Level Control												01. 20	Ability to interpret and execute procedure steps.	4.6	1
	014 Rod Position Indication														0	
RO57	015 Nuclear Instrumentation	0 1												RPS	4.1	1
	016 Non-nuclear Instrumentation														0	
RO58	017 In-core Temperature Monitor										0 1			Indications of normal, natural, and interrupted circulation of RCS	3.6	1
	027 Containment Iodine Removal														0	
	028 Hydrogen Recombiner and Purge Control														0	
	029 Containment Purge														0	
	033 Spent Fuel Pool Cooling														0	
	034 Fuel Handling Equipment														0	
	035 Steam Generator														0	
	041 Steam Dump/Turbine Bypass Control														0	
RO60	045 Main Turbine Generator				4 6									Defeat of reactor trip by overspeed trip test lever	2.5	1
RO59	055 Condenser Air Removal			0 1										Main condenser	2.5	1
RO61	056 Condensate								0 4					Loss of condensate pumps	2.6	1
RO62	068 Liquid Radwaste						1 0							Radiation monitors	2.5	1
RO63	071 Waste Gas Disposal							0 6						Ventilation system	2.5	1
	072 Area Radiation Monitoring														0	
RO64	075 Circulating Water								0 1					Loss of intake structure	3	1
	079 Station Air														0	
RO65	086 Fire Protection											0 2		Fire detection panels	3.5	1
K/A Category Totals:		1	0	1	1	0	1	1	2	1	1	1		Group Point Total:		10

ES-401	PWR Examination Outline							Form ES-401-2		
Emergency and Abnormal Plant Evolutions - Tier 1/Group 1 (SRO)										
Q#	E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
	000007 Reactor Trip - Stabilization - Recovery / 1									0
	000008 Pressurizer Vapor Space Accident / 3									0
	000009 Small Break LOCA / 3									0
SRO1	000011 Large Break LOCA / 3						04. 20	Knowledge of the operational implications of EOP warnings, cautions, and notes.	4.3	1
SRO2	000015 RCP Malfunctions / 4						0 9	When to secure RCPs on high stator temperatures	3.5	1
	000017 RCP Malfunctions (Loss of RC Flow) / 4									
	000022 Loss of Rx Coolant Makeup / 2									0
	000025 Loss of RHR System / 4									0
SRO3	000026 Loss of Component Cooling Water / 8						01. 07	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.	4.7	1
	000027 Pressurizer Pressure Control System Malfunction / 3									0
	000029 ATWS / 1									0
	000038 Steam Gen. Tube Rupture / 3									0
SRO5	000040 Steam Line Rupture - Excessive Heat Transfer / 4						04. 50	Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.	4	1
	WE12 Uncontrolled Depressurization of all Steam Generators / 4									
	000054 (CE/E06) Loss of Main Feedwater / 4									0
SRO4	000055 Station Blackout / 6						0 6	Faults and lockouts that must be cleared prior to re-energizing buses	4.1	1
	000056 Loss of Off-site Power / 6									0
SRO6	000057 Loss of Vital AC Inst. Bus / 6						0 5	S/G pressure and level meters	3.8	1
	000058 Loss of DC Power / 6									0
	000062 Loss of Nuclear Svc Water / 4									0
	000065 Loss of Instrument Air / 8									0
	WE04 LOCA Outside Containment / 3									0
	WE11 Loss of Emergency Coolant Recirc. / 4									0
	BW/E04; W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4									0
	000077 Generator Voltage and Electric Grid Disturbances / 6									0
K/A Category Totals:		0	0	0	0	3	3	Group Point Total:		6

ES-401		PWR Examination Outline						Form ES-401-2		
Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (SRO)										
Q#	E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
	000001 Continuous Rod Withdrawal / 1									0
	000003 Dropped Control Rod / 1									0
	000005 Inoperable/Stuck Control Rod / 1									0
	000024 Emergency Boration / 1									0
	000028 Pressurizer Level Malfunction / 2									0
	000032 Loss of Source Range NI / 7									0
	000033 Loss of Intermediate Range NI / 7									0
	000036 Fuel Handling Accident / 8									0
	000037 Steam Generator Tube Leak / 3									0
	000051 Loss of Condenser Vacuum / 4									0
SRO7	000059 Accidental Liquid RadWaste Rel. / 9					05		The occurrence of automatic safety actions as a result of a high PRM system signal	3.9	1
	000060 Accidental Gaseous Radwaste Rel. / 9									0
	000061 ARM System Alarms / 7									0
	000067 Plant Fire On-site / 8									0
	000068 Control Room Evac. / 8									0
	000069 Loss of CTMT Integrity / 5									0
	W/E14 High Containment Pressure / 5									0
	000074 Inad. Core Cooling / 4									0
	W/E06 Degraded Core Cooling / 4									0
	W/E07 Saturated Core Cooling / 4									0
	000076 High Reactor Coolant Activity / 9									0
	W/E01 Rediagnosis / 3									0
	W/E02 SI Termination / 3									0
	W/E13 Steam Generator Over-pressure / 4									0
	W/E15 Containment Flooding / 5									0
	W/E16 High Containment Radiation / 9									0
SRO8	W/E03 LOCA Cooldown - Depress. / 4						02. 22	Knowledge of limiting conditions for operations and safety limits.	4.7	1
SRO9	W/E09 Natural Circulation Operations / 4					01		Facility conditions and selection of appropriate procedures during abnormal and emergency operations	3.8	1
	W/E10 Natural Circulation with Steam Voide in Vessel with/without RVLIS. / 4									
SRO10	W/E08 RCS Overcooling - PTS / 4						04. 45	Ability to prioritize and interpret the significance of each annunciator or alarm.	4.3	1
K/A Category Totals:		0	0	0	0	2	2	Group Point Total:		4

ES-401		PWR Examination Outline											Form ES-401-2		
Plant Systems - Tier 2/Group 1 (SRO)															
Q#	System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
	003 Reactor Coolant Pump														0
SRO11	004 Chemical and Volume Control												02.39 Knowledge of less than or equal to one hour Technical Specification action statements for systems.	4.5	1
	005 Residual Heat Removal														0
SRO12	006 Emergency Core Cooling								1 2				Conditions requiring actuation of ECCS	4.8	1
	007 Pressurizer Relief/Quench Tank														0
	008 Component Cooling Water														0
	010 Pressurizer Pressure Control														0
	012 Reactor Protection														0
	013 Engineered Safety Features Actuation														0
	022 Containment Cooling														0
	025 Ice Condenser														0
SRO13	026 Containment Spray												04.06 Knowledge of EOP mitigation strategies.	4.7	1
	039 Main and Reheat Steam														0
	059 Main Feedwater														0
	061 Auxiliary/Emergency Feedwater														0
	062 AC Electrical Distribution														0
	063 DC Electrical Distribution														0
	064 Emergency Diesel Generator														0
	073 Process Radiation Monitoring														0
SRO14	076 Service Water								0 1				Loss of SWS	3.7	1
	078 Instrument Air														0
SRO15	103 Containment												02.38 Knowledge of conditions and limitations in the facility license.	4.5	1
															0
K/A Category Totals:		0	0	0	0	0	0	0	2	0	0	3	Group Point Total:		5

ES-401		PWR Examination Outline											Form ES-401-2			
Plant Systems - Tier 2/Group 2 (SRO)																
Q#	System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#	
	001 Control Rod Drive														0	
	002 Reactor Coolant														0	
	011 Pressurizer Level Control														0	
SRO16	014 Rod Position Indication												01.23	Ability to perform specific system and integrated plant procedures during all modes of plant operation.	4.4	1
	015 Nuclear Instrumentation														0	
	016 Non-nuclear Instrumentation														0	
	017 In-core Temperature Monitor														0	
	027 Containment Iodine Removal														0	
	028 Hydrogen Recombiner and Purge Control														0	
	029 Containment Purge														0	
	033 Spent Fuel Pool Cooling														0	
SRO17	034 Fuel Handling Equipment					0 2								Limiting of load	2.6	1
SRO18	035 Steam Generator								0 1					Faulted or ruptured S/Gs	4.6	1
	041 Steam Dump/Turbine Bypass Control														0	
	045 Main Turbine Generator														0	
	055 Condenser Air Removal														0	
	056 Condensate														0	
	068 Liquid Radwaste														0	
	071 Waste Gas Disposal														0	
	072 Area Radiation Monitoring														0	
	075 Circulating Water														0	
	079 Station Air														0	
	086 Fire Protection														0	
K/A Category Totals:		0	0	0	0	1	0	0	1	0	0	1	Group Point Total:		3	

Facility Name: Point Beach Nuclear Plant      Date of Exam: 5/11/2009							
Q#	Category	K/A #	Topic	RO		SRO-Only	
				IR	#	IR	#
RO66	1. Conduct of Operations	2.1. 01	Knowledge of conduct of operations requirements.	3.8	1		
RO67		2.1. 09	Ability to direct personnel activities inside the control room.	2.9	1		
RO68		2.1. 39	Knowledge of conservative decision making practices.	3.6	1		
SRO19		2.1. 40	Knowledge of refueling administrative requirements.			3.9	1
SRO20		2.1. 45	Ability to identify and interpret diverse indications to validate the response of another indicator.			4.3	1
		2.1.					
		<b>Subtotal</b>			<b>3</b>		<b>2</b>
RO69	2. Equipment Control	2.2. 40	Ability to apply Technical Specifications for a system.	3.4	1		
RO70		2.2. 06	Knowledge of the process for making changes to procedures.	3	1		
SRO21		2.2. 15	Ability to determine the expected plant configuration using design and configuration control documentation, such as drawings, line-ups, tag-outs, etc.			4.3	1
		2.2.					
		2.2.					
		<b>Subtotal</b>			<b>2</b>		<b>1</b>
RO71	3. Radiation Control	2.3. 04	Knowledge of radiation exposure limits under normal or emergency conditions.	3.2	1		
RO72		2.3. 05	Ability to use radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc.	2.9	1		
RO73		2.3. 12	Knowledge of radiological safety principles pertaining to licensed operator duties, such as containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc.	3.2	1		
SRO22		2.3. 06	Ability to approve release permits.			3.8	1
SRO23		2.3. 13	Knowledge of radiological safety procedures pertaining to licensed operator duties, such as response to radiation monitor alarms, containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc.			3.8	1
		2.3.					
		<b>Subtotal</b>			<b>3</b>		<b>2</b>
RO74	4. Emergency Procedures / Plan	2.4. 09	Knowledge of low power/shutdown implications in accident (e.g., loss of coolant accident or loss of residual heat removal) mitigation strategies.	3.8	1		
RO75		2.4. 47	Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material.	4.2	1		
SRO24		2.4. 05	Knowledge of the organization of the operating procedures network for normal, abnormal, and emergency evolutions.			4.3	1
SRO25		2.4. 21	Knowledge of the parameters and logic used to assess the status of safety functions, such as reactivity control, core cooling and heat removal, reactor coolant system integrity, containment conditions, radioactivity release control, etc.			4.6	1
		2.4.					
		2.4.					
		<b>Subtotal</b>			<b>2</b>		<b>2</b>
<b>Tier 3 Point Total</b>					<b>10</b>		<b>7</b>

Facility: Point Beach Scenario No.: 1 Op-Test No.: 2009-01

Examiners: \_\_\_\_\_ Operators: \_\_\_\_\_  
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Initial Conditions: Unit 1 EOL 75% power following a load reduction for load control. 1P-29 TDAFW OOS 4 hours ago for turbine bearing replacement. 1P-2B Charging Pump is OOS due to repairs on the variable frequency drive system. Fan 1W-45 B Bus Duct Cooling fan is OOS due to motor failure.

Turnover: OP 1C, "Startup to Power Operation Unit 1" is in effect at step 5.133. Pressurizer Backup Heater group B is energized and an additional letdown orifice is in service. Protected equipment includes 1P-2A Charging Pump, 1P-2C Charging Pump, P-38A MDAFW Pump and P-38B MDAFW Pump. TSAC 3.7.5.B to restore 1P-29 to OPERABLE in 72 hours was entered 4 hours ago. The goal of the shift is to maintain current plant conditions.

Event No.	Malf. No.	Event Type*	Event Description
1		C-BOP C-SRO TS-SRO	1P-11A CCW pump trip with failure of 1P-11B auto start
2		I-RO I-SRO	VCT level transmitter 112 fails low
3		C-BOP TS-SRO	Trip of Accident Fan W1B1
4		R-RO N-BOP N-SRO	B SGFP high bearing temp and associated power reduction
5		M-ALL	B S/G feed line rupture inside containment requiring plant trip and subsequent entry into CSP-H.1
6		C-RO C-BOP	Rx Trip buttons fail on panels 1C04 and C01
7		C-BOP	P-38A MDAFW Pump fails to auto start and trips after start. P-38B MDAFW Pump fails to auto start.

\* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Facility: Point Beach Scenario No.: 2 Op-Test No.: 2009-01

Examiners: \_\_\_\_\_ Operators: \_\_\_\_\_  
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Initial Conditions: Unit 1 MOL 100% power. 1P-29 TDAFW OOS 4 hours ago for turbine bearing replacement. 1P-2B Charging Pump is OOS due to repairs on the variable frequency drive system. Fan 1W-45 B Bus Duct Cooling fan is OOS due to motor failure.

Turnover: Protected equipment includes 1P-2A Charging Pump, 1P-2C Charging Pump, P-38A MDAFW Pump and P-38B MDAFW Pump. TSAC 3.7.5.B to restore 1P-29 to OPERABLE in 72 hours was entered 4 hours ago. The goal of the shift is to maintain current plant conditions.

Event No.	Malf. No.	Event Type*	Event Description
1		C-RO C-SRO	CV-135 controller malfunction AOP 1D
2		TS-SRO	Control power relay alarm/failure B SI pump
3		C-RO C-SRO TS-SRO	Small RCS leak on B RTD loop
4		R-RO N-BOP N-SRO	Bus Duct fan failure drives downpower due to inadequate bus cooling
5		M-ALL	Large break LOCA requiring plant trip and containment sump recirc
6		C-BOP C-SRO	Failure of 1P-15A SI pump auto start
7		C-BOP	Failure of SI-852A Core Deluge to auto open

\* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor

Facility: Point Beach Scenario No.: 3 Op-Test No.: 2009-01

Examiners: \_\_\_\_\_ Operators: \_\_\_\_\_  
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Initial Conditions: Unit 1 MOL 28% power hold for Chemistry and Reactor Engineering testing from a trip 6 days ago. Control Rods are in manual for the start up. 1P-29 TDAFW OOS 4 hours ago for turbine bearing replacement. 1P-2B Charging Pump is OOS due to repairs on the variable frequency drive system. Fan 1W-45 B Bus Duct Cooling fan is OOS due to motor failure.

Turnover: OP 1C, "Startup to Power Operation Unit 1" is in effect at step 5.120. Pressurizer Backup Heater group B is energized and an addition letdown orifice is in service. Protected equipment includes 1P-2A Charging Pump, 1P-2C Charging Pump, P-38A MDAFW Pump and P-38B MDAFW Pump. TSAC 3.7.5.B to restore 1P-29 to OPERABLE in 72 hours was entered 4 hours ago. The 28% power hold is cleared and you are directed to raise power to 47% per step XYZ at a rate of 15% per hour

Event No.	Malf. No.	Event Type*	Event Description
1		R-RO N-BOP N-SRO	Raise power per OP-1C
2		I-RO TS-SRO I-SRO	PT-431 failing high
3		TS-SRO	G01 EDG alarm, low starting air pressure
4		M-ALL	B SGTR requiring plant trip
5		C-BOP	SW-2907/2908 fail to auto open
6		C-BOP	P32D SW Pump failure to auto start

\* (N)ormal, (R)eactivity, (I)nstrument, (C)omponent, (M)ajor



