EXAMINATION OUTLINE

FOR THE POINT BEACH INITIAL EXAMINATION - NOVEMBER 2005

NMC
Committed to Nuclear Excellence

Point Beach Nuclear Plant
Operated by Nuclear Management Company, LLC

August 18, 2005

NRC 2005-0101

Mr. Hironori Peterson, Branch Chief
Operator Licensing
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
License Nos. DPR-24 and DPR-27

Initial Operator License Examination Outline

Reference: NRC to NMC Letter dated July 13, 2005

In accordance with the requirements listed in the referenced letter, Nuclear Management Company, LLC (NMC) 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 November 7-18, 2005. The following materials are included in the Enclosure:

- One Form ES-201-2, Examination Outline Quality Checklist and associated Explanation of Random Generation Technique
- One Form PBF-6805, Examination Security Agreement (Form ES-201-3 equivalent)
- Two Forms ES-301-1, Administrative topics Outline (Reactor Operator [RO] and Senior Reactor Operator [SRO])
- Three Forms ES-301-2, Control Room/In-Plant Systems Outline (RO, SRO and Upgrade SRO)
- Five Forms ES-301-5, Transient and Event Checklist (one for each proposed crew)
- Four Forms ES-D-1, Scenario Outline (one for each projected scenario)
- One Form ES-401-2, PWR Examination Outline
- One Form ES-401-3, Generic Knowledge and Abilities Outline (Tier 3)
- One Form ES-401-4, Record of Rejected K/As

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AUG 2 2 2005

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 Paul Smith at (920) 755-6416 if you have any questions regarding this submittal.

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

Dennis L. Koehl
Site Vice-President, Point Beach Nuclear Plant
Nuclear Management Company, LLC

Enclosure

ENCLOSURE

POINT BEACH NUCLEAR PLANT UNITS 1 AND 2
INITIAL LICENSE EXAMINATION OUTLINE

26 Pages Follow

Facility:		Date of Examination:		
Item	Task Description	Initials a	b*	c#
1. WRITTEN	a. Verify that the outline(s) fit(s) the appropriate model, in accordance with ES-401.			
	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.			
	c. Assess whether the outline over-emphasizes any systems, evolutions, or generic topics.			
	d. Assess whether the justifications for deselected or rejected K/A statements are appropriate.			
2. SIMULATOR	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.			
	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.			
	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.			
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.			
	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			
	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.			
4. GENERAL	a. Assess whether plant-specific priorities (including PRA and IPE insights) are covered in the appropriate exam sections.			
	b. Assess whether the 10 CFR 55.41/43 and 55.45 sampling is appropriate.			
	c. Ensure that K/A importance ratings (except for plant-specific priorities) are at least 2.5.			
	d. Check for duplication and overlap among exam sections.			
	e. Check the entire exam for balance of coverage.			
	f. Assess whether the exam fits the appropriate job level (RO or SRO).			

	Printed Name/Signature	Date
a. Author	Russell Joplin RW	8/15/05
b. Facility Reviewer (*)	Thomas B. Lawson	8/15/05
c. NRC Chief Examiner (#)	Raymond K. Walton	10/25/05
d. NRC Supervisor	Hironori Peterson	11/1/05

Note: # Independent NRC reviewer initial items in Column "c"; chief examiner concurrence required.

Facility: **Point Beach Nuclear Plant** Date of Examination: **11/7-11/18/2005**
Examination Level: **SRO** Operating Test Number: **2005301**

Administrative Topic (see Note)	Type Code*	Describe activity to be performed:
Conduct of Operations	P, D, S	**Perform Quadrant Power Tilt Calculation** (2002 NRC Exam)
Conduct of Operations	N, S	***Perform Initial Conditions for Reactor Startup* Procedure**
Equipment Control	N, S	**Test High Flux at Shutdown Alarm**
Radiation Control	D, R	**Review Release Permit (Forced Vent Interruption and Restart)**
Emergency Plan	M, R	**Emergency Plan Classification**

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 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 and RO retakes)
(N)ew or (M)odified from bank (≥1)
(P)revious 2 exams (≤1; randomly selected)

Facility: **Point Beach Nuclear Plant** Date of Examination: **11/7-11/18/2005**
Examination Level: **RO** Operating Test Number: **2005301**

Administrative Topic (see Note)	Type Code*	*Describe activity to be performed:*
Conduct of Operations	P, D, S	**Perform Quadrant Power Tilt Calculation** (2002 NRC Exam)
Conduct of Operations	N, S	**Perform Initial Conditions for Reactor Startup Procedure**
Equipment Control	N, S	**Test High Flux at Shutdown Alarm**
Radiation Control	D, R (2000 NRC Exam)	**Operate Tech Support Center Ventilation System**
Emergency Plan		

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when 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 and RO retakes)
(N)ew or (M)odified from bank (≥1)
(P)revious 2 exams (≤1; randomly selected)

Facility: **Point Beach Nuclear Plant**	Date of Examination: **11/7-11/18/2005**
Exam Level : **RO**	Operating Test No: **2005301**

Control Room Systems[@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, Including 1 ESF)		
System / JPM Title	Type Code*	Safety Function
a. ***Control Rod Drive System*** / Rod Exercise Test.	A, N, S	1
b. ***Chemical & Volume Control System*** / Establish Excess Letdown.	D, S	2
c. ***Pressurizer Pressure Control System*** / Place LTOP in-service.	A, L, M, S	3
d. ***Main Feedwater System*** / Respond to a Loss of Secondary Heat Sink.	A, M, S	4 (Secondary)
e. ***Containment Spray System*** / Adjust Containment Sump pH.	N, S	5
f. ***AC Electrical Distribution*** / Perform Transfer of 4 kV Non-Vital Bus between Transformers.	D, S	6
g. ***Nuclear Instrumentation System*** / Adjust Nuclear Instruments.	D, S	7
h. ***Component Cooling Water System*** / Respond to a Loss of Component Cooling Water. (2002 NRC Exam)	A, D, P, S	8
In-Plant Systems[@] (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. ***Emergency Core Cooling System*** / Makeup to RWST during Loss of Sump Recirc Capability (2002 NRC Exam)	D, E, P, R	2
j. ***Emergency Diesel Generators*** / Locally fast start EDG. (2002 NRC Exam)	A, D, E, P	6
k. ***Residual Heat Removal System*** / Perform CCW HX alignment during Loss of Shutdown Cooling.	E, L, N, R	8

@ 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.

* 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
(L)ow-power / Shutdown	≥1 / ≥1 / ≥1
(N)ew or (M) 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: **Point Beach Nuclear Plant**	Date of Examination: **11/7-11/18/2005**
Exam Level : **SRO-I**	Operating Test No: **2005301**

Control Room Systems[@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, Including 1 ESF)

System / JPM Title	Type Code*	Safety Function
a. ***Control Rod Drive System*** / Rod Exercise Test.	A, N, S	1
b. ***Chemical & Volume Control System*** / Establish Excess Letdown.	D, S	2
c. ***Pressurizer Pressure Control System*** / Place LTOP in-service.	A, L, M, S	3
d. ***Main Feedwater System*** / Respond to a Loss of Secondary Heat Sink.	A, M, S	4 (Secondary)
e. ***Containment Spray System*** / Adjust Containment Sump pH.	N, S	5
f. ***AC Electrical Distribution*** / Perform Transfer of 4 kV Non-Vital Bus between Transformers.	D, S	6
g. ***Component Cooling Water System*** / Respond to a Loss of Component Cooling Water (2002 NRC Exam)	A, D, P, S	8
h.		

In-Plant Systems[@] (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)

i. ***Emergency Core Cooling System*** / Makeup to RWST during Loss of Sump Recirc Capability (2002 NRC Exam)	D, E, P, R	2
j. ***Emergency Diesel Generators*** / Locally fast start EDG. (2002 NRC Exam)	A, D, E, P	6
k. ***Residual Heat Removal System*** / Perform CCW HX alignment during Loss of Shutdown Cooling.	E, L, N, R	8

@ 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.

* 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
(L)ow-power / Shutdown	≥1 / ≥1 / ≥1
(N)ew or (M) 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: **Point Beach Nuclear Plant**	Date of Examination: **11/7-11/18/2005**
Exam Level : **SRO-U**	Operating Test No: **2005301**

Control Room Systems[@] (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, Including 1 ESF)

System / JPM Title	Type Code*	Safety Function
a. ***Pressurizer Pressure Control System*** / Place LTOP in-service.	A, L, M, S	3
b. ***Main Feedwater System*** / Respond to a Loss of Secondary Heat Sink	A, M, S	4 (Secondary)
c. ***Containment Spray System*** / Adjust Containment Sump pH.	N, S (ESF)	5
d.		
e.		
f.		
g.		
h.		

In-Plant Systems[@] (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)

i. ***Residual Heat Removal System*** / Perform CCW HX alignment during Loss of Shutdown Cooling.	E, L, N, R	8
j. ***Emergency Diesel Generators*** / Locally fast start EDG. (2002 NRC Exam)	A, D, E, P	6
k.		

@ 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.

* 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
(L)ow-power / Shutdown	≥1 / ≥1 / ≥1
(N)ew or (M) 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'

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

Facitily: **PBNP** Date of Exam: **11/7/2005** Operating Test No.: **2005301**

APPLICANT	EVENT TYPE	Scenarios 1 CREW POSITION SRO	1 ATC	1 BOP	2 CREW POSITION SRO	2 ATC	2 BOP	3 CREW POSITION SRO	3 ATC	3 BOP	4 CREW POSITION SRO	4 ATC	4 BOP	TOTAL	MINIMUM R	MINIMUM I	MINIMUM U
SRO-I (I-1)	RX					1								1	1	1	0
	NOR													*	1	1	1
	I/C	1,2,3				2,4,6								6	4	4	2
	MAJ	4				5								2	2	2	1
	TS	1,2												2	0	2	2
RO (R-1)	RX		3											1	1	1	0
	NOR						1							1	1	1	1
	I/C		1,5				3,7							4	4	4	2
	MAJ		4				5							2	2	2	1
	TS													0	0	2	2
SRO-U (U-1)	RX													0	1	1	0
	NOR				1									1	1	1	1
	I/C			1,2,3	2,3,4,6									7	4	4	2
	MAJ			4	5									2	2	2	1
	TS				2,3									2	0	2	2
	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														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 do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in 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.

CREW 'B'

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

Facitily: **PBNP** Date of Exam: **11/7/2005** Operating Test No.: **2005301**

APPLICANT	EVENT TYPE	Scenarios 1 CREW POSITION SRO	ATC	BOP	2 CREW POSITION SRO	ATC	BOP	3 CREW POSITION SRO	ATC	BOP	4 CREW POSITION SRO	ATC	BOP	TOTAL	MINIMUM R	I	U
SRO-I (I-2)	RX					1								1	1	1	0
	NOR													*	1	1	1
	I/C	1,2,3				2,4,6								6	4	4	2
	MAJ	4				5								2	2	2	1
	TS	1,2												2	0	2	2
RO (R-2)	RX		3											1	1	1	0
	NOR						1							1	1	1	1
	I/C		1,5				3,7							4	4	4	2
	MAJ		4				5							2	2	2	1
	TS													0	0	2	2
SRO-U (U-2)	RX													0	1	1	0
	NOR				1									1	1	1	1
	I/C			1,2,3	2,3,4,6									7	4	4	2
	MAJ			4	5									2	2	2	1
	TS				2,3									2	0	2	2
	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														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 do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in 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.

CREW 'C'

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

Facitily: **PBNP** Date of Exam: **11/7/2005** Operating Test No.: **2005301**

APPLICANT	EVENT TYPE	Scenarios 1			2			3			4			TOTAL	MINIMUM		
		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 (I-3)	RX					1								1	1	1	0
	NOR							1						1	1	1	1
	I/C	1,2,3				2,4,6		2,4,6						9	4	4	2
	MAJ	4				5		5						3	2	2	1
	TS	1,2						2,3						4	0	2	2
RO (R-3)	RX		3											1	1	1	0
	NOR						1			1				2	1	1	1
	I/C		1,5				3,7			2,3,4				7	4	4	2
	MAJ		4				5			5				3	2	2	1
	TS													0	0	2	2
RO (R-4)	RX								1					1	1	1	0
	NOR													*	1	1	1
	I/C			1,2,3					4,6					5	4	4	2
	MAJ			4					5					2	2	2	1
	TS													0	0	2	2
	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														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 do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in 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.

CREW 'D'

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

Facitily: **PBNP** Date of Exam: **11/7/2005** Operating Test No.: **2005301**

APPLICANT	EVENT TYPE	Scenarios 1 CREW POSITION SRO	ATC	BOP	2 CREW POSITION SRO	ATC	BOP	3 CREW POSITION SRO	ATC	BOP	4 CREW POSITION SRO	ATC	BOP	TOTAL	MINIMUM R	I	U
SRO-I (I-4)	RX											2		1	1	1	0
	NOR							1						1	1	1	1
	I/C							2,4,6				3		4	4	4	2
	MAJ							5				4		2	2	2	1
	TS							2,3						2	0	2	2
RO (R-5)	RX								1					1	1	1	0
	NOR													*	1	1	1
	I/C								4,6				1,2,5	5	4	4	2
	MAJ								5				4	2	2	2	1
	TS														0	2	2
	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														0	2	2
	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														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 do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in 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.

CREW 'E'

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

Facility: **PBNP** Date of Exam: **11/7/2005** Operating Test No.: **2005301**

APPLICANT	EVENT TYPE	Scenarios 1 CREW POSITION SRO	1 ATC	1 BOP	2 SRO	2 ATC	2 BOP	3 SRO	3 ATC	3 BOP	4 SRO	4 ATC	4 BOP	TOTAL	MINIMUM R	MINIMUM I	MINIMUM U
SRO-I (I-5)	RX											2		1	1	1	0
	NOR							1						1	1	1	1
	I/C							2,4,6				3		4	4	4	2
	MAJ							5				4		2	2	2	1
	TS							2,3						2	0	2	2
RO (R-6)	RX								1					1	1	1	0
	NOR													*	1	1	1
	I/C								4,6				1,2,5	5	4	4	2
	MAJ								5				4	2	2	2	1
	TS														0	2	2
	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														0	2	2
	RX														1	1	0
	NOR														1	1	1
	I/C														4	4	2
	MAJ														2	2	1
	TS														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 do one scenario, including at least two instrument or component (I/C) malfunctions and one major transient, in 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 Name: Point Beach Nuclear Date of Exam: 11/7/05

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	1	4				3	3			4	18	3	3	6
	2	0	2	2	N/A			2	1	N/A		2	9	2	2	4
	Tier Totals	3	3	6				5	4			6	27	5	5	10
2. Plant Systems	1	3	2	4	2	2	1	2	2	3	4	3	28	3	2	5
	2	1	1	1	1	1	1	1	1	0	1	1	10	1	2	3
	Tier Totals	4	3	5	3	3	2	3	3	3	5	4	38	4	4	8
3. Generic Knowledge and Abilities Categories					1		2		3		4		10	1	2	3	4	7
					3		2		3		2			2	2	1	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 ES-401, Attachment 2, 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.
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)

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	04						Decrease in reactor power following reactor trip (prompt drop and subsequent decay)	3.6	1
000008 Pressurizer Vapor Space Accident / 3	02						Change in leak rate with change in pressure	3.1	1
000009 Small Break LOCA / 3						01.32	Ability to explain and apply all system limits and precautions.	3.4	1
000011 Large Break LOCA / 3					05		Significance of charging pump operation	3.3	1
000015 RCP Malfunctions / 4			03				Sequence of events for manually tripping reactor and RCP as a result of an RCP malfunction	3.7	1
000017 RCP Malfunctions (Loss of RC Flow) / 4									
000022 Loss of Rx Coolant Makeup / 2	01						Consequences of thermal shock to RCP seals	2.8	1
000025 Loss of RHR System / 4					05		Limitations on LPI flow and temperature rates of change	3.1	1
000026 Loss of Component Cooling Water / 8									0
000027 Pressurizer Pressure Control System Malfunction / 3						01.33	Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.	3.4	1
000029 ATWS / 1				02			*Charging pump suction valves from RWST operating switch*	3.6	1
000038 Steam Gen. Tube Rupture / 3			04				Automatic actions provided by each PRM	3.9	1
000040 Steam Line Rupture - Excessive Heat Transfer / 4									1
WE12 Uncontrolled Depreessurization of all Steam Generators / 4			04				RO or SRO function within the control room team as appropriate to the assigned position, in such a way that procedures are adhered to and the limitations in the facilities license and amendments are not violated	3.5	
000054 (CE/E06) Loss of Main Feedwater / 4			02				Matching of feedwater and steam flows	3.4	1
000055 Station Blackout / 6					01		Existing valve positioning on a loss of instrument air system	3.4	1
000056 Loss of Off-site Power / 6						01.07	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.	3.7	1
000057 Loss of Vital AC Inst. Bus / 6									0
000058 Loss of DC Power / 6				02			Static inverter dc input breaker, frequency meter, ac output breaker, and ground fault detector	3.1	1
000062 Loss of Nuclear Svc Water / 4									0
000065 Loss of Instrument Air / 8				05			RPS	3.3	1
W/E04 LOCA Outside Containment / 3		01					Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features	3.5	1
W/E11 Loss of Emergency Coolant Recirc. / 4									0
BW/E04; W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4						04.31	Knowledge of annunciators alarms and indications, and use of the response instructions.	3.3	1
K/A Category Totals:	3	1	4	3	3	4	Group Point Total:		18

ES-401 PWR Examination Outline Form ES-401-2

Emergency and Abnormal Plant Evolutions - Tier 1/Group 2 (RO)

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			02				Rod insertion limits	3.6	1
000024 Emergency Boration / 1									0
000028 Pressurizer Level Malfunction / 2			05				Actions contained in EOP for PZR level malfunction	3.7	1
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				11			PZR level indicator	3.4	1
000051 Loss of Condenser Vacuum / 4						04, 50	Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.	3.3	1
000059 Accidental Liquid RadWaste Rel. / 9									0
000060 Accidental Gaseous Radwaste Rel. / 9						02, 22	Knowledge of limiting conditions for operations and safety limits.	3.4	1
000061 ARM System Alarms / 7		01					Detectors at each ARM system location	2.5	1
000067 Plant Fire On-site / 8									0
000068 Control Room Evac. / 8		02					Reactor trip system	3.7	1
000069 Loss of CTMT Integrity / 5									0
W/E14 High Containment Pressure / 5									
000074 Inad. Core Cooling / 4									0
W/E06 Degraded Core Cooling / 4									
W/E07 Saturated Core Cooling / 4									
000076 High Reactor Coolant Activity / 9									0
W/E01 Rediagnosis / 3									0
W/E02 SI Termination / 3									
W/E13 Steam Generator Over-pressure / 4									0
W/E15 Containment Flooding / 5									0
W/E16 High Containment Radiation / 9					02		Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments	3.0	1
W/E03 LOCA Cooldown - Depress. / 4				01			Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features	4.0	1
W/E09 Natural Circulation Operations / 4									0
W/E10 Natural Circulation with Steam Voide in Vessel with/without RVLIS. / 4									
W/E08 RCS Overcooling - PTS / 4									0
K/A Category Totals:	0	2	2	2	1	2	Group Point Total:		9

ES-401	PWR Examination Outline Plant Systems - Tier 2/Group 1 (RO)												Form ES-401-2	
E/APE # / Name / Safety Function	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			03						02			Feedwater and emergency feedwater; Motor current	2.8; 2.6	2
004 Chemical and Volume Control					30	24						Relationship between temperature and pressure in CVCS components during solid plant operation; Controllers and positioners	3.8; 2.5	2
005 Residual Heat Removal			06									CSS	3.1	1
006 Emergency Core Cooling		01							06			ECCS pumps; Valve lineups	3.6; 3.9	2
007 Pressurizer Relief/Quench Tank			01				03					Containment; Monitoring quench tank temperature	3.3; 2.6	2
008 Component Cooling Water	02											Loads cooled by CCWS	3.3	1
010 Pressurizer Pressure Control										01		PZR spray valve	3.7	1
012 Reactor Protection							01					Trip setpoint adjustment	2.9	1
013 Engineered Safety Features Actuation					01							Definitions of safety train and ESF channel	2.8	1
022 Containment Cooling				05								Containment cooling after LOCA destroys ventilation ducts	2.6	1
025 Ice Condenser														0
026 Containment Spray								05				Failure of chemical addition tanks to inject	3.7	1
039 Main and Reheat Steam									02			Isolation of the MRSS	3.1	1
059 Main Feedwater	02										02.01	AFW System; Ability to perform pre-startup procedures for the facility, including operating those controls associated with plant equipment that could affect reactivity.	3.4; 3.7	2
061 Auxiliary/Emergency Feedwater		02									04.04	AFW electric driven pumps; Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	3.7; 4.0	2
062 AC Electrical Distribution										03		Synchroscope, including an understanding of running and incoming voltages	2.8	1
063 DC Electrical Distribution								01				Grounds	2.5	1
064 Emergency Diesel Generator	01											AC distribution system	4.1	1
073 Process Radiation Monitoring										02		Radiation monitoring system control panel	3.7	1
076 Service Water										04	01.32	Emergency heat loads; Ability to explain and apply all system limits and precautions.	3.5; 3.4	2
078 Instrument Air				01								Manual/automatic transfers of control	2.7	1
103 Containment			02									Loss of containment integrity under normal operations	3.8	1
K/A Category Totals:	3	2	4	2	2	1	2	2	3	4	3	Group Point Total:		28

ES-401 PWR Examination Outline Form ES-401-2

Plant Systems - Tier 2/Group 2 (RO)

E/APE # / Name / Safety Function	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											04.50	Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.	3.3	1
002 Reactor Coolant						03						Reactor vessel level indication	3.1	1
011 Pressurizer Level Control														0
014 Rod Position Indication														0
015 Nuclear Instrumentation				06								Reactor trip bypasses	3.9	1
016 Non-nuclear Instrumentation								03				Interruption of transmitted signal	3.0	1
017 In-core Temperature Monitor							01					Core exit temperature	3.7	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
045 Main Turbine Generator					01							Possible presence of explosive mixture in generator if hydrogen purity deteriorates	2.8	1
055 Condenser Air Removal			01									Main condenser	2.5	1
056 Condensate														0
068 Liquid Radwaste														0
071 Waste Gas Disposal	04											Station ventilation	2.7	1
072 Area Radiation Monitoring														0
075 Circulating Water		03										Emergency/essential SWS pumps	2.6	1
079 Station Air														0
086 Fire Protection										03		Fire alarm switch	3.5	1
K/A Category Totals:	1	1	1	1	1	1	1	1	0	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)									
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					3 0		Inadequate core cooling	4.7	1
000009 Small Break LOCA / 3						04. 46	Ability to verify that the alarms are consistent with the plant conditions.	3.6	1
000011 Large Break LOCA / 3									0
000015 RCP Malfunctions / 4									0
000017 RCP Malfunctions (Loss of RC Flow) / 4									
000022 Loss of Rx Coolant Makeup / 2									0
000025 Loss of RHR System / 4						01. 22	Ability to determine Mode of Operation.	3.3	1
000026 Loss of Component Cooling Water / 8									0
000027 Pressurizer Pressure Control System Malfunction / 3									0
000029 ATWS / 1									0
000038 Steam Gen. Tube Rupture / 3						04. 01	Knowledge of EOP entry conditions and immediate action steps.	4.6	1
000040 Steam Line Rupture - Excessive Heat Transfer / 4									0
WE12 Unconrtrolled Depreessurization of all Steam Generators / 4									
000054 (CE/E06) Loss of Main Feedwater / 4					0 1		Occurrence of reactor and/or turbine trip	4.4	1
000055 Station Blackout / 6									0
000056 Loss of Off-site Power / 6									0
000057 Loss of Vital AC Inst. Bus / 6									0
000058 Loss of DC Power / 6					0 3		DC loads lost; impact on to operate and monitor plant systems	3.9	1
000062 Loss of Nuclear Svc Water / 4									0
000065 Loss of Instrument Air / 8									0
W/E04 LOCA Outside Containment / 3									0
W/E11 Loss of Emergency Coolant Recirc. / 4									0
BW/E04; W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4									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)									
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					04		Interpretation of computer in-core TC map for dropped rod location	3.4	1
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
000059 Accidental Liquid RadWaste Rel. / 9									0
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					07		PZR level	4.3	1
000069 Loss of CTMT Integrity / 5									0
W/E14 High Containment Pressure / 5									
000074 Inad. Core Cooling / 4									0
W/E06 Degraded Core Cooling / 4									
W/E07 Saturated Core Cooling / 4									
000076 High Reactor Coolant Activity / 9						01, 33	Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.	4.0	1
W/E01 Rediagnosis / 3									0
W/E02 SI Termination / 3									
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
W/E09 Natural Circulation Operations / 4									0
W/E10 Natural Circulation with Steam Voide in Vessel with/without RVLIS. / 4									
W/E08 RCS Overcooling - PTS / 4						01, 02	Knowledge of operator responsibilities during all modes of plant operation.	4.0	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)

E/APE # / Name / Safety Function	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
004 Chemical and Volume Control														0
005 Residual Heat Removal														0
006 Emergency Core Cooling														0
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											04, 46	Ability to verify that the alarms are consistent with the plant conditions.	3.6	1
025 Ice Condenser														0
026 Containment Spray								09				Radiation hazard potential of BWST	2.9	1
039 Main and Reheat Steam														0
059 Main Feedwater											02, 22	Knowledge of limiting conditions for operations and safety limits.	4.1	1
061 Auxiliary/Emergency Feedwater								06				Back leakage of MFW	3.0	1
062 AC Electrical Distribution														0
063 DC Electrical Distribution														0
064 Emergency Diesel Generator														0
073 *Process Radiation Monitoring*														0
076 Service Water														0
078 Instrument Air								01				Air dryer and filter malfunctions	2.9	1
103 Containment														0
K/A Category Totals:	0	0	0	0	0	0	0	3	0	0	2	Group Point Total:		5

ES-401 PWR Examination Outline Form ES-401-2

Plant Systems - Tier 2/Group 2 (SRO)

E/APE # / Name / Safety Function	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
014 Rod Position Indication														0
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											02. 25	Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	3.7	1
034 Fuel Handling Equipment														0
035 Steam Generator														0
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											02. 22	Knowledge of limiting conditions for operations and safety limits.	4.1	1
072 Area Radiation Monitoring														0
075 Circulating Water								0 2				Loss of circulating water pumps	2.7	1
079 Station Air														0
086 Fire Protection														0
K/A Category Totals:	0	0	0	0	0	0	0	1	0	0	2	Group Point Total:		3

ES-401	Generic Knowledge and Abilities Outline (Tier 3)				Form ES-401-3	
Facility Name: Point Beach Nuclear	Date of Exam: 11/7/05					
Category	K/A #	Topic	RO		SRO-Only	
			IR	#	IR	#
1. Conduct of *Operations*	2.1. 10	Knowledge of conditions and limitations in the facility license.	2.7	1		
	2.1. 31	*Ability to locate control room switches, controls and indications and to determine* that they are correctly reflecting the desired plant lineup.	4.2	1		
	2.1. 23	Ability to perform specific system and integrated plant procedures during all modes of plant operation.	3.9	1		
	2.1. 25	Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data.			3.1	1
	2.1. 05	Ability to locate and use procedures and directives related to shift staffing and activities.			3.4	1
	2.1.					
	Subtotal			3		2
2. Equipment Control	2.2. 30	Knowledge of RO duties in the control room during fuel handling such as alarms from fuel handling area, communication with fuel storage facility, systems operated from the control room in support of fueling operations, and supporting instrumentation.	3.5	1		
	2.2. 28	Knowledge of new and spent fuel movement procedures.	2.6	1		
	2.2. 32	Knowledge of the effects of alterations on core configuration.			3.3	1
	2.2. 07	Knowledge of the process for conducting tests or experiments not described in the safety analysis report.			3.2	1
	2.2.					
	2.2.					
	Subtotal			2		2
3. *Radiation* Control	2.3. 11	Ability to control radiation releases.	2.7	1		
	2.3. 01	Knowledge of 10 CFR: 20 and related facility radiation control requirements.	2.6	1		
	2.3. 09	Knowledge of the process for performing a containment purge.	2.5	1		
	2.3. 03	*Knowledge of SRO responsibilities* for auxiliary systems that are outside the control room (e.g., waste disposal and handling systems).			2.9	1
	2.3.					
	2.3.					
	Subtotal			3		1
4. Emergency Procedures / Plan	2.4. 03	Ability to identify post-accident instrumentation.	3.5	1		
	2.4. 45	Ability to prioritize and interpret the significance of each annunciator or alarm.	3.3	1		
	2.4. 11	Knowledge of abnormal condition procedures.			3.6	1
	2.4. 28	Knowledge of procedures relating to emergency response to sabotage.			3.3	1
	2.4.					
	2.4.					
	Subtotal			2		2
Tier 3 Point Total				10		7

Facility: **Point Beach** Scenario No.: **1** OP-Test No.: **2005301**

Examiners: _____ Operators: _____

_____ _____

_____ _____

Initial Conditions: Unit 1 is at 75% power. Power was stabilized approximately 2 hours ago after reducing load at ~12%/hour at the request of the Power System Supervisor. Boron Concentration is 815 PPM. Xenon is building in slightly. Unit 2 is at 100% power.

Turnover: G-01 EDG is out of service for annual maintenance. It was taken out of service 3 days ago and is expected to be returned to service in 3 days. G-02 is aligned to 4.16 kV buses 1A-05 and 2A-05 IAW OI-35A.

1TE-404, Loop B Hot Leg Temperature Element has failed high and has been removed from service IAW 1-SOP-IC-001 Yellow.

1RC-515, Block valve for 1RC-431C is closed due to PORV leakage. Tech Spec 3.4.11, Required Action A.1 has been completed.

1RPI is selected to alternate power (1Y02) due to planned breaker replacement on 1Y06 (Bkr 21).

Today is Sunday, present clock time is real time. An RP Tech and Chemistry Tech are on-site. ERO Maintenance personnel are working on G01.

The objective of the shift is to maintain stable plant conditions until the Power System Supervisor requests power be returned to 100%. OP-1C, Startup to Power Operation, has been prepared.

Event No.	Malf. No.	Event Type*	Event Description
1		I – ALL SRO(T)	1LT-427 Pressurizer Level Channel Fails Low
2		C – BOP SRO(T)	P-32B Service Water Pump Trip with reduced head capacity on two running SW pumps
3		C – BOP SRO R - RO	P-28B Main Feed Pump Bearing Failure (Overheat)/Power Reduction
4		M -ALL	Main Feedwater Line Break inside Containment
5		C-RO	Reactor Trip manual push buttons on 1C04 fail to operate

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

Facility: **Point Beach** Scenario No.: **2** OP-Test No.: **2005301**

Examiners: _____ Operators: _____

Initial Conditions: Unit 1 is at 100% power, MOL, equilibrium xenon conditions. Boron Concentration is 813 PPM. Unit 2 is at 100% power.

Turnover: G-01 EDG is out of service for annual maintenance. It was taken out of service 3 days ago and is expected to be returned to service in 3 days. G-02 is aligned to 4.16 kV buses 1A-05 and 2A-05 IAW OI-35A.

1TE-404, Loop B Hot Leg Temperature Element has failed high and has been removed from service IAW 1-SOP-IC-001 Yellow.

1RC-515, Block valve for 1RC-431C is closed due to PORV leakage. Tech Spec 3.4.11, Required Action A.1 has been completed.

1RPI is selected to alternate power (1Y02) due to planned breaker replacement on 1Y06 (Bkr 21).

Today is Sunday, present clock time is real time. An RP Tech and Chemistry Tech are on-site. ERO Maintenance personnel are working on G01.

The objective of the shift is to lower power to 90% for Atmospheric Dump Valve (ADV) testing.

Event No.	Malf. No.	Event Type*	Event Description
1		R – RO N – BOP N – SRO	Lower power for ADV testing
2		I – RO SRO(T)	Power Range NI Channel 41 Summing and Level Amp fails low.
3		I – BOP SRO(T)	1LT-461, 'A' Steam Generator Level Transmitter fails low.
4		C – RO SRO	'B' RCP #2 Seal Fails
5		M - ALL	'B' RCP Seal Package fails
6		C-RO SRO	SI pumps fail to auto start on SI signal.
7		C-BOP	Two Containment Rad Monitor Containment Isolation Valves fail to shut on CI signal.

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

Facility: **Point Beach** Scenario No.: **3** OP-Test No.: **2005301**

Examiners: _____ Operators: _____

_____ _____

_____ _____

Initial Conditions: Unit 1 is at ~6.5% power following a Reactor Trip recovery startup. Turbine is off line. Unit 1 is at MOL (8001 MWD/MTU), Xenon is building in slowly. Boron Concentration is 673 PPM. Currently in OP-1C, Startup to Power Operation, at step 5.26. Step 5.22 is being held open, pending shift to Main Feed Regulating Valves. Unit 2 is at 100% power.

Turnover: G-01 EDG is out of service for annual maintenance. It was taken out of service 3 days ago and is expected to be returned to service in 3 days. G-02 is aligned to 4.16 kV buses 1A-05 and 2A-05 IAW OI-35A.

1TE-404, Loop B Hot Leg Temperature Element failed high after entry into MODE 1 and removal from service IAW 0-SOP-IC-001 Yellow has just been accomplished. I&C plans to repair the channel during 28% chemistry hold.

1RC-515, Block valve for 1RC-431C is closed due to PORV leakage. Tech Spec 3.4.11, Required Action A.1 has been completed.

IRPI is selected to alternate power (1Y02) due to planned breaker replacement on 1Y06 (Bkr 21).

Today is Sunday, present clock time is real time. An RP Tech and Chemistry Tech are on-site. ERO Maintenance personnel are working on G01.

The objective of the shift is to raise power and roll the Main Turbine. Approved Reactivity Plan designates that power should be raised using Control Rods.

Event No.	Malf. No.	Event Type*	Event Description
1		R-RO N-BOP N-SRO	Raise Power and Prepare to roll the turbine.
2		I-BOP SRO(T)	1FT-413, Loop Flow Transmitter fails high.
3		C-BOP	'B' Containment Accident Fan Trips
3		T-SRO	'B' Containment Accident Fan Trips
4		C-ALL	1A05 Lockout
5		M-ALL	1X04 Lockout, Reactor Trip due to Loss of RCS Flow, G03 fails to start
6		C-RO SRO	Two rods fail to insert on trip

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

Facility: **Point Beach** Scenario No.: **4** OP-Test No.: **2005301**

Examiners: _____ Operators: _____

_____ _____

_____ _____

Initial Conditions: Unit 1 is at 28% power for chemistry hold following a startup, MOL, equilibrium xenon conditions. Boron Concentration is 1125 PPM. Unit 2 is at 100% power.

Turnover: G-01 EDG is out of service for annual maintenance. It was taken out of service 3 days ago and is expected to be returned to service in 3 days. G-02 is aligned to 4.16 kV buses 1A-05 and 2A-05 IAW OI-35A.

1TE-404, Loop B Hot Leg Temperature Element has failed high and has been removed from service IAW 1-SOP-IC-001 Yellow.

1RC-515, Block valve for 1RC-431C is closed due to PORV leakage. Tech Spec 3.4.11, Required Action A.1 has been completed.

1RPI is selected to alternate power (1Y02) due to planned breaker replacement on 1Y06 (Bkr 21).

Today is Sunday, present clock time is real time. An RP Tech and Chemistry Tech are on-site. ERO Maintenance personnel are working on G01.

The objective of the shift is to maintain stable plant conditions.

Event No.	Malf. No.	Event Type*	Event Description
1		C – BOP	1P-75 EH Pump Trips/1P-76 EH Pump fails to auto start
2		R - RO C – BOP SRO	1X01 Lockout / Turbine Trip
3		C – RO SRO	2 Dropped Rods requiring Reactor Trip
4		M - ALL	One 'A' SG Safety Valve fails open, 'A' Non-return valve sticks open and 'B' MSIV sticks open, depressurizing BOTH SGs
5		C – BOP SRO	'A' MFP fails to trip on SI/CS-466 MFRV sticks 10% open

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

During the week of October 17, 2005, I reviewed the licensee's outline submittal for the Point Beach Initial License Exam - 2005.

I did not have any comments regarding the licensee's initial outline submittal.

Raymond Keith Walton, Chief Examiner