



**North
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North Atlantic Energy Service Corporation
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The Northeast Utilities System

January 21, 2000

Docket No. 50-443

NYN-000004

AR#99016047

United States Nuclear Regulatory Commission, Region 1
Attention: Hubert J. Miller
Regional Administrator
475 Allendale Road
King of Prussia, PA 19406-1415

Seabrook Station
Proposed Senior Reactor Operator Written Exams and Operating Tests

North Atlantic Energy Service Corporation (North Atlantic) hereby forwards to Mr. D. Silk, NRC Chief Examiner, the proposed Senior Reactor Operator (SRO) written examination and operating test material. The administration of the SRO examination is scheduled for the week of March 6, 2000. The enclosed package includes the following material:

Completed Forms:

- ES-301-2, Control Room Systems and Facility Walk-Through Test Outline, (2) Rev.1.
- ES-301-3, Operating Test Quality Checklist
- ES-301-4, Simulator Scenario Quality Checklist (3)
- ES-301-5, Transient and Event Checklist (3)
- ES-301-6, Competencies Checklist (3)
- ES-401-3, PWR SRO Examination Outline, Rev.1
- ES-401-7, Written Examination Quality Checklist
- ES-D-1, Scenario Outline (5 scenarios with 1 backup)

Exam Materials:


- Category A Operating Exam (4 JPMs and two questions)
- Category B Operating Exam (13 JPMs)
- Category C Operating Exam (5 Scenarios with 1 backup)
- Written Examination (Worksheet version with copies of original questions that were modified for this exam)

The written examination and operating test material was prepared in accordance with the guidance provided in NUREG-1021, Revision 8. All of the material is being safeguarded in accordance with the guidelines of ES-201 and should be withheld from public disclosure until the examination process is completed.

Should you have any questions regarding this material, please contact Timothy C. Cassidy, Operations Training Supervisor at (603) 773-7651.

Very truly yours,

NORTH ATLANTIC ENERGY SERVICE CORP.



William A. DiProfio
Station Director

cc: w/o enclosures:

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, DC 20555-0001

United States Nuclear Regulatory Commission, Region 1
Attention: Richard J. Conte, Chief
Operator Licensing and Human Resources Branch
475 Allendale Road
King of Prussia, PA 19406-1415

R. M. Pulsifer, NRC Project Manager, Project Directorate 1-2
R. K. Lorson, NRC Senior Resident Inspector

cc: with enclosure

United States Nuclear Regulatory Commission, Region 1
Attention: Dave Silk, Chief Examiner
Operator Licensing and Human Performance Branch
475 Allendale Road
King of Prussia, PA 19406-1415

Facility: <u>Seabrook</u>		Date of Examination: <u>March 6, 2000</u>
Exam Level: <u>SRO</u>		Operating Test No.: <u>7</u>
Administrative Topic / Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Ability to apply technical specifications for a system.	New JPM to determine the TS related conditions that must be satisfied to apply the one time AOT for the CBA design modification. K/A 2.1.12 SRO 4.0
	Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data	JPM to perform an ECP calculation K/A 2.1.25 SRO 3.1
A.2	Knowledge of SRO fuel handling responsibilities	New administrative question to identify conditions requiring an SRO in the Fuel Building. K/A 2.2.29 SRO 3.8
	Knowledge of procedures and limitations involved in initial core loading	New administrative question related to requirement to have completed 1/M prior to inserting fuel assemblies into the core. K/A 2.2.31 SRO 2.9
A.3	Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure	New Administrative JPM to verify the Operations portion of a Liquid Effluent Waste Sample Request. K/A 2.3.10 SRO 3.3
A.4	Knowledge of the emergency action level thresholds and classifications.	Administrative JPM to perform ER-1.1, Classification of Emergencies, immediately after the candidate completes a simulator scenario as the Unit Supervisor.
		K/A 2.4.41 SRO 4.1

Facility: SeabrookDate of Examination: March 6, 2000Exam Level: SRO(I)Operating Test No.: 4 Rev.1

B.1 Control Room Systems		
System / JPM Title	Type Code*	Safety Function
a. 001 L0002I, RECOVER A DROPPED ROD	D/S	1
b. 040 LOUT 01 AP, DEPRESSURIZE THE RCS USING AUXILIARY SPRAY (E-3)	D/S/A	3
c. E09 LOUT 02, START A REACTOR COOLANT PUMP (ES-0.1)	N/S	4
d. 028 L0084I, START HYDROGEN RECOMBINERS	D/S	5
e. 064 LOUT 03, RESTORATION OF OFF-SITE POWER TO BUS E6 **	D/S	6
f. 015 LOUT 04 AP, POWER RANGE CHANNEL NI FAILURE ** This JPM will be performed by SRO candidate I2	D/S/A	7
g. 016 LOUT 05 AP, SG LEVEL CHANNEL FAILURE This JPM will be performed by SRO candidate I1	N/S/A	7
h. 034 L0063I, PLACE FAH IN THE FUEL HANDLING MODE	D/S/A	8
B.2 Facility Walk-Through		
a. 004 L0001I AP, LOCAL MANUAL RAPID BORATION	D/R/L/A	1
b. 062 L0120I AP, DC START OF ELGAR UPS	D/A	6
c. 008 LOUT 06, ALIGN ALTERNATE COOLING TO CCP LUBE OIL COOLER	N/R	8
* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA		

** Used on the October 1998 Exam

This exam will be administered to the SRO Instants

Facility: <u>Seabrook</u>		Date of Examination: <u>March 6, 2000</u>
Exam Level: <u>SRO</u>		Operating Test No.: <u>7</u>
Administrative Topic / Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	Ability to apply technical specifications for a system.	New JPM to determine the TS related conditions that must be satisfied to apply the one time AOT for the CBA design modification. K/A 2.1.12 SRO 4.0
	Ability to obtain and interpret station reference materials such as graphs, monographs, and tables which contain performance data	JPM to perform an ECP calculation K/A 2.1.25 SRO 3.1
A.2	Knowledge of SRO fuel handling responsibilities	New administrative question to identify conditions requiring an SRO in the Fuel Building. K/A 2.2.29 SRO 3.8
	Knowledge of procedures and limitations involved in initial core loading	New administrative question related to requirement to have completed 1/M prior to inserting fuel assemblies into the core. K/A 2.2.31 SRO 2.9
A.3	Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure	New Administrative JPM to verify the Operations portion of a Liquid Effluent Waste Sample Request. K/A 2.3.10 SRO 3.3
A.4	Knowledge of the emergency action level thresholds and classifications.	Administrative JPM to perform ER-1.1, Classification of Emergencies, immediately after the candidate completes a simulator scenario as the Unit Supervisor. K/A 2.4.41 SRO 4.1

Facility: SeabrookDate of Examination: March 6, 2000Exam Level: SRO(I)Operating Test No.: 4 Rev.2**B.1 Control Room Systems**

System / JPM Title	Type Code*	Safety Function
a. 001 L0002I, RECOVER A DROPPED ROD	D/S	1
b. 040 LOUT 01 AP, DEPRESSURIZE THE RCS USING AUXILIARY SPRAY (E-3)	D/S/A	3
c. E09 LOUT 02, START A REACTOR COOLANT PUMP (ES-0.1)	N/S	4
d. 028 L0084I, START HYDROGEN RECOMBINERS	D/S	5
e. 064 LOUT 08 AP, EMERGENCY TRIP OF DIESEL GENERATOR 1B	N/S/A	6
f. 015 LOUT 04, POWER RANGE CHANNEL NI FAILURE This JPM will be performed by SRO candidate I2	M/S	7
g. 016 LOUT 05, SG LEVEL CHANNEL FAILURE This JPM will be performed by SRO candidate I1	N/S	7
h. 034 L0063I, PLACE FAH IN THE FUEL HANDLING MODE	M/S/A	8

B.2 Facility Walk-Through

a. 004 L0001I AP, LOCAL MANUAL RAPID BORATION	D/R/L	1
b. 062 L0120I AP, DC START OF ELGAR UPS	D/A	6
c. 008 LOUT 06, ALIGN ALTERNATE COOLING TO CCP LUBE OIL COOLER	N/R	8

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

This exam will be administered to the SRO Instants

Facility: SeabrookDate of Examination: March 6, 2000Exam Level: SRO(U)Operating Test No.: 5 Rev. 1**B.1 Control Room Systems**

System / JPM Title	Type Code*	Safety Function
a. 003, L0083I AP, TRIP ALL RCPs	D/S/A	3
b. 028 L0084I, START HYDROGEN RECOMBINERS	D/S	5

B.2 Facility Walk-Through

a. 005 L0130I, MANUAL OPERATION OF RHR TCV FOR MID-LOOP OPERATION **	D/L/R	4
b. 062 L0120I AP, DC START OF ELGAR UPS	D/A	6
c. 008 LOUT 06, ALIGN ALTERNATE COOLING TO CCP LUBE OIL COOLER	N/R	8

* Type Codes: (D)irect from bank, (M)odified from bank, (N)ew, (A)lternate path, (C)ontrol room, (S)imulator, (L)ow-Power, (R)CA

** Used on the October 1998 Exam

This exam will be administered to all SRO Upgrades

Facility: Seabrook Date of Exam: March 3, 2000 Exam Level: SRO Rev. 1 (Initial)													
Tier	Group	K/A Category Points											Point Total
		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G*	
1. Emergency & Abnormal Plant Evolutions	1	3	3	7				3	6			2	24
	2	2	2	4				2	5			1	16
	3	1	0	0				1	1			0	3
	Tier Totals	6	5	11				6	12			3	43
2. Plant Systems	1	2	1	1	3	3	1	1	2	2	2	1	19
	2	3	1	1	1	1	2	1	1	1	2	3	17
	3	0	0	1	2	0	0	1	0	0	0	0	4
	Tier Totals	5	2	3	6	4	3	3	3	3	4	4	40
3. Generic Knowledge and Abilities					Cat 1		Cat 2		Cat 3		Cat 4		17
					5		5		3		4		
<p>Note: 1. Ensure that at least two topics from every K/A category are sampled within each tier (i.e., the "Tier Totals" in each K/A category shall not be less than two).</p> <p>2. Actual point totals must match those specified in the table.</p> <p>3. Select topics from many systems; avoid selecting more than two or three K/A topics from a given system unless they relate to plant-specific priorities.</p> <p>4. Systems/evolutions within each group are identified on the associated outline.</p> <p>5. The shaded areas are not applicable to the category/tier.</p> <p>6.* The generic 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.</p> <p>7. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings for the RO license level, and the point totals for each system and category. K/As below 2.5 should be justified on the basis of plant-specific priorities. Enter the tier totals for each category in the table above.</p>													