

Facility: <u>Millstone Unit 2</u>		Date of Examination: <u>02/27/2017</u>
Examination Level: RO <input checked="" type="checkbox"/> SRO <input type="checkbox"/>		Operating Test Number: <u>ES17LI</u>

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
A1.1-RO Conduct of Operations <i>* Replace with Spare *</i>	R, D	K/A 2.1.23 Ability to perform specific system and integrated plant procedures during all modes of plant operation. (RO 4.3) Calculate the maximum RCS venting time to eliminate a non-condensable void in the reactor vessel.
A1.2-RO Conduct of Operations	R, M	K/A 2.1.37 Knowledge of procedures, guidelines, or limitations associated with reactivity management. (RO 4.3) Determine Shutdown Margin with one CEA not inserted and crediting xenon reactivity worth.
A1.3-RO Conduct of Operations [Spare]	R, D	K/A 2.1.7 Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation. (RO 4.4) <i>Evaluate an RCP Seal Failure</i>
A2-RO Equipment Control	R, N	K/A 2.2.12 Knowledge of surveillance procedures. (RO 3.7) Complete "A" Service Water Pump Operability Surveillance, SP 2612A-003.
A3-RO Radiation Control	R, M	K/A 2.3.7 Ability to comply with radiation work permit requirements during normal or abnormal conditions. (RO 3.5) For the task of venting a CTMT Spray pump, determine RWP clothing requirements, maximum dose and contamination levels in the area and adjacent to the valves being manipulated.

NOTE: All items (five total) are required for SROs. RO applicants require only four items unless they are retaking only the administrative topics (which would require all five items).

* 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)

** Replace with Spare*

Facility: Millstone Unit 2Date of Examination: 02/27/2017Exam Level: RO ☒SRO-I ☐SRO-U ☐Operating Test No.: ES17LI

Control Room Systems: 8 for RO; 7 for SRO-I; 2 or 3 for SRO-U

	System / JPM Title	Type Code*	Safety Function
S-1	CVCS / Emergency Boration 004/A2.14 Emergency boration (RO 3.8)	D, L, S	1
S-2	LPSI / Verify adequate Safety Injection Flow IAW EOP 2532, LOCA 006/A3.03 ESFAS-operated valves (RO 4.1)	A, L, N, S	2
S-3	PZR Pressure Control / Force Pressurizer Sprays 010/A1.07 RCS Pressure (RO 3.7)	A, M, S	3
S-4	Auxiliary Feedwater / Operate TDAFP IAW EOP 2541, App 6 061/A2.04 Pump failure or improper operation (RO 3.4)	A, L, N, S	4(S)
S-5	CTMT Spray / Restore from inadvertent CTMT Spray actuation 026/A4.05 Containment spray reset switches (RO 3.5)	EN, N, S	5
S-6	Emergency Diesel Generators / Unload and secure a EDG 064/A4.06 Manual start, loading, and stopping of the ED/G (RO 3.9)	A, D, S	6
S-7	RPS / Respond to S/G Level Safety Channel Failure Low <i>* Replace with spare *</i> 012/A4.03 Channel blocks and bypasses (RO 3.6)	N, S	7
S-8	Circulating Water / Respond to the loss of a 2 nd CW pump 075/A2.02 Loss of circulating water pumps (RO 2.5)	A, N, S	8
S-9	<i>Mitigating a Reactor Regulating System Failed T_{COLD} Input [Spare]</i> 016/A4.01 NNI channel select controls (RO 2.9*)	N, S	7

In-Plant Systems* (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)

P-1	AC Electrical (Instrument Power) / Transfer PPC Power Supply 062/A4.01 All breakers (including available switchyard) (RO 3.3)	D	6
P-2	Service Water / On a loss of 22E, swap the "B" SW Pump Strainer power supply to 22F to restore Facility 1 SW to operation 076/A2.01 Loss of SWS (RO 3.5)	E, M	4(S)
P-3	Waste Gas Disposal / Shift In-Service Waste Gas Decay Tank 071/A4.05 Gas decay tanks, including valves, indicators, and sample line (RO 2.6)	D, R	9
P-4	<i>Local Manual Operation of a FRV [Spare]</i> 035/A4.01 Shift of S/G controls between manual and automatic control, by bumpless transfer (RO 3.7)	D, E	4(P)

* All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all five 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
(EN)gineered safety feature	≥ 1 / ≥ 1 / ≥ 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	

* Replace with spare