FACILITY NAME: McGuire Nulear Plant Section 1

REPORT NUMBER: 05000369/370/2009-301

DRAFT ADMINISTRATIVE DOCUMENTS

CONTENTS:

- ☑ **Draft Written Exam sample plan (ES-401-1/2)**
- ☑ **Draft Administrative Topics Outline (ES-301-1)**
- ☑ **Draft Control Room Systems & Facility Walk-Through Test Outline (ES-301-2)**

Location of Electronic Files:

Submitted By: _____ Verified By Mark J. Riches

Facility: McGuire		Date of Examination:	5/11/09
Examination Level:	RO	Operating Test Number:	N09-1

Administrative Topic (see Note)	Type Code*	Describe activity to be performed	
Conduct of Operations	M, R	2.1.25 (3.9)	Ability to interpret reference materials, such as graphs, curves, tables, etc.
		JPM:	Determine Boric Acid Addition to FWST
Conduct of Operations	M, R	2.1.7 (4.4)	Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.
		JPM:	Calculate QPTR
Equipment Control	N, S	2.2.44 (4.2)	Ability to interpret control room indications to verify the status and operation of a system, and understand how operator actions and directives affect plant and system conditions.
		JPM:	Perform Daily Surveillance Items Checklist
Emergency Procedures/Plan	D, S	2.4.39 (3.9)	Knowledge of RO responsibilities in emergency plan implementation.
		JPM:	Conduct a Site Assembly

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, **(0)** (S)imulator, **(2)** or Class(R)oom **(2)**
(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) **(1)**
(N)ew or (M)odified from bank (≥ 1) **(3)**
(P)revious 2 exams (≤ 1; randomly selected) **(0)**

DRAFT

RO Admin JPM Summary

A1a This is a modified JPM. The operator will be told that a leak, which is now isolated has lowered the FWST level to 440 inches, and that it has been decided to use the Recycle Holdup Tank (RHT) to refill the FWST. The operator will be told that Enclosure 4.4, "FWST Makeup Using the RHT," of OP/1/A/6200/014, "Refueling Water System" is in progress and completed through Step 3.9, and provided with Chemistry Data for the BAT and RHT. The operator will then be directed to determine the amount of Boric Acid needed to raise the FWST level to 480" using the RHT in accordance with Step 3.10 of Enclosure 4.4 of OP/1/A/6200/014, "Refueling Water System." The operator will be expected to calculate the amount of Boric Acid that must be added from the BAT to refill the FWST as 7,912 gallons $\pm$ 372 gallons.

A1b This is a modified JPM using bank JPM ADM-NRC-A1-004 as its basis. With the plant at 100% power, the operator will be told that the Unit 1 OAC failed and is not operating, and that the crew has implemented PT/1/A/4600/021A, Loss of Operator Aid Computer while in Mode 1. The operator will be directed to calculate QPTR in accordance with Enclosure 13.5, Part A of PT/1/A/4600/21A Loss of Operator Aid Computer while in Mode 1. The operator will be expected to calculate QPTR, and determine that Technical Specification 3.2.4, Quadrant Power Tilt Ratio, has been exceeded.

A2 This is a new JPM. The operator will be told that Unit 1 and Unit 2 are in Mode 1 at 100% power, and provided with a just completed portion of PT/1/A/4600/003B, "Daily Surveillance Items," that reflects those items NOT simulated. The operator will be directed to perform Enclosure 13.1, Daily Surveillance Items Checklist in accordance with PT/1/A/4600/003B. The operator will be required to identify four items on the Checklist that do not meet the identified acceptance criteria, and one item that requires CRSRO notification.

A4 This is bank JPM ADM-NRC-A4-005. The operator will told that Unit 1 was at 100% power when it experienced a loss of electrical power, that an ALERT has been declared, and that a Site Assembly is required. The operator will be directed to conduct a Site Assembly in accordance with Step 1 of Enclosure 4.3, OSM Actions for Site Assembly, of RP/0/A/5700/011, "Conducting a Site Assembly, Site Evacuation or Containment Evacuation." The operator will be expected to inform the Security Department that a Site Assembly is being performed, determine whether or not the Card Reader System is functioning properly, turn the Outside Page Speakers on and off, operate the Site Assembly alarm, make announcements pertinent to a Site Assembly, and direct the Security Department to ensure that the Site Assembly is thorough.

Facility: McGuire		Date of Examination:	5/11/09
Examination Level:	SRO	Operating Test Number:	N09-1

Administrative Topic (see Note)	Type Code*	Describe activity to be performed	
Conduct of Operations	M, R	2.1.25 (4.2)	Ability to interpret reference materials, such as graphs, curves, tables, etc.
		JPM:	Determine Boric Acid Addition to FWST
Conduct of Operations	N, R	2.1.5 (3.9)	Ability to use procedures related to shift staffing, such as minimum compliment overtime limitations, etc.
		JPM:	Determine Proper Shift Staffing
Equipment Control	N, R	2.2.42 (4.6)	Ability to recognize system parameters that are entry level conditions for Technical Specifications.
		JPM:	Perform Daily Surveillance Items Checklist
Radiation Control	M, R	2.3.6 (3.8)	Ability to approve release permits.
		JPM:	Approve a Gaseous Waste Release Permit
Emergency Procedures/Plan	N, R	2.4.41 (4.6)	Knowledge of emergency action level thresholds and classifications.
		JPM:	Classify an Emergency Event

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, **(0)** (S)imulator, **(0)** or Class(R)oom **(5)**
(D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) **(0)**
(N)ew or (M)odified from bank (≥ 1) **(5)**
(P)revious 2 exams (≤ 1; randomly selected) **(0)**

DRAFT

SRO Admin JPM Summary

A1a This is a modified JPM. The operator will be told that a leak, which is now isolated has lowered the FWST level to 440 inches, below the Technical Specification Limit, and that it has been decided to use the Recycle Holdup Tank (RHT) to refill the FWST. The operator will be told that Enclosure 4.4, "FWST Makeup Using the RHT," of OP/1/A/6200/014, "Refueling Water System" is in progress and completed through Step 3.10, and provided with Chemistry Data for the BAT and RHT. The operator will then be directed to perform the Separate Verification of the calculation in Step 3.10 of Enclosure 4.4 to determine the amount of Boric Acid that must be added from the Boric Acid Tank (BAT), in order to raise the FWST Level to 480" using the RHT. The operator will discover two errors within the RO's calculation, and determine the correct volume of Boric Acid to add. Following this, the operator will be given a makeup flowrate to the FWST and asked to identify the impact on the Technical Specification ACTION. The operator will be required to identify that ACTION C is applicable after one hour.

A1b This is a new JPM that combines elements of two bank JPMs, ADM-NRC-A1-001 and ADM-NRC-A1-010. The operator will be told that Units 1 and 2 are at 100% power and that it is a specific time and date. The operator will be provided with a Work Schedule of personnel that are reporting for work, and told that three individuals have expressed concerns regarding overtime limitations, and present their recent work history. After being provided a work history for those that have expressed concerns, the operator will be directed to evaluate the work history of the three individuals who have expressed overtime limitation concerns; and then assign personnel to a shift position on Attachment 12.1, Control Room Supervisor Turnover Checklist, in accordance with the attached Work Schedule. The operator will directed to identify any arriving personnel that cannot be assigned to a shift position; and to hold over personnel and/or call in additional personnel ONLY if the minimum staffing cannot be met. The operator will be expected to evaluate the work history of three individuals in accordance with section 200.6 of NSD 200, and determine that one RO cannot report for work, however, the other individuals with work history concerns may report for work. The operator will also be expected to assign all other personnel reporting to work in accordance with an attached Key, identifying that that STA must be held over from the previous shift, and that one RO must be held over, or a Request for Work Hours Extension must be approved.

A2 This is a new JPM. The operator will be provided with a completed Enclosure 13.1, "Daily Surveillance Items Checklist" of PT/1/A/4600/003B, as well as a completed Enclosure 13.2, "NAC-UMS Cask Monitoring" of PT/1/A/4600/003B and directed to evaluate the completed Enclosures in accordance with PT/1/A/4600/003B, and identify all Technical Specification/SLC required ACTION, as well as all other actions that must be taken. The operator will need to evaluate the four discrepancies discovered against the Technical

Specifications and Selected Licensee Commitments, and identify all required actions.

A3 This is a modified JPM using bank JPM ADM-NRC-A3-001 as its basis. The operator will be told that Unit 1 and Unit 2 are in Mode 1 at 100% power, that OP/0/A/6200/019, Enclosure 4.1, Waste Gas Decay Tank Release to Unit Vent, is in progress in preparation for release of the C WGDT, and completed through Step 3.11, and that RP has just delivered the GWR package # 2009010 to the Control Room. The operator will be directed to review and approve GWR Package # 2009010 for the C Waste Gas Decay Tank by performing Step 3.12 of Enclosure 4.1 of OP/0/A/6200/019, Waste Gas Decay Tank Release. The operator will be expected to discover three errors in the submitted release package, and delay approval of the package until the errors are corrected.

A4 This is a new JPM. The operator will be given a timeline of events that span a few hours, and asked to classify the event at the point where each procedure identifies a need to address RP/0/A/5700/000, Classification of Emergency. The operator will be expected to recognize that an Unusual Event is declared at the first procedure direction, the Unusual Event is updated at the second procedure direction, and that a Site Area Emergency exists upon entry into the EOP network.

Facility: McGuire		Date of Examination:	5/11/09
Exam Level (circle one):	*RO (only)* / SRO(I) / **SRO (U)**	Operating Test No.:	N09-1

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.	004 Chemical and Volume Control System Emergency Borate the Reactor Coolant System Using the PD Pump	S, D, A	1
b.	**006 Emergency Core Cooling System** **Align the ND, NI, and NV Systems to Cold Leg Recirculation**	**S, D, A, EN**	**2**
c.	**010 Pressurizer Pressure Control System** **Place LTOP in Service**	**S, D, L**	**3**
d.	059 Main Feedwater System Establish Feedwater Flow to the S/G's Following a Reactor Trip	S, D	4S
e.	028 Hydrogen Recombiner and Purge Control System Manually Align Phase B HVAC Equipment	S, N, EN	5
f.	**064 Emergency Diesel Generators** **Perform Diesel Generator Operability Test**	**S, N, A**	**6**
g.	015 Nuclear Instrumentation System Restore Repaired Power Range Channel to Service	S, D, A	7
h.	*008 Component Cooling Water System* *Place Standby Component Cooling Train in Operation*	*S, D*	*8*
In-Plant Systems@ (3 for RO; 3 for SRO-I; 3 or 2 for **SRO-U**)			
i.	**APE 054 Loss of Main Feedwater** **Reset Unit 2 Turbine Driven CA Pump Stop Valve per Generic Enclosure 24**	**D, R, E**	**4S**
j.	**APE 065 Steam Loss of Instrument Air** **Aligning Nitrogen To Supply Control Air to D, E and F VI Compressors**	**D, A, E**	**8**
k.	APE 058 Loss of DC Power Swap Battery Charger EVCA Power Supply from Unit 1 to Unit 2	D, R, E	6

@	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 (5) /4-6 (5) / 2-3 (3)
(C)ontrol room	
(D)irect from bank	≤ 9 (9) /≤ 8 (8) / ≤ 4 (4)
(E)mergency or abnormal in-plant	≥ 1 (3) /≥ 1 (3) / ≥ 1 (2)
(EN)gineered Safety Feature	- / - / ≥ 1 (1) (Control Room System)
(L)ow-Power / Shutdown	≥ 1 (1) /≥ 1 (1) / ≥ 1 (1)
(N)ew or (M)odified from bank including 1(A)	≥ 2 (2) / ≥ 2 (2) / ≥ 1 (1)
(P)revious 2 exams	≤ 3 (0) / ≤ 3 (0)/ ≤ 2 (0) (Randomly Selected)
(R)CA	≥ 1 (2)/≥ 1 (2) / ≥ 1 (1)
(S)imulator	

JPM Summary

JPM A This is bank JPM PS-NV-200A. The operator will be told that Unit 1 was at 100% power with "A" NV pump tagged for maintenance, when a failure of an automatic reactor trip occurred causing entry into EP/1/A/5000/FR-S.1, Response to Nuclear Power Generation/ATWS. The operator will be directed to emergency borate the NC System per Step 5 of EP/1/A/5000/FR-S.1. During the course of the procedure implementation the operator will discover that the "B" NV Pump has tripped (Alternate Path). The operator will be expected to place the PD pump in service in accordance with EP/1/A/5000/G-1, Generic Enclosures, Enclosure 17, PD Pump Startup, and complete the emergency boration.

JPM B This is Bank JPM-ECC-NI-116A. The Operator will be placed in a post-Large Break LOCA situation at Unit 1 with the FWST trending toward Cold Leg Recirculation Switchover Criteria. The operator will be told that the unit is presently implementing EP/1/A/5000/E-1, Loss of Reactor or Secondary Coolant. The operator will be asked to monitor FWST level and perform transfer to Cold Leg Recirculation at the appropriate time. During the transfer to Cold Leg Recirculation in accordance with EP/1/A/5000/ES-1.3, Transfer to Cold Leg Recirculation, 1NI-184B, RB Sump to Train B ND & NS, will fail to open, and the B ND Pump will need to be stopped (Alternate Path). The operator will place the A Train of ND, NI and NV on Cold Leg Recirculation.

JPM C This is a bank JPM. The Operator will be placed in a situation in which Unit 1 is in a cooldown and depressurization in accordance with OP/1/A/6100/SD-4, "Cooldown to 240 Degrees F." The operator will be told that the 1A and 1B NCPs are operating, that NC System pressure is 340 psig and NC System temperature is 306-312°F. The operator will be asked to Place the LTOP System in operation in accordance with Enclosure 4.1 of OP/1/A/6100/SO-10, "Controlling Procedure for LTOP Operation," and monitor for proper operation.

JPM D This is bank JPM CF-CF-036. The operator will be told that Unit 1 has experienced a Reactor Trip, that EP/1/A/5000/ES-0.1, "Reactor Trip Response," has been completed through step 11, total feed flow to S/G's is < 450 gpm, that no CA Pumps are running or available, and that CF Isolation has not occurred. The operator will be directed to place

the 1A CF Pump in service, and establish CF to the S/G's in accordance with Enclosure 4 of EP/1/A/5000/ES-0.1. The operator will be expected to place the 1A CF Pump in service and provide feedwater flow to all four S/G's. The operator will be told that if, as expected, a Red Path occurs on Heat Sink, to continue with the assigned task.

JPM E This is a new JPM. The operator will be told that they are the Unit 2 BOP, and that Unit 1 has experienced a Large Break LOCA. The operator will be directed to check Phase B HVAC equipment in accordance with Enclosure 2, "Phase B HVAC Equipment," of EP/1/A/5000/E-0, "Reactor Trip or Safety Injection." During the performance of Enclosure 2, the operator will recognize that neither train of the VE and VX Systems automatically started. The operator will be expected to manually start the both Trains of VE and VX Systems.

JPM F This is a new JPM. The operator will be told that Unit 1 is operating at 100% power, that a monthly test of the 1B Emergency Diesel Generator is required, and that the System Engineer wants to start and stop the Diesel from the Control Room. The operator will be directed to conduct a Slow Start of the 1B Emergency Diesel Generator using Enclosure-13.1 of PT/1/A/4350/002B, "Diesel Generator 1B Operability Test." During the performance of Enclosure 13.1, a sudden loss of crankcase vacuum will be indicated together with a loss of engine speed (Alternate Path). The operator will be expected to stop the engine with the normal stop switch.

JPM G This is a bank JPM. The Operator will be placed in a situation with Unit 1 at 100% power. The operator will be told that Power Range Channel N43 has previously failed high, and that the channel has been defeated in accordance with AP/1/A/5500/16, "Malfunction of Nuclear Instrumentation," Case III, "Power Range Malfunction." The operator will be asked to restore Power Range Channel N43 to service in accordance with Step 22 of AP16, "Malfunction of Nuclear Instrumentation," Case III, "Power Range Malfunction." During the restoration, N43 will fail a second time, rendering this an Alternate Path JPM. The operator will be required to use, an Annunciator Response/Abnormal Response Procedure and place Rod Control manual.

JPM H This is bank JPM PSS-KC-029. The operator will be told that Unit 1 is in a post-trip situation with "A" train RN and KC in service, and that 1A1 KC pump has tripped on overcurrent and will not restart. The crew has implemented AP/1/A/5500/21, "Loss of KC or KC System Leakage," and has completed step 8. The operator will be directed to start the standby KC train starting at Step 9 of AP/1/A/5500/21. The operator will be expected to place the B Train of KC in service, and place the A Train of KC in standby.

JPM I This is Bank JPM CF-CA-248. The Operator will be told that the Unit 2 reactor has tripped due to a loss of all offsite power, that 2ETA and 2ETB are deenergized, that the crew has entered EP/2/A/5000/ECA-0.0, "Loss of All AC Power," and that the "TD CA PUMP STOP VLV NOT OPEN" alarm (2AD-5, F-3) is lit. The operator will be directed to reset the stop valve PER EP/2/A/5000/G-1, "Generic Enclosures," Enclosure 24, "Resetting TD CA Stop Valve." The operator will be expected to reset 2SA-3 in accordance with Generic Enclosure 24.

JPM J This is bank JPM SS-VI-110A. The operator will be told that a total loss of VI has occurred. The operator will be directed to perform AP/1/A/5500/22, "Loss of VI, Enclosure 6, "D, E, and F VI Compressor Operation With Low Control Air." During the implementation of Enclosure 6, the operator will discover that the Breathing Air (VB)

Compressors are tripped, and that another strategy will need to be implemented to restore VI System pressure (Alternate Path). The operator will be expected to align Nitrogen from backup cylinders to D, E, and F VI compressors with pressure set between 90-100 psig.

JPM K This is bank JPM EL-EPL-166T. The operator will be told that Unit 1 has just experienced a Loss of Offsite Power, that the 1A D/G will not start, and that 1ETA is de-energized. AP/1/A/5500/07, "Loss of Electrical Power," Case 1 has been implemented. The operator will be directed to swap power supplies to the EVCA Battery Charger from Unit 1 to Unit 2 in accordance with AP/1/A/5500/07, "Loss of Electrical Power," Enclosure 22, Swapping Battery Charger Power Supplies." The operator will be expected to place Battery Charger EVCA in service with power being supplied from Unit 2 within 20 minutes of dispatch. This is a Time Critical JPM.

DRAFT

ES-401, Rev. 9 **PWR Examination Outline** **Form ES-401-2**

Facility: McGuire Date of Exam:

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	A2	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				2	1			1	9	2	2	4
	Tier Totals	4	5	5				5	4			4	27	5	5	10
2. Plant Systems	1	2	3	4	2	3	1	3	2	3	2	3	28	3	2	5
	2	1	1	1	1	1	1	1	0	1	1	1	10	2	1	3
	Tier Totals	3	4	5	3	4	2	4	2	4	3	4	38	5	3	8
3. Generic Knowledge and Abilities Categories		1			2			3			4		10	1	2	3	4	7
		3			3			2			2			1	2	2	2	

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.

Changes Sent to Tracy 10/2/2008 @ 0930 AM.

DRAFT

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
007EK1.06	Reactor Trip - Stabilization - Recovery / 1	3.7	4.1	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Relationship of emergency feedwater flow to S/G and decay heat removal following reactor trip
008AK3.05	Pressurizer Vapor Space Accident / 3	4	4.5	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	ECCS termination or throttling criteria
009EK3.21	Small Break LOCA / 3	4.2	4.5	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	Actions contained in EOP for small break LOCA/leak
011EK3.11	Large Break LOCA / 3 change to 3.14	3.3	3.4 4.1/4.2	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	NC and PC RCP TRIPPING REQUIREMENT
015AA2.11	RCP Malfunctions / 4	3.4	3.8	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	When to jog RCPs during ICC (Inadequate Core Cooling)
022AK1.03	Loss of Rx Coolant Makeup / 2	3	3.4	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Relationship between charging flow and PZR level

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
025AK2.01	Loss of RHR System / 4	2.9	2.9	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	RHR heat exchangers ✓
029EA2.10	ATWS / 1	3.1	3.4	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Positive displacement charging pumps 2 McGuire ONE not PDP's ✓ CVCS Centrifical Chg Pump Operating Indications
040AG2.1.31	Steam Line Rupture - Excessive Heat Transfer / 4	4.6	4.3	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to locate control room switches, controls and indications and to determine that they are correctly reflecting the desired plant lineup. ✓
054AA1.04	Loss of Main Feedwater / 4	4.4	4.5	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	HPI, under total feedwater loss conditions ✓ Feed & Bleed Criteria OK
055EK2.04	Station Blackout / 6			☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Pumps ✓
056AG2.4.35	Loss of Off-site Power / 6	3.8	4.0	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects ✓
057AA2.09	Loss of Vital AC Inst. Bus / 6	3.1	3.4	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	T-ave. and T-ref. chart recorder ✓

3.2/3.3 change to EA 2.04

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
058AA1.03	Loss of DC Power / 6	3.1	3.3	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Vital and battery bus components
062AG2.2.40	Loss of Nuclear Svc Water / 4	3.4	4.7	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to apply technical specifications for a system.
065AA1.01	Loss of Instrument Air / 8	2.7	2.5	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Remote manual loaders ?
077AK2.07	Generator Voltage and Electric Grid Disturbances / 6	3.6	3.7	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Turbine / Generator control
WE11EK1.2	Loss of Emergency Coolant Recirc. / 4	3.6	4.1	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Normal, abnormal and emergency operating procedures associated with (Loss of Emergency Coolant Recir).

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
003AK3.10	Dropped Control Rod / 1	3.2	4.2	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	RIL and PDIL
028AA1.07	Pressurizer Level Malfunction / 2	3.3	3.3	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Charging pumps maintenance of PZR level (including manual backup)
051AG2.4.6	Loss of Condenser Vacuum / 4 Change to 2.4.4	3.7	4.7 3.4/3.6	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge symptom based EOP mitigation strategies. Allow ASP
068AK2.02	Control Room Evac. / 8	3.7	3.9	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Reactor trip system
WE03EA1.3	LOCA Cooldown - Depress. / 4	3.7	4.1	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to operate and / or monitor the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)	Desired operating results during abnormal and emergency situations.
WE07EK1.3	Saturated Core Cooling Core Cooling / 4	3.2	3.6	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)	Annunciators and conditions indicating signals, and remedial actions associated with the ~~(Pressurized Thermal Shock)~~. SATURATED Core Cooling

Change

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
WE08EK2.1	RCS Overcooling - PTS / 4	3.4	3.7	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)	Components and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes and automatic and manual features.
WE09EK3.2	Natural Circ. / 4	3.2	3.6	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)	Normal, abnormal and emergency operating procedures associated with (Natural Circulation Operations).
WE16EA2.1	High Containment Radiation / 9	2.9	3.3	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Facility conditions and selection of appropriate procedures during abnormal and emergency operations.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
003K1.03	Reactor Coolant Pump	3.3	3.6	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	RCP seal system
004K5.50	Chemical and Volume Control	2.6	2.7	☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	Design basis letdown system temperatures: resin integrity
005K6.03	Residual Heat Removal	2.5	2.6	☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)	RHR heat exchanger
006A3.06	Emergency Core Cooling	3.9	4.2	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Valve lineups
007A2.05	Pressurizer Relief/Quench Tank	3.2	3.6	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Exceeding PRT high-pressure limits
007K5.02	Pressurizer Relief/Quench Tank	3.1	3.4	☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	Method of forming a steam bubble in the PZR

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
008K3.03	Component Cooling Water	4.1	4.2	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	RCP
010A4.01	Pressurizer Pressure Control	3.7	3.5	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	PZR spray valve
012A1.01	Reactor Protection	2.9	3.4	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	Trip setpoint adjustment
012K3.01	Reactor Protection	3.9	4.0	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	CRDS
013K2.01	Engineered Safety Features Actuation	3.6	3.8	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of electrical power supplies to the following:(CFR: 41.7)	ESFAS/safeguards equipment control
022K1.04	Containment Cooling	2.9	2.9	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	Chilled water
022K2.02	Containment Cooling	2.5	2.4	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of electrical power supplies to the following:(CFR: 41.7)	Chillers

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
025K5 01	Ice Condenser	3.0	3.4	☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	Relationships between pressure and temperature
026G2.1.32	Containment Spray	3.8	4.0	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to explain and apply all system limits and precautions.
039G2.2.39	Main and Reheat Steam	3.9	4.5	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated. Change to G2.2.38	Knowledge of less than one hour technical specification action statements for systems. Knowledge of conditions and limitations in the facility License
059A4.03	Main Feedwater	2.9	2.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	Feedwater control during power increase and decrease
061A2.05	Auxiliary/Emergency Feedwater	3.1	3.4	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	~~Loss of dc power~~ Change to Automatic Control Malfunction
062A3.05	AC Electrical Distribution	3.5	3.6	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Safety-related indicators and controls
062G2.2.39	AC Electrical Distribution	3.9	4.5	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of less than one hour technical specification action statements for systems.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
063A3.01	DC Electrical Distribution	2.7	3.1	☐☐☐☐☐☐☐☐☑☐☐ Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Meters, annunciators, dials, recorders and indicating lights
063K2.01	DC Electrical Distribution	2.9	3.1	☐☑☐☐☐☐☐☐☐☐☐ Knowledge of electrical power supplies to the following:(CFR: 41.7)	Major DC loads
064K4.11	Emergency Diesel Generator	3.5	4.0	☐☐☐☑☐☐☐☐☐☐☐ Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	Automatic load sequencer: safeguards
073A1.01	Process Radiation Monitoring	3.2	3.5	☐☐☐☐☐☐☑☐☐☐☐ Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	Radiation levels
073K3.01	Process Radiation Monitoring	3.6	4.2	☐☐☑☐☐☐☐☐☐☐☐ Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	Radioactive effluent releases
076A1.02	Service Water	2.6	2.6	☐☐☐☐☐☐☑☐☐☐☐ Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	Reactor and turbine building closed cooling water temperatures.
078K3.02	Instrument Air	3.4	3.6	☐☐☑☐☐☐☐☐☐☐☐ Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	Systems having pneumatic valves and controls

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
103K4.01	Containment	3.0	3.7	☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐	Vacuum breaker protection

Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
011A3.03	Pressurizer Level Control	3.2	3.3	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)	Charging and letdown
015K5.02	Nuclear Instrumentation	2.7	2.9	☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)	Discriminator/compensation operation
017K6.01	In-core Temperature Monitor	2.7	3.0	☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)	Sensors and detectors
027K2.01	Containment Iodine Removal	3.1	3.4	☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of electrical power supplies to the following:(CFR: 41.7)	Fans
028K3.01	Hydrogen Recombiner and Purge Control	3.3	4.0	☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)	Hydrogen concentration in containment
033G2.4.21 Change to: 033G2.4.31	Spent Fuel Pool Cooling	4.0	4.6	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of the parameters and logic used to assess the status of safety functions
034K1.02	Fuel Handling Equipment	2.5	3.2	☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)	RHRS

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
071A1.06	Waste Gas Disposal	2.5	2.8	☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)	Ventilation system
079A4.01	Station Air	2.7	2.7	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)	Cross-tie valves with IAS
086K4.02	Fire Protection	3.0	3.4	☐ ☐ ☐ ☑ ☐ ☐ ☐ ☐ ☐ ☐ ☐ Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)	Maintenance of fire header pressure

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.1	Conduct of operations	3.8	4.2	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of conduct of operations requirements.
G2.1.27	Conduct of operations	3.9	4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of system purpose and or function.
G2.1.37	Conduct of operations	4.3	4.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of procedures, guidelines or limitations associated with reactivity management
G2.2.17	Equipment Control	2.6	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the process for managing maintenance activities during power operations.
G2.2.4	Equipment Control	3.6	3.6	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	(multi-unit) Ability to explain the variations in control board layouts, systems, instrumentation and procedural actions between units at a facility.
G2.2.40	Equipment Control	3.4	4.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to apply technical specifications for a system.
G2.3.14	Radiation Control	3.4	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.3.4	Radiation Control	3.2	3.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation exposure limits under normal and emergency conditions
G2.4.39	Emergency Procedures/Plans	3.9	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the RO's responsibilities in emergency plan implementation.
G2.4.45	Emergency Procedures/Plans	4.1	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to prioritize and interpret the significance of each annunciator or alarm.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
007EG2.4.35	Reactor Trip - Stabilization - Recovery / 1	3.8	4.0	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects
008AA2.10	Pressurizer Vapor Space Accident / 3	3.6	3.6	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	High-pressure injection valves and controllers
022AG2.4.4	Loss of Rx Coolant Makeup / 2	4.5	4.7	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.
025AA2.07	Loss of RHR System / 4	3.4	3.7	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Pump cavitation
027AA2.03	Pressurizer Pressure Control System Malfunction / 3	3.3	3.4	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Effects of RCS pressure changes on key components in plant
062AG2.1.31	Loss of Nuclear Svc Water / 4	4.6	4.3	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to locate control room switches, controls and indications and to determine that they are correctly reflecting the desired plant lineup.

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
003AG2.4.11	Dropped Control Rod / 1	4.0	4.2	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Knowledge of abnormal condition procedures. ✓
051AA2.02	Loss of Condenser Vacuum / 4	3.9	4.1	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Conditions requiring reactor and/or turbine trip ✓
WE15EA2.2	Containment Flooding / 5	2.9	3.3	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)	Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments. ✓
we16EG2.4.49	High Containment Radiation / 9	4.6	4.4	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.

NO IOA's For this

change to 2.4.41

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
004G2.1.20	Chemical and Volume Control	4.6	4.6	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated.	Ability to execute procedure steps.
012G2.1.19	Reactor Protection	3.9	3.8	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated. Change to 2.1.32	Ability to use plant computer to evaluate system or component status.
063A2.02	DC Electrical Distribution	2.3	3.1	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Loss of ventilation during battery charging
076A2.01	Service Water	3.5	3.7	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Loss of SWS
078A2.01	Instrument Air	2.4	2.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Air dryer and filter malfunctions

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1 K2 K3 K4 K5 K6 A1 A2 A3 A4 G	TOPIC:
034G2.4.20	Fuel Handling Equipment 2.4.11	3.8	4.3	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ This is a Generic, no stem statement is associated. Change to 2.4.11	Knowledge of operational implications of EOP warnings, cautions and notes. ✓
072A2.02	Area Radiation Monitoring	2.8	2.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Detector failure ✓
086A2.03	Fire Protection	2.7	2.9	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☑ ☐ ☐ ☐ Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)	Inadvertent actuation of the FPS due to circuit failure or welding ✓

KA	NAME / SAFETY FUNCTION:	IR RO	IR SRO	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
G2.1.5	Conduct of operations	2.9	3.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Ability to locate and use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc.
G2.2.11	Equipment Control	2.3	3.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the process for controlling temporary design changes.
G2.2.3	Equipment Control	3.8	3.9	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	(multi-unit license) Knowledge of the design, procedural and operational differences between units.
G2.3.12	Radiation Control	3.2	3.7	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiological safety principles pertaining to licensed operator duties
G2.3.14	Radiation Control	3.4	3.8	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities
G2.4.20	Emergency Procedures/Plans	3.8	4.3	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of operational implications of EOP warnings, cautions and notes.
G2.4.23	Emergency Procedures/Plans	3.4	4.4	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☑	Knowledge of the bases for prioritizing emergency procedure implementation during emergency operations.