

Facility: Nine Mile Point Unit 2      Date of Exam: November 2010																	
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 & Plant Evaluations	1	3	4	4				3	3			3	20	4	3	7	
	2	1	2	1				1	1			1	7	2	1	3	
	Tier Totals	4	6	5				4	4			4	27	6	4	10	
2. Plant Systems	1	2	2	3	3	2	2	2	3	2	2	3	26	3	2	5	
	2	2	0	1	2	1	1	1	1	1	1	1	12	0	1	3	
	Tier Totals	4	2	4	5	3	3	3	4	3	3	4	38	4	4	8	
3. Generic Knowledge & Abilities				1		2		3		4		10	1	2	3	4	
				2		3		2		3			2	2	1	2	
Note	<p>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).</p> <p>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.</p> <p>3. Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems that are not included on the outline should be added. Refer to section D.1.b of ES-401, for guidance regarding elimination of inappropriate K/A statements.</p> <p>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.</p> <p>5. Absent a plant specific priority, only those KAs 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.</p> <p>6. Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.</p> <p>7.* The generic (G) K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system. Refer to Section D.1.b of ES-401 for the applicable K/A's</p> <p>8. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings (IR) 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.</p> <p>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 10CFR55.43</p>																

Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Emergency and Abnormal Plant Evolutions - Tier 1 Group 1

EAPE#/Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
700000 Generator Voltage and Electric Grid Disturbances					X		AA2.05- Ability to determine and/or interpret the following as they apply to GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES: Operational status of offsite circuit	3.8	76
295019 Partial or Total Loss of Inst. Air / 8					X		AA2.01 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR : Instrument air system pressure	3.6	77
295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4					X		AA2.04 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION : Individual jet pump flows: Not-BWR-1&2	3.1	78
295021 Loss of Shutdown Cooling / 4						X	2.2.38 - Equipment Control: Knowledge of conditions and limitations in the facility license.	4.5	79
295016 Control Room Abandonment / 7						X	2.4.34 - Emergency Procedures / Plan: Knowledge of RO tasks performed outside the main control room during an emergency and the resultant operational effects.	4.1	80
295037 SCRAM Conditions Present and Reactor Power Above APRM Downscale or Unknown / 1						X	2.4.6. - Emergency Procedures / Plan: Knowledge of EOP Mitigation strategies	4.7	81
295023 Refueling Accidents / 8					X		AA2.03 - Ability to determine and/or interpret the following as they apply to REFUELING ACCIDENTS : Airborne contamination levels	3.8	82



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Written Examination Outline (NRC)  
Emergency and Abnormal Plant Evolutions - Tier 1 Group 1

EAPE#/Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
295024 High Drywell Pressure / 5	X						EK1.01 - Knowledge of the operational implications of the following concepts as they apply to HIGH DRYWELL PRESSURE : Drywell integrity: Plant-Specific	4.1	39
295025 High Reactor Pressure / 3	X						EK1.03 - Knowledge of the operational implications of the following concepts as they apply to HIGH REACTOR PRESSURE : Safety/relief valve tailpipe temperature/pressure relationships	3.6	40
600000 Plant Fire On-site / 8			X				AK3.04 - Knowledge of the reasons for the following responses as they apply to PLANT FIRE ON SITE: Actions contained in the abnormal procedure for plant fire on site	2.8	41
295019 Partial or Total Loss of Inst. Air / 8		X					AK2.08 - Knowledge of the interrelations between PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR and the following: Plant Ventilation	2.8	42
295037 SCRAM Conditions Present and Reactor Power Above APRM Downscale or Unknown / 1		X					EK2.09 - Knowledge of the interrelations between SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN and the following: Reactor Water level	4.0	43
295028 High Drywell Temperature / 5		X					EK2.03 - Knowledge of the interrelations between HIGH DRYWELL TEMPERATURE and the following: Reactor water level indication	3.6	44

Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Emergency and Abnormal Plant Evolutions - Tier 1 Group 1

EAPE#/Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
295021 Loss of Shutdown Cooling / 4			X				AK3.01 - Knowledge of the reasons for the following responses as they apply to LOSS OF SHUTDOWN COOLING : Raising reactor water level	3.3	45
295023 Refueling Accidents / 8			X				AK3.03 - Knowledge of the reasons for the following responses as they apply to REFUELING ACCIDENTS : Ventilation isolation	3.3	46
295030 Low Suppression Pool Water Level / 5			X				EK3.03 - Knowledge of the reasons for the following responses as they apply to LOW SUPPRESSION POOL WATER LEVEL: RCIC operation: Plant-Specific	3.6	47
700000 Generator Voltage and Electric Grid Disturbances				X			AA1.01 - Ability to operate and/or monitor the following as they apply to GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES: Grid frequency and voltage.	3.6	48
295026 Suppression Pool High Water Temp. / 5				X			EA1.02 - Ability to operate and/or monitor the following as they apply to SUPPRESSION POOL HIGH WATER TEMPERATURE: Suppression pool spray: Plant-Specific	3.6	49
295003 Partial or Complete Loss of AC / 6				X			AA1.01 - Ability to operate and/or monitor the following as they apply to PARTIAL OR COMPLETE LOSS OF A.C. POWER : A.C. electrical distribution system	3.7	50
295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4					X		AA2.03 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION : Actual core flow	3.3	51



Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Emergency and Abnormal Plant Evolutions - Tier 1 Group 1

EAPE#/Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
295018 Partial or Total Loss of CCW / 8					X		AA2.04 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF COMPONENT COOLING WATER : System flow	2.9	52
295005 Main Turbine Generator Trip / 3					X		AA2.03 - Ability to determine and/or interpret the following as they apply to MAIN TURBINE GENERATOR TRIP : Turbine valve position	3.1	53
295004 Partial or Total Loss of DC Pwr / 6		X					AK2.03 - Knowledge of the interrelations between PARTIAL OR COMPLETE LOSS OF D.C. POWER and the following: DC Bus loads	3.3	54
295038 High Off-site Release Rate / 9						X	2.2.25 - Equipment Control: Knowledge of bases in Technical Specifications for limiting conditions for operations and safety limits.	3.2	55
295006 SCRAM / 1						X	2.4.50 - Emergency Procedures / Plan: Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.	4.2	56
295016 Control Room Abandonment / 7						X	2.4.9 - Emergency Procedures / Plan: Knowledge of low power / shutdown implications in accident (e.g., loss of coolant accident or loss of residual heat removal) mitigation strategies.	3.8	57
295031 Reactor Low Water Level / 2	X						EK1.01 - Knowledge of the operational implications of the following concepts as they apply to REACTOR LOW WATER LEVEL : Adequate core cooling	4.6	58
K/A Category Totals	3	4	4	3	3/4	3/3	Group Point Total:		20/7

Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Emergency and Abnormal Plant Evolutions - Tier 1 Group 2

EAPE#/Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
295015 Incomplete SCRAM / 1					X		AA2.02 - Ability to determine and/or interpret the following as they apply to INCOMPLETE SCRAM : Control rod position	4.2	83
295014 Inadvertent Reactivity Addition / 1						X	2.4.31 - Emergency Procedures / Plan: Knowledge of annunciator alarms, indications, or response procedures.	4.1	84
295007 High Reactor Pressure					X		AA2.01 - Ability to determine and/or interpret the following as they apply to HIGH REACTOR PRESSURE : Reactor pressure	4.1	85
295022 Loss of CRD Pumps / 1	X						AK1.01 - Knowledge of the operational implications of the following concepts as they apply to LOSS OF CRD PUMPS: Reactor pressure vs. rod insertion capability	3.3	59
295009 Low Reactor Water Level / 2		X					AK2.03 - Knowledge of the interrelations between LOW REACTOR WATER LEVEL and the following: Recirculation system	3.1	60
295020 Inadvertent Cont. Isolation / 5 & 7			X				AK3.02 - Knowledge of the reasons for the following responses as they apply to INADVERTENT CONTAINMENT ISOLATION: Drywell/containment pressure response	3.3	61
295036 Secondary Containment High Sump/Area Water Level / 5				X			EA1.01 - Ability to operate and/or monitor the following as they apply to SECONDARY CONTAINMENT HIGH SUMP/AREA WATER LEVEL : Secondary containment equipment and floor drain systems	3.2	62



Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Emergency and Abnormal Plant Evolutions - Tier 1 Group 2

EAPE#/Name Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Q#
295007 High Reactor Pressure / 3					X		AA2.02 - Ability to determine and/or interpret the following as they apply to HIGH REACTOR PRESSURE : Reactor power	4.1	63
295002 Loss of Main Condenser Vac / 3					X		2.4.11 - Emergency Procedures / Plan: Knowledge of abnormal condition procedures.	4.0	64
295029 High Suppression Pool Water Level / 5		X					EK2.07 - Knowledge of the interrelations between HIGH SUPPRESSION POOL WATER LEVEL and the following: Drywell/containment water level	3.1	65
K/A CategoryTotals	1	2	1	1	1/2	1/1	Group Point Total:	7/3	

Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 1

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
211000 SLC								X				A2.05 - Ability to (a) predict the impacts of the following on the STANDBY LIQUID CONTROL SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of SBLC tank heaters	3.4	86
218000 ADS								X				A2.03 - Ability to (a) predict the impacts of the following on the AUTOMATIC DEPRESSURIZATION SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of air supply to ADS valves: Plant-Specific	3.6	87
215005 APRM / LPRM								X				A2.05 - Ability to (a) predict the impacts of the following on the AVERAGE POWER RANGE MONITOR/LOCAL POWER RANGE MONITOR SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of recirculation flow signal	3.6	88



Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 1

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
400000 Component Cooling Water											X	2.1.23 - Conduct of Operations: Ability to perform specific system and integrated plant procedures during all modes of plant operation.	4.4	89
203000 RHR/LPCI: Injection Mode											X	2.2.40 - Equipment Control: Ability to apply Technical Specifications for a system.	4.7	90
239002 SRVs	X											K1.06 - Knowledge of the physical connections and/or cause-effect relationships between RELIEF/SAFETY VALVES and the following: Drywell instrument air/ drywell pneumatics: Plant-Specific	3.4	1
218000 ADS	X											K1.05 - Knowledge of the physical connections and/or cause-effect relationships between AUTOMATIC DEPRESSURIZATION SYSTEM and the following: Remote shutdown system: Plant-Specific	3.9	2
212000 RPS		X										K2.02 - Knowledge of electrical power supplies to the following: Analog trip system logic cabinets	2.7	3
215004 Source Range Monitor		X										K2.01 - Knowledge of electrical power supplies to the following: SRM channels/detectors	2.6	4

Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 1

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
263000 DC Electrical Distribution			X									K3.03 - Knowledge of the effect that a loss or malfunction of the D.C. ELECTRICAL DISTRIBUTION will have on following: Systems with D.C. components (i.e. valves, motors, solenoids, etc.)	3.4	5
262002 UPS (AC/DC)			X									K3.05 - Knowledge of the effect that a loss or malfunction of the UNINTERRUPTABLE POWER SUPPLY (A.C./D.C.) will have on following: Rod worth minimizer: Plant-Specific	2.9	6
205000 Shutdown Cooling				X								K4.02 - Knowledge of SHUTDOWN COOLING SYSTEM (RHR SHUTDOWN COOLING MODE) design feature(s) and/or interlocks which provide for the following: High pressure isolation: Plant-Specific	3.7	7
211000 SLC				X								K4.05 - Knowledge of STANDBY LIQUID CONTROL SYSTEM design feature(s) and/or interlocks which provide for the following: Dispersal of boron upon injection into the vessel	3.4	8
262001 AC Electrical Distribution					X							K5.02 - Knowledge of the operational implications of the following concepts as they apply to A.C. ELECTRICAL DISTRIBUTION: Breaker control	2.6	9



Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 1

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
215003 IRM					X							K5.03 - Knowledge of the operational implications of the following concepts as they apply to INTERMEDIATE RANGE MONITOR (IRM) SYSTEM : Changing detector position	3.0	10
259002 Reactor Water Level Control						X						K6.01 - Knowledge of the effect that a loss or malfunction of the following will have on the REACTOR WATER LEVEL CONTROL SYSTEM : Plant air systems	3.2	11
400000 Component Cooling Water						X						K6.01 - Knowledge of the effect that a loss or malfunction of the following will have on the CCWS: Valves	2.7	12
209001 LPCS							X					A1.03 - Ability to predict and/or monitor changes in parameters associated with operating the LOW PRESSURE CORE SPRAY SYSTEM controls including: Reactor water level	3.8	13
217000 RCIC							X					A1.01 - Ability to predict and/or monitor changes in parameters associated with operating the REACTOR CORE ISOLATION COOLING SYSTEM (RCIC) controls including: RCIC flow	3.7	14

Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 1

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
261000 SGTS								X				A2.05 - Ability to (a) predict the impacts of the following on the STANDBY GAS TREATMENT SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Fan trips	3.0	15
203000 RHR/LPCI: Injection Mode								X				A2.02 - Ability to (a) predict the impacts of the following on the RHR/LPCI: INJECTION MODE (PLANT SPECIFIC) ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Pump trips	3.5	16
264000 EDGs									X			A3.04 - Ability to monitor automatic operations of the EMERGENCY GENERATORS (DIESEL/JET) including: Operation of the governor control system on frequency and voltage control	3.1	17
209002 HPCS									X			A3.04 - Ability to monitor automatic operations of the HIGH PRESSURE CORE SPRAY SYSTEM (HPCS) including: System flow: BWR-5,6	3.7	18
215005 APRM / LPRM										X		A4.04 - Ability to manually operate and/or monitor in the control room: LPRM back panel switches, meters and indicating lights	3.2	19



Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 1

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
215003 IRM										X		A4.04 - Ability to manually operate and/or monitor in the control room: IRM back panel switches, meters, and indicating lights	3.1	20
223002 PCIS/Nuclear Steam Supply Shutoff										X		2.2.12 - Equipment Control: Knowledge of surveillance procedures.	3.7	21
205000 Shutdown Cooling										X		2.1.28 - Conduct of Operations: Knowledge of the purpose and function of major system components and controls.	4.1	22
215004 Source Range Monitor										X		2.4.46 - Emergency Procedures / Plan: Ability to verify that the alarms are consistent with the plant conditions.	4.2	23
262001 AC Electrical Distribution								X				A2.07 - Ability to (a) predict the impacts of the following on the A.C. ELECTRICAL DISTRIBUTION ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Energizing a dead bus	3.0	24
212000 RPS			X									K3.09 - Knowledge of the effect that a loss or malfunction of the REACTOR PROTECTION SYSTEM will have on following: The magnitude of heat energy that must be absorbed by the containment during accident/transient conditions	3.2	25

Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 1

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
300000 Instrument Air				X								K4.03 - Knowledge of (INSTRUMENT AIR SYSTEM) design feature(s) and or interlocks which provide for the following: Securing of IAS upon loss of cooling water	2.8	26
K/A Category Totals	2	2	3	3	2	2	2	3/3	2	2	3/2	Group Point Total:	26/5	

Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 2

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
290002 Reactor Vessel Internals								X				A2.04 - Ability to (a) predict the impacts of the following on the REACTOR VESSEL INTERNALS ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Excessive heatup/cool-down rate	4.1	91
201003 Control Rod and Drive Mechanism											X	2.2.22 - Equipment Control: Knowledge of limiting conditions for operations and safety limits.	4.7	92
259001 Reactor Feedwater											X	2.1.19 - Conduct of Operations: Ability to use plant computers to evaluate system or component status.	3.8	93
271000 Off-gas	X											K1.04 - Knowledge of the physical connections and/or cause-effect relationships between OFFGAS SYSTEM and the following: Condensate system	2.7	27
216000 Nuclear Boiler Inst.	X											K1.02 - Knowledge of the physical connections and/or cause effect relationships between NUCLEAR BOILER INSTRUMENTATION and the following: PCIS/NSSSS	3.8	28

Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 2

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
201002 RMCS			X									K3.03 - Knowledge of the effect that a loss or malfunction of the REACTOR MANUAL CONTROL SYSTEM will have on following: Ability to process rod block signals	2.9	29
239001 Main and Reheat Steam				X								K4.06 - Knowledge of MAIN AND REHEAT STEAM SYSTEM design feature(s) and/or interlocks which provide for the following: Allows for removal or prevents escape of radioactive steam from systems that have leaky MSIV's	3.1	30
204000 RWCU					X							K5.04 - Knowledge of the operational implications of the following concepts as they apply to REACTOR WATER CLEANUP SYSTEM : Heat exchanger operation	2.7	31
201006 RWM						X						K6.05 - Knowledge of the effect that a loss or malfunction of the following will have on the ROD WORTH MINIMIZER SYSTEM (RWM) (PLANT SPECIFIC) : Steam flow input: P-Spec(Not-BWR6)	2.7	32
233000 Fuel Pool Cooling/Cleanup							X					A1.07 - Ability to predict and/or monitor changes in parameters associated with operating the FUEL POOL COOLING AND CLEAN-UP controls including: System temperature	2.7	33



Nine Mile Point Unit 2  
Written Examination Outline (NRC)  
Plant Systems - Tier 2 Group 2

System #/Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Q#
202002 Recirculation Flow Control								X				A2.08 - Ability to (a) predict the impacts of the following on the RECIRCULATION FLOW CONTROL SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: FCV Lockup (BWR-5,6)	3.3	34
215001 Traversing In-core Probe									X			A3.03 - Ability to monitor automatic operations of the TRAVERSING IN-CORE PROBE including: Valve operation: Not-BWR1	2.5	35
201003 Control Rod and Drive Mechanism										X		A4.02 - Ability to manually operate and/or monitor in the control room: CRD mechanism position: Plant-Specific	3.5	36
215002 RBM											X	2.1.20 - Conduct of Operations: Ability to interpret and execute procedure steps.	4.6	37
234000 Fuel Handling Equipment				X								K4.03 - Knowledge of FUEL HANDLING EQUIPMENT design feature(s) and/or interlocks which provide for the following: Protection against inadvertently lifting radioactive components out of the water	3.4	38
K/A Category Totals	2	0	1	2	1	1	1	1/1	1	1	1/2	Group Point Total:	12/3	

Facility: NMP2 N		Date:				
Category	KA #	Topic	RO		SRO-Only	
			IR	Q#	IR	Q#
1. Conduct of Operations	2.1.41	Knowledge of the refueling process.	2.8	66		
	2.1.36	Knowledge of procedures and limitations involved in core alterations.	3.0	67		
	2.1.5	Ability to use procedures related to shift staffing, such as minimum crew complement, overtime limitations, etc.			3.9	94
	2.1.32	Ability to explain and apply all system limits and precautions.			4.0	100
Subtotal				2		2
2. Equipment Control	2.2.2	Ability to manipulate the console controls as required to operate the facility between shutdown and designated power levels.	4.6	68		
	2.2.13	Knowledge of tagging and clearance procedures.	4.1	69		
	2.2.38	Knowledge of conditions and limitations in the facility license.	3.6	74		
	2.2.18	Knowledge of the process for managing maintenance activities during shutdown operations, such as risk assessments, work prioritization, etc.			3.9	95
	2.2.36	Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions for operations.			4.2	99
Subtotal				3		2

Written Examination Outline (NRC)  
Generic Knowledge and Abilities Outline (Tier 3)

3. Radiation Control	2.3.14	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities.	3.4	70		
	2.3.12	Knowledge of Radiological Safety Principles pertaining to licensed operator duties, such as containment entry requirements, fuel handling responsibilities, access to locked high-radiation areas, aligning filters, etc.	3.2	71		
	2.3.13	Knowledge of Radiological Safety Procedures pertaining to licensed operator duties, such as response to radiation monitor alarms, containment entry requirements, fuel handling responsibilities, access to locked high radiation areas, aligning filters, etc.			3.8	96
Subtotal				2		1
4. Emergency Procedures / Plan	2.4.17	Knowledge of EOP terms and definitions.	3.9	72		
	2.4.12	Knowledge of general operating crew responsibilities during emergency operations.	4.0	73		
	2.4.29	Knowledge of the emergency plan.	3.1	75		
	2.4.20	Knowledge of operational implications of EOP warnings, cautions, and notes.			4.3	97
	2.4.22	Knowledge of the bases for prioritizing safety functions during abnormal/emergency operations.			4.4	98
Subtotal				3		2
Tier 3 Point Total:				10		7



Tier / Group	Randomly Selected KA	Reason for Rejection
1 / 1	600000 / AK1.01	<p>Question 41, Knowledge of the operation applications of the following concepts as they apply to Plant Fire On Site: Fire Classifications by type. Low level of difficulty.</p> <p>Randomly selected AK3.04 - Knowledge of the reasons for the following responses as they apply to PLANT FIRE ON SITE: Actions contained in the abnormal procedure for plant fire on site</p>
1 / 2	295002 / 2.2.4	<p>Question 64, Equipment Control: (multi-unit license) Ability to explain the variations in control board layouts, systems, instrumentation and procedural actions between units at a facility. (Loss of Main Condenser Vac). NMP2 is not a multi-unit license.</p> <p>Randomly selected G2.4.11 - Emergency Procedures / Plan: Knowledge of abnormal condition procedures.</p>
2 / 1	215005 / 2.2.4	<p>Question 88, Equipment Control: (multi-unit license) Ability to explain the variations in control board layouts, systems, instrumentation and procedural actions between units at a facility. (APRMs). NMP2 is not a multi-unit facility.</p> <p>Randomly selected A2.05 - Ability to (a) predict the impacts of the following on the AVERAGE POWER RANGE MONITOR/LOCAL POWER RANGE MONITOR SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of recirculation flow signal</p>
2 / 1	400000 / 2.1.27	<p>Question 89, Conduct of Operations: Knowledge of system purpose and / or function (Component cooling water). Not discriminatory at the SRO level.</p> <p>Randomly selected G2.1.23 - Conduct of Operations: Ability to perform specific system and integrated plant procedures during all modes of plant operation.</p>
2 / 2	268000 / K5.01	<p>Question 31, Knowledge of the operational implications of the following concepts as they apply to RADWASTE: Units of radiation, dose and dose rate. Low level of difficulty.</p> <p>Randomly selected 204000 K5.04 - Knowledge of the operational implications of the following concepts as they apply to REACTOR WATER CLEANUP SYSTEM: Heat exchanger operation</p>



2 / 2	201006 / K6.02	<p>Question 32, Knowledge of the effect that a loss or malfunction of the following will have on the ROD WORTH MINIMIZER SYSTEM (RWM) (PLANT SPECIFIC): Reactor water level control input: P-Spec(Not-BWR6) . NMP2 is not a not a BWR6.</p> <p>Randomly selected K6.05 - Steam flow input: P-Spec(Not-BWR6)</p>
3 / 2	G2 / 2.2.17	<p>Question 69, Knowledge of the process for managing maintenance activities during power operations, such as risk assessments, work prioritization, coordination with the transmission system operator. This is an SRO function per NMP2 procedures.</p> <p>Randomly selected G2.2.13 - Knowledge of tagging and clearance procedures</p>
1 / 1	295019 / AK2.13	<p>Question 42, Knowledge of the interrelations between PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR and the following: Isolation condenser: Plant-Specific. NMP2 does not have isolation condensers.</p> <p>Randomly selected AK2.08 - Plant Ventilation</p>
2 / 1	295007 / AA2.02	<p>Question 85, Ability to determine and/or interpret the following as they apply to HIGH REACTOR PRESSURE: Reactor power. Same KA as RO #63.</p> <p>Randomly selected AA2.01 - Reactor pressure</p>
2 / 1	300000 / A4.01	<p>Question 20, Ability to manually operate and/or monitor in the control room: Pressure gauges. Instrument Air oversampled throughout exam. (42,77,87)</p> <p>Randomly selected 215003 A4.04 - Ability to manually operate and/or monitor in the control room: IRM back panel switches, meters, and indicating lights</p>
2 / 1	215003/2.2.40	<p>Question 90, Equipment Control: Ability to apply Technical Specifications for a system. Nuclear Instrumentation is oversampled throughout exam.</p> <p>Randomly selected 203000 2.2.40- RHR/LPCI: Injection Mode, Equipment Control: Ability to apply Technical Specifications for a system</p>

2 / 1	261000/A2.04	<p>Question 15, Ability to (a) predict the impacts of the following on the STANDBY GAS TREATMENT SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: High train moisture content. Low discriminatory value at the license operator level.</p> <p>Randomly selected A2.05 – Fan Trips</p>
2 / 2	216000/K2.01	<p>Question 28, Knowledge of electrical power supplies to the following: Analog trip system: Plant-Specific. Analog trip system does not apply at NMP2</p> <p>Randomly selected K1.02 - Knowledge of the physical connections and/or cause effect relationships between NUCLEAR BOILER INSTRUMENTATION and the following: PCIS/NSSSS</p>
2 / 2	202002 / A2.03	<p>Question 34, Ability to (a) predict the impacts of the following on the RECIRCULATION FLOW CONTROL SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of D.C. DC control for system does not apply at NMP2.</p> <p>Randomly selected A2.08 – FCV Lockup</p>
1 / 1	295037 / EK2.12	<p>Question 43, Knowledge of the interrelations between SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN and the following: Rod control and information system: Rod control and information system: Plant-Specific. RCIS does not apply at NMP2.</p> <p>Randomly selected EK2.09 - Reactor water level</p>
1 / 1	295026 / EA1.03	<p>Question 49, Ability to operate and/or monitor the following as they apply to SUPPRESSION POOL HIGH WATER TEMPERATURE: Temperature monitoring. Low level of difficulty.</p> <p>Randomly selected EA1.02 - Suppression pool spray.</p>
1 / 1	295005 / AA2.07	<p>Question 53, Ability to determine and/or interpret the following as they apply to MAIN TURBINE GENERATOR TRIP : Reactor water level. The tie between reactor level and turbine trip is the high level trip to prevent moisture carryover and subsequent shrink/swell. This is a low level of difficulty topic.</p> <p>Randomly selected AA2.03 – Turbine valve position</p>

1 / 1	295004 / 2.2.38	<p>Question 54, Equipment Control: Knowledge of conditions and limitations in the facility license. Although there are procedural and TS requirements for this system there are no limitations in the facility license. Other KAs would address TS.</p> <p>Randomly selected AK2.03 DC Bus loads (Partial or complete loss of DC)</p>
1 / 1	700000 / AA2.06	<p>Question 76, Ability to determine and/or interpret the following as they apply to GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES: Generator frequency limitations. Topic similar to RO #48.</p> <p>Randomly selected AA2.05 - Operational status of offsite circuit</p>
1 / 1	295037 / 2.2.36	<p>Question 81, Equipment Control: Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions for operations. An operationally valid question could not be written because the topic does not align with the APE, SCRAM Conditions Present and Reactor Power Above APRM Downscale or Unknown, In this situation, EOP implementation is the concern, not LCO status.</p> <p>Randomly selected 2.4.6 – Knowledge of EOP mitigation Strategies</p>
3 / 3	G2 / G2.3.6	<p>Question 99, Ability to approve release permits. This function is rarely done and is mainly performed thru chemistry and radwaste procedures.</p> <p>Randomly selected G2.2.36 - Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions for operations.</p>

Facility: <u>          NMP2 - NRC          </u> Examination Level: <b>RO</b>		Date of Examination: <u>  11/10  </u> Operating Test Number: <u>      1      </u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	N,R	<b>Verification of License Requirements</b>  Given information related to maintenance of active license status for three operators, the candidate will determine which operator(s), if any, is(are) qualified to relieve the watch.  2.1.4 (3.3) Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status, 10CFR55, etc.  S-ODP-TQS-0101-R0050
Conduct of Operations	D,R	<b>Determine Core Thermal Power IAW N2-REP-11</b>  The candidate will determine core thermal power using turbine first stage pressure in accordance with N2-REP-11  K/A 2.1.7 (4.4) Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.
Equipment Control	M,R	<b>Develop a Tagging Request for the "B" TBCLCW Pump</b>  The candidate will develop and document a tagging request for the "B" TBCLCW Pump.  K/A 2.2.13 (4.3) Knowledge of tagging and clearance procedures.  CNG-OP-1.01-1007
Emergency Plan	M,S	<b>Actions For External Security Threats</b>  Given plant conditions, respond to a security threat per EPIP-EPP-10, Attachment 2, Security Contingency Event (CSO Checklist)  2.4.28 (3.2) Knowledge of procedures relating to a security event (non-safeguards information).  EPIP-EPP-10 Attachment 2 <b>SAME AS UNIT 1 EXAM</b>



NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
* Type Codes & Criteria:	(C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank ( $\leq 3$ for ROs; $\leq 4$ for SROs & RO retakes) (N)ew or (M)odified from bank ( $\geq 1$ ) (P)revious 2 exams ( $\leq 1$ ; randomly selected)	

Facility: <u>          NMP2-NRC          </u> Examination Level: <b>SRO</b>		Date of Examination: <u>  11/10  </u> Operating Test Number: <u>      1      </u>
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M,R	<b>Review Daily Checks Log IAW N2-OSP-LOG-D001</b>  The candidate will review a completed portion of control room daily logs. Identify deficiencies and TS requirements.  K/A 2.1.18 (3.8) Ability to make accurate, clear, and concise logs, records, status boards, and reports.
Conduct of Operations	D,R	<b>Evaluate Plant Chemistry Report (GAP-CHE-01, TS)</b>  Review plant daily status report, which includes plant chemistry, identify and determine required actions in response to out-of-specification reactor coolant chemistry parameters.  K/A 2.1.34 (3.5) Ability to maintain the primary and secondary plant chemistry within allowable limits.
Equipment Control	N,R	<b>Review of Completed Surveillance Test N2-OSP-CPS-Q001, Primary Containment Purge System Valve Operability Test.</b>  The candidate will review a completed surveillance test to determine acceptability  K/A 2.2.12 (4.3) Knowledge of surveillance procedures
Radiation Control	P,R	<b>Emergency Exposure Authorization Review and Approval</b>  The candidate will review the exposure status of personnel to determine expected radiation exposure and the need for an Emergency Exposure Authorization.  K/A 2.3.4 (3.7) Knowledge of radiation exposure limits under normal or emergency conditions.  <b>SAME JPM ON UNIT 1 EXAM</b>

Emergency Plan	D,R	<div>Classify Emergency Event</div> <div>Given plant conditions, evaluate emergency event.</div> <div>K/A 2.4.44 (4.4) Knowledge of emergency plan protective action recommendations.</div>
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
<div>* Type Codes &amp; Criteria:</div> <div>(C)ontrol room, (S)imulator, or Class(R)oom</div> <div>(D)irect from bank (<math>\leq 3</math> for ROs; <math>\leq 4</math> for SROs &amp; RO retakes)</div> <div>(N)ew or (M)odified from bank (<math>\geq 1</math>)</div> <div>(P)revious 2 exams (<math>\leq 1</math>; randomly selected)</div>		



Facility:	Nine Mile Point Unit 2	Date of Examination:	November 2010
Exam Level:	RO/SRO	Operating Test No.:	1
Control Room Systems® (8 for RO; 2 or 3 for SRO-U, including 1 ESF)			
	System / JPM Title	Type Code*	Safety Function
S-1	<b>Start the DIV1 H2/O2 Monitoring from the Suppression Chamber Post LOCA</b>  The candidate will restart the H2/O2 monitoring system post LOCA and sample from the suppression chamber IAW N2-OP-82 Sections F.1.0 and H.2.0  K/A 223001 A4.04 3.5/3.6	D,EN,S	5 CONTAINMENT INTEGRITY
S-2	<b>Add Air to a De-inerted Drywell</b>  The candidate will raise drywell pressure using the primary containment purge fan IAW N2-OP-61A Section H.3.0  K/A 261001 A4.04 3.3/3.4	M,L,S	9 RADIOACTIVITY RELEASE
S-3	<b>Securing and Restart of Shutdown Cooling</b>  The candidate will secure SDC for a short period of time and then restart the pump. During the restart, a failure of the throttle valve results in the inability to establish required flow and a pump trip is required IAW N2-OP-31 Sections H.3.0 & 4.0  K/A 205000 A4.01 3.7/3.7	M,A,L,S	4 HEAT REMOVAL FROM RX CORE
S-4	<b>Return WCS to Normal</b>  The candidate will return WCS to normal following feedwater stratification operation IAW N2-OP-37. Actions will be required due to an isolation signal IAW the ARP.  K/A 204000 A4.03 3.2/3.1	D,A,S	2 REACTOR WATER INVENTORY CONTROL
S-5	<b>Start and Load Division I Diesel</b>  The candidate will start and load the Division I Diesel IAW N2-OP-100A, Section F.4.0. A loss of SW will occur requiring a diesel shutdown.  K/A 264000 A4.04 (3.7/3.7)	D,A,S	6 ELECTRICAL

S-6 RO ONLY	<b>Place Main Turbine Shell Warming in service</b>  The candidate will place Main Turbine Shell Warming in service IAW N2-OP-21, Section E.3.0.  K/A 241000 A4.18 2.9/2.8	M,L,S	3  REACTOR PRESSURE CONTROL
S-7	<b>Transfer Recirc Pumps from High to Low speed</b>  The candidate will transfer Recirc Pumps from high speed to low speed per N2-OP-29 section G.1.0.  K/A 202001 A4.01 3.7/3.7	D, S	1  REACTIVITY CONTROL
S-8	<b>Shift RBCLCW and TBCLCW Pumps</b>  The candidate will shift RBCLCW Pumps from "A" to "C", then shift TBCLCW Pumps from "A" to "C" IAW N2-OP-13 & 14. Actions will be required due to a failure of the TBCLCW temperature controller  KA 400000 A4.01 3.1/3.0	P,A,S	8  PLANT SERVICE SYSTEMS
In-Plant Systems® (3 for RO; 3 or 2 for SRO-U)			
P-1	<b>Start the Diesel Fire Pump Locally</b>  The candidate will start the Diesel Fire Pump locally IAW N2-OP-43 Section E.3.0.  K/A 286000 2.1.30 4.4/4.0	M	8  PLANT SERVICE SYSTEMS
P-2	<b>Hydro Pump Boron Injection</b>  The candidate will Commence boron injection with the hydro pump lined up to 2SLS*P1A piping in accordance with EOP-6, Attachment 15.  K/A 295037 EA1.10 3.7/3.9	D,E,R	1  REACTIVITY CONTROL
P-3	<b>Reset an EPA Breaker</b>  The candidate will Reset EPA Breaker 2VBS*ACB2A with an Overvoltage condition present IAW N2-SOP-97  KA 262001 2.1.23 4.3/4.4	D,R	6  ELECTRICAL

@ 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
(EN)gineered safety feature	- / - / ≥1 (control room system)
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

Facility: <b>Nine Mile Point Unit 2</b>		Scenario No.: <b>NRC-01</b>		Op-Test No.: <b>11/2010</b>	
Examiners: _____		Operators: _____			
<b>Initial Conditions:</b> Simulator IC-21 or equivalent					
1. Reactor Power 95%					
<b>Turnover:</b>					
1. 95% power.					
2. Add water to the suppression pool with CSH IAW N2-OP-33					

Event No.	Malf. No.	Event Type*	Event Description
1	N/A	N (BOP) N (SRO) TS (SRO)	Add water to the suppression pool with CSH  <b>OP-33, TS 3.5.1 Condition B</b>
2	CS08	TS (SRO)	CSH Min Flow Valve Fails Closed  <b>TS 3.5.1</b>
3	TC03A	R (RO) R (SRO)	EHC Oscillations – Power reduction required  <b>SOP-101D, SOP-23</b>
4	CW16C CW02A	C (BOP) C (SRO)	RBCLCW pump trip, standby pump fails to auto start  <b>SOP-13</b>
5	RH13A	C (ALL) TS (SRO)	ECCS Div 1 Spurious Initiation  <b>TS 3.5.1 Condition C, 3.8.1 Condition B</b>
6	ED05A	C (ALL)	DIV1 Bus 101 Fault, Scram  <b>SOP-3, SOP-11, SOP-101C</b>
7	MS04	M (ALL)	Steam Line break in Drywell  <b>EOP-RPV, EOP-PC</b>
8	ED02B	C (ALL)	Loss of Line 6  <b>EOP-RPV, EOP-PC, SOP-03</b>
9	Override	C (BOP) C (SRO)	EDG DIV II Output BKR fails to auto close when required.  <b>SOP-03</b>

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



Facility: <b>Nine Mile Point Unit 2</b>		Scenario No.: <b>NRC-01</b>	Op-Test No.: <b>11/2010</b>
1. Total malfunctions (5-8) <b>Events 2,3,4,5,6,7,8,9</b>	8		
2. Malfunctions after EOP entry (1-2) <b>Events 8 &amp; 9</b>	2		
3. Abnormal events (2-4) <b>Events 3,4,5,6</b>	4		
4. Major transients (1-2) <b>Events 7</b>	1		
5. EOPs entered/requiring substantive actions (1-2) <b>Events 7 &amp; 8 (EOP-RPV, EOP-PC)</b>	2		
6. EOP contingencies requiring substantive actions (0-2)	0		
7. Critical tasks (2-3)	2		
<b>CRITICAL TASK DESCRIPTIONS:</b>			
<b>CT-1.0 - Restore power to DIV II vital bus by closing the DIV II EDG output breaker IAW SOP-03</b>			
<b>CT-2.0 - Initiate Drywell spray when suppression chamber pressure is &gt;10 psig to prevent exceeding the Pressure Suppression Pressure Limit</b>			

Facility: <b>Nine Mile Point Unit 2</b>				Scenario No.: <b>NRC-02</b>				Op-Test No.: <b>11/2010</b>			
Examiners: _____				Operators: _____							
Initial Conditions: Simulator IC-21 or equivalent											
1. Reactor Power 100%											
Turnover:											
1. 100% power.											
2. Perform section 8.2 of N2-OSP-RPS-W002, Manual Scram Test Channel "A" only											
Event No.	Malf. No.	Event Type*	Event Description								
1	Override	N (BOP) N (SRO) TS (SRO)	Perform section 8.2 of N2-OSP-RPS-W002, Manual Scram Test Channel "A" only  Indication Failure during test at step 8.2.11 – Annunciator remains in alarm  <b>TS 3.3.1.1</b>								
2	CS01B Remote	C (BOP) C (SRO) TS (SRO)	Spurious start of HPCS  <b>TS 3.5.1., 3.6.1.3</b>								
3	RD12A	C (RO) C (SRO)	CRD Pump Trip P1A motor electric fault  <b>SOP-30</b>								
4	MS10A	R (RO) R (SRO)	Loss of Extraction Steam – Power reduction  <b>SOP-08 &amp; 101D</b> – power reduced to less than rated								
5	FW15	I (BOP) I (SRO)	FW controller failure – fails as is  <b>SOP-06</b>								
6	RR46A RR10B	C (ALL)	"A" Recirc pump high vibration requires a manual trip by operators. Subsequently the "B" Recirc pump trips requiring a manual scram.  <b>SOP-29.1, SOP-29, SOP-101C</b>								
7	RD17A-E RD17H-M	M (ALL)	ATWS  <b>EOP-RPV, EOP-C5</b>								
8	RP08A &B	C (BOP) C (SRO)	RRCS failure, SLC fails to start  <b>EOP-C5</b>								

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

Facility: <b>Nine Mile Point Unit 2</b>		Scenario No.: <b>NRC-02</b>	Op-Test No.: <b>11/2010</b>
1. Total malfunctions (5-8) <b>Events 1 thru 8</b>	8		
2. Malfunctions after EOP entry (1-2) <b>Event 8</b>	1		
3. Abnormal events (2-4) <b>Event 2,3,4,5,6</b>	5		
4. Major transients (1-2) <b>Event 7</b>	1		
5. EOPs entered/requiring substantive actions (1-2) <b>Event 7 (EOP-RPV)</b>	1		
6. EOP contingencies requiring substantive actions (0-2) <b>Event 7 (EOP-C5)</b>	1		
7. Critical tasks (2-3)	2		
<b>CRITICAL TASK DESCRIPTIONS:</b>			
CT-1.0 – Given a failure of the reactor to SCRAM, with power above 4% or unknown, the crew will terminate and prevent all injection except boron, CRD and RCIC.			
CT-2.0 – Given a failure of the reactor to scram, the crew will lower power by inserting control rods or injecting boron IAW EOP-C5 (Failure to Scram)			

Facility: <b>Nine Mile Point Unit 2</b>				Scenario No.: <b>NRC-05</b>		Op-Test No.: <b>11/2010</b>	
Examiners: _____				Operators: _____			
<b>Initial Conditions:</b> IC-11 or equivalent							
1. Reactor Power 4.5%							
<b>Turnover:</b>							
1. For a PMT, perform DW to SC Vacuum Bkr test N2-OSP-ISC-M@002 for 2ISC*RV33A & 2ISC*RV33A							
1. Continue plant startup to place the reactor mode switch to RUN per N2-OP-101A. Currently complete through step E.3.3							
Event No.	Malf. No.	Event Type*	Event Description				
1	N/A	N (BOP) N (SRO)	Perform DW to SC Vacuum Bkr test N2-OSP-ISC-M@002				
2	N/A	R (RO) R (SRO)	Continue Startup <b>OP-101A</b>				
3	NM06D	I (RO) I (SRO)	IRM D Fails Upscale <b>OP-97</b>				
4	RD07	C (RO) C (SRO)	Stuck Control Rod <b>OP-30</b>				
5	N/A	N (RO) N (SRO)	Transfer Mode Switch to Run <b>OP-101A</b>				
6	ED04G	C (BOP) C (SRO) TS (SRO)	Loss of Power to Div II switchgear <b>SOP-03, TS 3.8.1</b>				
7	Override	TS (SRO)	RCIC Steam Line Isolation Valve ICS*MOV128 breaker trips open <b>TS 3.6.1.3</b>				
8	RC12 RC11 TC15A TC15B	M (ALL)	RCIC steam leak into reactor building fails to isolate EHC pumps trip <b>EOP-RPV, EOP-SC, EOP-C2, SOP-101C</b>				
9	FW02A,B,C	C (BOP) C (SRO)	Condensate Booster pumps trip <b>EOP-RPV</b>				



Facility: Nine Mile Point Unit 2		Scenario No.: NRC-05	Op-Test No.: 11/2010
1. Total malfunctions (5-8) Events 3, 4, 6, 7, 8, 9	6		
2. Malfunctions after EOP entry (1-2) Event 9	1		
3. Abnormal events (2-4) Events 3, 4, 6	3		
4. Major transients (1-2) Event 8	1		
5. EOPs entered/requiring substantive actions (1-2) Event 8 – (EOP-RPV, EOP-SC)	2		
6. EOP contingencies requiring substantive actions (0-2) Event 8 – (EOP-C2)	1		
7. Critical tasks (2-3)	2		
CRITICAL TASK DESCRIPTIONS:			
CT-1.0	Given an unisolable RCIC steam leak and secondary containment temperature approaching maximum safe values in one area, the crew will enter EOP-RPV and initiate a manual reactor scram		
CT-2.0	Given an unisolable RCIC steam leak and secondary containment temperature above maximum safe values in two or more areas, the crew will perform an RPV Blowdown per EOP-C2.		