

Facility: Nine Mile Point Unit 1      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	3	3				4	4			3	20	3	4	7	
	2	1	1	1				1	2			1	7	2	1	3	
	Tier Totals	4	4	4				5	6			4	27	5	5	10	
2. Plant Systems	1	2	2	2	2	2	2	3	3	3	3	2	26	2	3	5	
	2	1	2	1	1	1	1	1	1	1	1	1	12	0	1	2	
	Tier Totals	3	4	3	3	3	3	4	4	4	4	3	38	3	5	8	
3. Generic Knowledge & Abilities				1		2		3		4		10	1	2	3	4	7
				2		2		3		3			2	2	1	2	

- Note
1. Ensure that at least two topics from every applicable K/A category are sampled within each tier of the RO and SRO-only outlines (i.e., except for one category in Tier 3 of the SRO-only outline, the Tier Totals in each K/A category shall not be less than two).
  2. The point total for each group and tier in the proposed outline must match that specified in the table. The final point total for each group and tier may deviate by 1 from that specified in the table based on NRC revisions. The final RO exam must total 75 points and the SRO-only exam must total 25 points.
  3. Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems that are not included on the outline should be added. Refer to section D.1.b of ES-401, for guidance regarding 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 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.
  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. Refer to Section D.1.b of ES-401 for the applicable K/A's
  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.
  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

Nine Mile Point Unit 1  
Written Examination Outline  
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		EA2.02 - Ability to determine and/or interpret the following as they apply to HIGH DRYWELL PRESSURE: Drywell temperature	4.0	76
295004 Partial or Total Loss of DC Pwr / 6					X		AA2.04 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF D.C. POWER: System lineups	3.3	77
295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4					X		AA2.02 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION: Neutron monitoring	3.2	78
295038 High Off-site Release Rate / 9						X	2.4.18, Knowledge of the specific bases for EOPs.	4.0	79
295026 Suppression Pool High Water Temp. / 5						X	2.2.38 - Equipment Control: Knowledge of conditions and limitations in the facility license.	4.5	80
295037 SCRAM Conditions Present and Reactor Power Above APRM Downscale or Unknown / 1						X	2.2.39 - Equipment Control: Knowledge of less than or equal to one hour technical specification action statements for systems.	4.5	81
295005 Main Turbine Generator Trip / 3						X	2.2.37 - Equipment Control: Ability to determine operability and / or availability of safety related equipment.	4.6	82
295030 Low Suppression Pool Water Level / 5	X						EK1.03 - Knowledge of the operational implications of the following concepts as they apply to LOW SUPPRESSION POOL WATER LEVEL: Heat capacity	3.8	39

Nine Mile Point Unit 1  
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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	40
295005 Main Turbine Generator Trip / 3	X						AK1.03 - Knowledge of the operational implications of the following concepts as they apply to MAIN TURBINE GENERATOR TRIP: Pressure effects on reactor level	3.5	41
295028 High Drywell Temperature / 5		X					EK2.04 - Knowledge of the interrelations between HIGH DRYWELL TEMPERATURE and the following: Drywell ventilation	3.6	42
295006 SCRAM / 1		X					AK2.06 - Knowledge of the interrelations between SCRAM and the following: Reactor power	4.2	43
295025 High Reactor Pressure / 3		X					EK2.01 - Knowledge of the interrelations between HIGH REACTOR PRESSURE and the following: RPS	4.1	44
700000 Generator Voltage and Electric Grid Disturbances			X				AK3.02 - Knowledge of the reasons for the following responses as they apply to GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES: Actions contained in abnormal operating procedure for voltage and grid disturbances.	3.6	45
295004 Partial or Total Loss of DC Pwr / 6			X				AK3.02, Knowledge of the reasons for the following responses as they apply to PARTIAL OR COMPLETE LOSS OF D.C. POWER: Ground isolation/fault determination.	2.9	46

Nine Mile Point Unit 1  
Written Examination Outline  
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#
295016 Control Room Abandonment / 7			X				AK3.03 - Knowledge of the reasons for the following responses as they apply to CONTROL ROOM ABANDONMENT: Disabling control room controls	3.5	47
295031 Reactor Low Water Level / 2				X			EA1.10 - Ability to operate and/or monitor the following as they apply to REACTOR LOW WATER LEVEL: Control rod drive	3.6	48
295037 SCRAM Conditions Present and Reactor Power Above APRM Downscale or Unknown / 1				X			EA1.10 - Ability to operate and/or monitor the following as they apply to SCRAM CONDITION PRESENT AND REACTOR POWER ABOVE APRM DOWNSCALE OR UNKNOWN: Alternate boron injection methods: Plant-Specific	3.7	49
295021 Loss of Shutdown Cooling / 4				X			AA1.02 - Ability to operate and/or monitor the following as they apply to LOSS OF SHUTDOWN COOLING: RHR/shutdown cooling	3.5	50
295003 Partial or Complete Loss of AC / 6					X		AA2.04 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF A.C. POWER: System lineups	3.5	51
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	3.5	52
295026 Suppression Pool High Water Temp. / 5					X		EA2.03 - Ability to determine and/or interpret the following as they apply to SUPPRESSION POOL HIGH WATER TEMPERATURE: Reactor pressure	3.9	53

Nine Mile Point Unit 1  
Written Examination Outline  
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#
295023 Refueling Accidents / 8						X	2.4.21 - Emergency Procedures / Plan: Knowledge of the parameters and logic used to assess the status of safety functions, such as reactivity control, core cooling and heat removal, reactor coolant system integrity, containment conditions, radioactivity release control, etc.	4.0	54
295018 Partial or Total Loss of CCW / 8						X	2.4.46 - Emergency Procedures / Plan: Ability to verify that the alarms are consistent with the plant conditions.	4.2	55
295038 High Off-site Release Rate / 9						X	2.1.27 - Conduct of Operations: Knowledge of system purpose and / or function.	3.9	56
600000 Plant Fire On-site / 8				X			AA1.09 - Ability to operate and / or monitor the following as they apply to PLANT FIRE ON SITE: Plant fire zone panel (including detector location)	2.5	57
295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4					X		AA2.06 - Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION: Nuclear boiler instrumentation	3.2	58
K/A CategoryTotals	3	3	3	4	4/3	3/4	Group Point Total:	20/7	

Nine Mile Point Unit 1  
Written Examination Outline  
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#
295020 Inadvertent Cont. Isolation / 5 & 7					X		AA2.03 - Ability to determine and/or interpret the following as they apply to INADVERTENT CONTAINMENT ISOLATION: Reactor power	3.7	83
295007 High Reactor Pressure / 3						X	2.4.6, Knowledge of EOP mitigation strategies.	4.7	84
295014 Inadvertent Reactivity Addition / 1					X		AA2.03 - Ability to determine and/or interpret the following as they apply to INADVERTENT REACTIVITY ADDITION: Cause of reactivity addition	4.3	85
295017 High Off-site Release Rate / 9	X						AK1.02 - Knowledge of the operational implications of the following concepts as they apply to HIGH OFF-SITE RELEASE RATE: Protection of the general public	3.8	59
295009 Low Reactor Water Level / 2		X					AK2.01 - Knowledge of the interrelations between LOW REACTOR WATER LEVEL and the following: Reactor water level indication	3.9	60
295032 High Secondary Containment Area Temperature / 5			X				EK3.01 - Knowledge of the reasons for the following responses as they apply to HIGH SECONDARY CONTAINMENT AREA TEMPERATURE: Emergency/normal depressurization	3.5	61
295036 Secondary Containment High Sump/Area Water Level / 5				X			EA1.04 - Ability to operate and/or monitor the following as they apply to SECONDARY CONTAINMENT HIGH SUMP/AREA WATER LEVEL: Radiation monitoring: Plant-Specific	3.1	62

Nine Mile Point Unit 1  
 Written Examination Outline  
 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#
295012 High Drywell Temperature / 5					X		AA2.01 - Ability to determine and/or interpret the following as they apply to HIGH DRYWELL TEMPERATURE: Drywell temperature	3.8	63
295029 High Suppression Pool Water Level / 5						X	2.4.1 - Emergency Procedures / Plan: Knowledge of EOP entry conditions and immediate action steps.	4.6	64
295002 Loss of Main Condenser Vac / 3					X		AA2.01 - Ability to determine and/or interpret the following as they apply to LOSS OF MAIN CONDENSER VACUUM: Condenser vacuum/absolute pressure	2.9	65
K/A CategoryTotals	1	1	1	1	2/2	1/1	Group Point Total:	7/3	

Nine Mile Point Unit 1  
Written Examination Outline  
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#
259002 Reactor Water Level Control								X				A2.07 - Ability to (a) predict the impacts of the following on the REACTOR WATER LEVEL 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 comparator bias signal	2.5	86
211000 SLC								X				A2.07 - 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: Valve closures	3.2	87
205000 Shutdown Cooling											X	2.2.12 - Equipment Control: Knowledge of surveillance procedures.	4.1	88
264000 EDGs											X	2.1.32 - Conduct of Operations: Ability to explain and apply all system limits and precautions.	4.0	89
207000 Isolation (Emergency) Condenser											X	2.2.25 - Equipment Control: Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.	4.2	90



Nine Mile Point Unit 1  
Written Examination Outline  
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#
262001 AC Electrical Distribution	X											K1.02 - Knowledge of the physical connections and/or cause- effect relationships between A.C. ELECTRICAL DISTRIBUTION and the following: D.C. electrical distribution	3.3	1
212000 RPS	X											K1.02 - Knowledge of the physical connections and/or cause- effect relationships between REACTOR PROTECTION SYSTEM and the following: Nuclear boiler instrumentation	3.7	2
300000 Instrument Air		X										K2.02 - Knowledge of electrical power supplies to the following: Emergency air compressor	3.0	3
206000 HPCI		X										K2.01 - Knowledge of electrical power supplies to the following: System valves: BWR-2,3,4	3.2	4
239002 SRVs			X									K3.03 - Knowledge of the effect that a loss or malfunction of the RELIEF/SAFETY VALVES will have on following: Ability to rapidly depressurize the reactor	4.3	5
262002 UPS (AC/DC)			X									K3.08 - Knowledge of the effect that a loss or malfunction of the UNINTERRUPTABLE POWER SUPPLY (A.C./D.C.) will have on following: Computer operation: Plant-Specific	2.7	6

Nine Mile Point Unit 1  
Written Examination Outline  
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#
259002 Reactor Water Level Control				X								K4.09 - Knowledge of REACTOR WATER LEVEL CONTROL SYSTEM design feature(s) and/or interlocks which provide for the following: Single element control (reactor water level provides the only input)	3.1	7
400000 Component Cooling Water				X								K4.01 - Knowledge of CCWS design feature(s) and or interlocks which provide for the following: Automatic start of standby pump	3.4	8
215005 APRM / LPRM					X							K5.01 - Knowledge of the operational implications of the following concepts as they apply to AVERAGE POWER RANGE MONITOR/LOCAL POWER RANGE MONITOR SYSTEM: LPRM detector operation	2.8	9
207000 Isolation (Emergency) Condenser					X							K5.03 - Knowledge of the operational implications of the following concepts as they apply to ISOLATION (EMERGENCY) CONDENSER: Heat transfer: BWR-2,3	2.7	10
205000 Shutdown Cooling						X						K6.02 - Knowledge of the effect that a loss or malfunction of the following will have on the SHUTDOWN COOLING SYSTEM (RHR SHUTDOWN COOLING MODE): D.C. electrical power	2.7	11

Nine Mile Point Unit 1  
Written Examination Outline  
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#
215004 Source Range Monitor						X						K6.01 - Knowledge of the effect that a loss or malfunction of the following will have on the SOURCE RANGE MONITOR (SRM) SYSTEM: RPS	3.2	12
263000 DC Electrical Distribution							X					A1.01 - Ability to predict and/or monitor changes in parameters associated with operating the D.C. ELECTRICAL DISTRIBUTION controls including: Battery charging/discharging rate	2.5	13
261000 SGTS							X					A1.06 - Ability to predict and/or monitor changes in parameters associated with operating the STANDBY GAS TREATMENT SYSTEM controls including: Drywell and suppression chamber differential pressure: Mark-I	2.7	14
209001 LPCS								X				A2.06 - Ability to (a) predict the impacts of the following on the LOW PRESSURE CORE SPRAY SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Inadequate system flow	3.2	15

Nine Mile Point Unit 1  
Written Examination Outline  
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				A2.05 - Ability to (a) predict the impacts of the following on the INTERMEDIATE RANGE MONITOR (IRM) SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Faulty or erratic operation of detectors/system	3.3	16
218000 ADS									X			A3.04 - Ability to monitor automatic operations of the AUTOMATIC DEPRESSURIZATION SYSTEM including: Primary containment pressure	3.7	17
223002 PCIS/Nuclear Steam Supply Shutoff									X			A3.02 - Ability to monitor automatic operations of the PRIMARY CONTAINMENT ISOLATION SYSTEM/NUCLEAR STEAM SUPPLY SHUT-OFF including: Valve closures	3.5	18
211000 SLC										X		A4.05 - Ability to manually operate and/or monitor in the control room: Flow indication: Plant-Specific	4.1	19
264000 EDGs										X		A4.01 - Ability to manually operate and/or monitor in the control room: Adjustment of exciter voltage	3.3	20

Nine Mile Point Unit 1  
Written Examination Outline  
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#
218000 ADS											X	2.4.8 - Emergency Procedures / Plan: Knowledge of how abnormal operating procedures are used in conjunction with EOP's.	3.8	21
209001 LPCS											X	2.4.4 - Emergency Procedures / Plan: Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.5	22
223002 PCIS/Nuclear Steam Supply Shutoff								X				A2.06 - Ability to (a) predict the impacts of the following on the PRIMARY CONTAINMENT ISOLATION SYSTEM/NUCLEAR STEAM SUPPLY SHUT-OFF; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Containment instrumentation failures	3.0	23
300000 Instrument Air									X			A3.02 - Ability to monitor automatic operations of the INSTRUMENT AIR SYSTEM including: Air temperature	2.9	24
262002 UPS (AC/DC)										X		A4.01 - Ability to manually operate and/or monitor in the control room: Transfer from alternative source to preferred source	2.8	25

Nine Mile Point Unit 1  
 Written Examination Outline  
 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					A1.05 - Ability to predict and/or monitor changes in parameters associated with operating the INTERMEDIATE RANGE MONITOR (IRM) SYSTEM controls including: SCRAM and rod block trip setpoints	3.9	26
K/A Category Totals	2	2	2	2	2	2	3	3/2	3	3	2/3	Group Point Total:	26/5	

Nine Mile Point Unit 1  
Written Examination Outline  
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#
286000 Fire Protection								X				A2.08 - Ability to (a) predict the impacts of the following on the FIRE PROTECTION SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Failure to actuate when required	3.3	91
201003 Control Rod and Drive Mechanism											X	2.4.31 - Emergency Procedures / Plan: Knowledge of annunciator alarms, indications, or response procedures.	4.1	92
234000 Fuel Handling Equipment											X	2.1.32 - Conduct of Operations: Ability to explain and apply all system limits and precautions.	4.0	93
259001 Reactor Feedwater	X											K1.05 - Knowledge of the physical connections and/or cause- effect relationships between REACTOR FEEDWATER SYSTEM and the following: Condensate system	3.2	27
219000 RHR/LPCI: Torus/Pool Cooling Mode		X										K2.01 - Knowledge of electrical power supplies to the following: Valves	2.5	28
271000 Off-gas			X									K3.01 - Knowledge of the effect that a loss or malfunction of the OFFGAS SYSTEM will have on following: Condenser vacuum	3.5	29

Nine Mile Point Unit 1  
Written Examination Outline  
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#
272000 Radiation Monitoring				X								K4.03 - Knowledge of RADIATION MONITORING System design feature(s) and/or interlocks which provide for the following: Fail safe tripping of process radiation monitoring logic during conditions of instrument failure	3.6	30
288000 Plant Ventilation					X							K5.01 - Knowledge of the operational implications of the following concepts as they apply to PLANT VENTILATION SYSTEMS: Airborne contamination control	3.1	31
201002 RMCS						X						K6.01 - Knowledge of the effect that a loss or malfunction of the following will have on the REACTOR MANUAL CONTROL SYSTEM: Select matrix power	2.5	32
204000 RWCU							X					A1.03 - Ability to predict and/or monitor changes in parameters associated with operating the REACTOR WATER CLEANUP SYSTEM controls including: Reactor water temperature	2.8	33
201003 Control Rod and Drive Mechanism								X				A2.04 - Ability to predict and/or monitor changes in parameters associated with operating the CONTROL ROD AND DRIVE MECHANISM controls including: Single control rod SCRAM	3.5	34



Nine Mile Point Unit 1  
Written Examination Outline  
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#
223001 Primary CTMT and Aux.									X			A3.05 - Ability to monitor automatic operations of the PRIMARY CONTAINMENT SYSTEM AND AUXILIARIES including: Drywell pressure	4.3	35
201006 RWM									X			A4.04 - Ability to manually operate and/or monitor in the control room: Rod withdrawal error indication: P-Spec(Not-BWR6)	3.3	36
214000 RPIS										X		2.2.44 - Equipment Control: 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.	4.2	37
256000 Reactor Condensate		X										K2.01 - Knowledge of electrical power supplies to the following: System pumps	2.7	38
K/A Category Totals	1	2	1	1	1	1	1	1/1	1	1	1/2	Group Point Total:	12/3	

Facility: Nine Mile Point Unit 1		Date: November 2010				
Category	KA #	Topic	RO		SRO-Only	
			IR	Q#	IR	Q#
1. Conduct of Operations	2.1.34	Knowledge of primary and secondary plant chemistry limits.	2.7	66		
	2.1.8	Ability to coordinate personnel activities outside the control room.	3.4	67		
	2.1.40	Knowledge of refueling administrative requirements			3.9	94
	2.1.13	Knowledge of facility requirements for controlling vital / controlled access.			3.2	98
	Subtotal				2	
2. Equipment Control	2.2.13	Knowledge of tagging and clearance procedures.	4.1	68		
	2.2.20	Knowledge of the process for managing troubleshooting activities.	2.6	69		
	2.2.42	Ability to recognize system parameters that are entry-level conditions for Technical Specifications.			4.6	95
	2.2.40	Ability to apply technical specifications for a system.			4.7	100
Subtotal				2		2
3. Radiation Control	2.3.5	Ability to use radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc.	2.9	70		
	2.3.14	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities.	3.4	71		
	2.3.4	Knowledge of radiation exposure limits under normal or emergency conditions.	3.2	75		
	2.3.11	Ability to control radiation releases.			4.3	96
Subtotal				3		1

4. Emergency Procedures / Plan	2.4.41	Knowledge of the emergency action level thresholds and classifications.	2.9	72		
	2.4.45	Ability to prioritize and interpret the significance of each annunciator or alarm.	4.1	73		
	2.4.34	Knowledge of RO tasks performed outside the main control room during an emergency and the resultant operational effects.	4.2	74		
	2.4.26	Knowledge of facility protection requirements, including fire brigade and portable fire fighting equipment usage.			3.6	97
	2.4.17	Knowledge of EOP terms and definitions.			4.3	99
		Subtotal			3	2
Tier 3 Point Total:				10		7

Tier / Group	Randomly Selected KA	Reason for Rejection
1 / 1	295024 / EA2.07	<p>Question 76, Ability to determine and/or interpret the following as they apply to HIGH DRYWELL PRESSURE: Containment radiation levels: Mark-III. Nine Mile Point Unit 1 has a Mark-I containment, not a Mark-III containment.</p> <p>Randomly selected EA2.02 - Ability to determine and/or interpret the following as they apply to HIGH DRYWELL PRESSURE: Drywell temperature.</p>
1 / 1	295025 / EK2.07	<p>Question 44, Knowledge of the interrelations between HIGH REACTOR PRESSURE and the following: RCIC: Plant-Specific. Nine Mile Point Unit 1 does not have RCIC.</p> <p>Randomly selected EK2.01 - Knowledge of the interrelations between HIGH REACTOR PRESSURE and the following: RPS.</p>
2 / 1	212000 / K1.07	<p>Question 2, Knowledge of the physical connections and/or cause- effect relationships between REACTOR PROTECTION SYSTEM and the following: Relief/safety valves (low-low-set logic): Plant-Specific. Nine Mile Point Unit 1 does not have low-low set logic associated with relief/safety valves.</p> <p>Randomly selected K1.02 - Knowledge of the physical connections and/or cause- effect relationships between REACTOR PROTECTION SYSTEM and the following: Nuclear boiler instrumentation.</p>
2 / 1	209001 / A2.11	<p>Question 15, Ability to (a) predict the impacts of the following on the LOW PRESSURE CORE SPRAY SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Loss of fire protection: BWR-1. Nine Mile Point Unit 1 is a BWR-2, not a BWR-1.</p> <p>Randomly selected A2.06 - Ability to (a) predict the impacts of the following on the LOW PRESSURE CORE SPRAY SYSTEM ; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Inadequate system flow.</p>

1 / 1	295038 / 2.1.30	<p>Question 79, Conduct of Operations: Ability to locate and operate components, including local controls (High Off-site Release Rate). This K/A involves asking an SRO about the location and operation of local controls. Writing a question on this topic and meeting SRO question requirements would be difficult.</p> <p>Randomly selected 2.1.6 - Conduct of Operations: Ability to manage the control room crew during plant transients.</p>
2 / 1	261000 / A1.05	<p>Question 14, Ability to predict and/or monitor changes in parameters associated with operating the STANDBY GAS TREATMENT SYSTEM controls including: Primary containment oxygen level: Mark-I&amp;II. This K/A involves the relationship between SGTS Controls and O2 levels. There is no procedural reference available to write a question on this relationship.</p> <p>Randomly selected A1.06 - Ability to predict and/or monitor changes in parameters associated with operating the STANDBY GAS TREATMENT SYSTEM controls including: Drywell and suppression chamber differential pressure: Mark-I.</p>
2 / 2	234000 / 2.1.19	<p>Question 93, Conduct of Operations: Ability to use plant computers to evaluate system or component status (Fuel Handling Equipment). This K/A involves the relationship between Fuel Handling Equipment and the plant process computer. There is no direct relationship at Nine Mile Point Unit 1.</p> <p>Randomly selected 2.1.32 - Conduct of Operations: Ability to explain and apply all system limits and precautions.</p>
2 / 1	300000 / 2.2.38	<p>Question 90, Equipment Control: Knowledge of conditions and limitations in the facility license (Instrument Air). There is no direct relationship between Instrument Air and the facility license. Additionally, this is one of four Instrument Air K/As.</p> <p>Randomly selected 207000 Isolation (Emergency) Condenser, 2.2.25 – Equipment Control: Knowledge of bases in technical specifications for limiting conditions for operations and safety limits.</p>

2 / 2	215002 / K1.02	<p>Question 27, Knowledge of the physical connections and/or cause- effect relationships between ROD BLOCK MONITOR SYSTEM and the following: LPRM: BWR-3, 4, 5. Nine Mile Point Unit 1 does not have a Rod Block Monitor.</p> <p>Randomly selected another Tier 2 System and K/A. 259001 Reactor Feedwater, K1.05 - Knowledge of the physical connections and/or cause effect relationships between REACTOR FEEDWATER SYSTEM and the following: Condensate System.</p>
3 / 3	G3 / 2.3.11	<p>Question 70, Ability to control radiation releases. This K/A is identical with the K/A for question 96. This topic is also covered in other K/As in the exam. To prevent a potential double jeopardy question for an SRO candidate another Generic K/A will be randomly added.</p> <p>Randomly selected 2.3.5, Ability to use radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc.</p>
1 / 1	295038 / 2.1.6	<p>Question 79, Conduct of Operations: Ability to manage the control room crew during plant transients. This is not an acceptable K/A for a Tier 1 or Tier 2 topic.</p> <p>Randomly selected 2.4.18, Knowledge of the specific bases for EOPs.</p>

1 / 1	295004 / AK3.03	<p>Question 46, Knowledge of the reasons for the following responses as they apply to PARTIAL OR COMPLETE LOSS OF D.C. POWER: Reactor SCRAM: Plant-Specific. There are no procedural references regarding a loss of DC and a reactor scram.</p> <p>Randomly selected AK3.02, Knowledge of the reasons for the following responses as they apply to PARTIAL OR COMPLETE LOSS OF D.C. POWER: Ground isolation/fault determination.</p>
2 / 2	201006 / A4.02	<p>Question 36, Ability to monitor automatic operations of the ROD WORTH MINIMIZER SYSTEM (RWM) (PLANT SPECIFIC) including: Pushbutton indicating switches. Based on limited function of RWM pushbutton indicating switches at Nine Mile Point Unit 1, this K/A has low operational validity.</p> <p>Randomly selected A4.04, Ability to monitor automatic operations of the ROD WORTH MINIMIZER SYSTEM (RWM) (PLANT SPECIFIC) including: Rod withdrawal error indication: P-Spec (Not-BWR6).</p>
1 / 2	295012 / 2.4.47	<p>Question 84, Emergency Procedures / Plan: Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material (High Drywell Temperature). This is the 4<sup>th</sup> K/A dealing with High Drywell Temperature (Questions 42, 63 and 76). Since Drywell Cooling, HCTL and CSIL have all been tested, there is not a suitable SRO question to match the K/A.</p> <p>Randomly selected from the untested Tier 1 Group 2 K/As; 295007, High Reactor Pressure, 2.4.6, Knowledge of EOP mitigation strategies.</p>
3 / 4	G3 / 2.4.25	<p>Question 99, Knowledge of fire protection procedures. This is the third fire protection K/A on the SRO exam (also #91 and #97). Re-sampling for better balance of coverage.</p> <p>Randomly selected 2.4.17 – Knowledge of EOP terms and definitions.</p>

Facility: Nine Mile Point Unit 1Date of Examination: 11/10Examination Level: RO  SRO Operating Test Number: 1

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M, S	<p><b>PERFORM RPV LEVEL INSTRUMENT CHECKS PER N1-ST-D0, DAILY CHECKS</b></p> <p>Take control room reactor water level instrument readings for various daily checks required by Technical Specifications, enter the instrument readings into the applicable sections of the Daily Checks and take appropriate actions based on those checks.</p> <p>2.1.7 (4.4) Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.</p> <p>N1-ST-D0</p>
Conduct of Operations	M, R	<p><b>PERFORM DWED AND DWFD LEAK RATE CALCULATIONS USING INTEGRATOR READINGS</b></p> <p>Given the DWED and DWFD integrator readings determine the identified and unidentified leak rates IAW Att 6 of N1-OP-8.</p> <p>2.1.18 (3.6) Ability to make accurate, clear, and concise logs, records, status boards, and reports.</p> <p>N1-OP-8</p>
Equipment Control	N, R	<p><b>PREPARE A TAGOUT FOR RBCLC PUMP 13</b></p> <p>Identify the isolations required to tagout RBCLC pump 13 for the shaft seal replacement. Record the required isolations using CNG-OP-1.01-1007 attachment 8.</p> <p>2.2.13 (4.1) Knowledge of tagging and clearance procedures.</p> <p>CNG-OP-1.01-1007, N1-OP-11, P&amp;ID C-18022-C, EWD C-19436-C</p>



Emergency Plan	M, S	<p><b>ACTIONS FOR EXTERNAL SECURITY THREATS</b></p> <p>Given plant conditions, respond to a security threat per EPIP-EPP-10, Attachment 2, Security Contingency Event (CSO Checklist)</p> <p>2.4.28 (3.2) Knowledge of procedures relating to a security event (non-safeguards information).</p> <p>EPIP-EPP-10 Attachment 2</p>
<p><b>NOTE:</b> 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.</p>		
<p>* Type Codes &amp; Criteria:</p> <p>(C)ontrol room, (S)imulator, or Class(R)oom</p> <p>(D)irect from bank (<math>\leq 3</math> for ROs; <math>\leq 4</math> for SROs &amp; RO retakes)</p> <p>(N)ew or (M)odified from bank (<math>\geq 1</math>)</p> <p>(P)revious 2 exams (<math>\leq 1</math>; randomly selected)</p>		

Facility: Nine Mile Point Unit 1Date of Examination: 11/10Examination Level: RO  SRO Operating Test Number: 1

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	D, R	<p><b>DETERMINE THERMAL LIMITS WITH INOPERABLE PRESSURE REGULATOR</b></p> <p>Given plant parameters including an inoperable reactor pressure regulator, determine the adjusted thermal limit values. Core Operating Limit Report graphs and a 3D Monicore printout are used to evaluate conditions against the adjusted thermal limits.</p> <p>2.1.19 (3.8) Ability to use plant computers to evaluate system or component status.</p> <p>N1-RESP-1, Core Operating Limits Report, Technical Specifications</p>
Conduct of Operations	M, R	<p><b>ASSESS REPORTABILITY REQUIREMENTS</b></p> <p>Given a series of plant events, determine the reporting requirements per 10 CFR 50.72.</p> <p>2.1.18 (3.8) Ability to make accurate, clear, and concise logs, records, status boards, and reports.</p> <p>10 CFR 50.72, NUREG 1022, CNG-NL-1.01-1004</p>
Equipment Control	D, R	<p><b>EVALUATE A COMPLETED SURVEILLANCE TEST AND TAKE THE REQUIRED ACTIONS</b></p> <p>Given a completed Surveillance Test, N1-ST-M1A, Liquid Poison Pump #11 Operability Test, complete the "Acceptance Criteria" and "SM Review" sections.</p> <p>2.2.12 (4.1) Knowledge of surveillance procedures.</p> <p>N1-ST-M1A, Technical Specifications</p>

Radiation Control	D, R	<p><b>GENERATE AND APPROVE AN EMERGENCY EXPOSURE AUTHORIZATION</b></p> <p>Given a work activity, area dose rates and personnel dose history, determine the need for an emergency exposure authorization and select the appropriate person to perform the task.</p> <p>2.3.4 (3.7) Knowledge of radiation exposure limits under normal and emergency conditions.</p> <p>EPIP-EPP-15</p>
Emergency Plan	M, R	<p><b>CLASSIFY EMERGENCY EVENT AND PERFORM INITIAL NOTIFICATIONS</b></p> <p>Given plant conditions, determine event classification and complete initial notifications.</p> <p>2.4.41 (4.6) Knowledge of the emergency action level thresholds and classifications.</p> <p>EAL Matrix, EPIP-EPP-18, EPIP-EPP-20</p>

**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:	Nine Mile Point Unit 1	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	<p><b>Respond to a Loss of Service Water</b></p> <p>The candidate will start the standby Service water pump. The pump then trips, requiring override actions IAW N1-SOP-18.1.</p> <p>K/A 295018 AA.01 (3.3/3.4)</p>	D, A, S	<p>8</p> <p>PLANT SERVICE SYSTEMS</p>
S-2	<p><b>Bypass LPRM Input To APRM</b></p> <p>The candidate will bypass LPRM 20-25A input to its associated APRM IAW N1-OP-38C.</p> <p>K/A 215005 A4.04 (3.2/3.2)</p>	D, S	<p>7</p> <p>INSTRUMENTATION</p>
S-3	<p><b>Synchronize Main Generator to Grid, Main Generator Locks Out</b></p> <p>The candidate will complete synchronizing the Main Generator to the grid IAW N1-OP-32 and a generator lockout will occur, requiring N1-SOP-31.1 actions.</p> <p>K/A 245000 A4.02 (3.1/2.9)</p>	M, A, S	<p>4</p> <p>HEAT REMOVAL FROM CORE</p>
S-4	<p><b>Rapid RWCU System Restoration for Level Control</b></p> <p>The candidate will perform rapid RWCU system restoration for RPV level control and establish reject flow to the condenser to lower level IAW N1-OP-3.</p> <p>K/A 204000 A4.06 (3.0/2.9)</p>	D, L, S	<p>2</p> <p>REACTOR WATER INVENTORY CONTROL</p>
S-5	<p><b>Start the RB Emergency Ventilation System Loop 11</b></p> <p>The candidate will manually start Reactor Building Emergency Ventilation System Loop 11 IAW N1-OP-10.</p> <p>K/A 288000 A4.01 (3.1/2.9)</p>	D, EN, S	<p>9</p> <p>RADIOACTIVITY RELEASE</p>

S-6	<b>MSIV Stroke Test and Limit Switch Test</b>	P, S	3 REACTOR PRESSURE CONTROL
The candidate will perform the MSIV Stroke Test and Limit Switch Test IAW N1-ST-Q26 for MSIV 112.			
K/A 239001 A4.01 (4.2/4.1) NRC 2009			
S-7	<b>Perform Rod Block Withdrawal Test</b>	N, A, L, S	1 REACTIVITY CONTROL
The candidate will select and withdraw a control rod and perform an over-travel check IAW N1-ST-R4. The rod will be uncoupled. The candidate will re-couple the control rod IAW N1-OP-5 and complete the test.			
K/A 201003 A2.02 (3.7/3.8)			
S-8	<b>Vent the Drywell Prior to Personnel Entry</b>	N, S	5 PRIMARY CONTAINMENT SYSTEM AND AUXILIARIES
The candidate will lineup and vent the Drywell to lower pressure prior to personnel entry IAW N1-OP-9.			
K/A 223001 A4.03 (3.4/3.4)			
In-Plant Systems® (3 for RO; 3 or 2 for SRO-U)			
P-1	<b>Lineup Lake Water to Supply the Emergency Condenser Makeup Tanks using the Electric Fire Pump</b>	M, A, E, R	4 HEAT REMOVAL FROM REACTOR CORE
The candidate will attempt to lineup the Diesel Fire Pump to supply lake water to the Emergency Condenser Makeup Tanks IAW N1-SOP-21.2. The Diesel Fire Pump will fail, requiring use of the Electric Fire Pump.			
K/A 207000 2.1.30 (4.4/4.0)			
P-2	<b>Transfer RPS Bus 11 from UPS 162A to UPS 162B</b>	D, R	6 ELECTRICAL
The candidate will place UPS 162B in service and place UPS 162A in standby IAW N1-OP-40.			
K/A 262002 2.1.20 (4.6/4.6)			
P-3	<b>Inject Boron Into the Reactor Using the Hydro Pump</b>	D, E, R	1 REACTIVITY CONTROL
The candidate will lineup and inject boron using the Hydro Pump IAW N1-EOP-3.2.			
K/A 295037 EA1.10 (3.7/3.9)			

@ 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 (C)ontrol room (D)irect from bank (E)mergency or abnormal in-plant (EN)gineered safety feature (L)ow-Power / Shutdown (N)ew or (M)odified from bank including 1(A) (P)revious 2 exams (R)CA (S)imulator	$4-6 / 4-6 / 2-3$  $\leq 9 / \leq 8 / \leq 4$ $\geq 1 / \geq 1 / \geq 1$ - / - / $\geq 1$ (control room system) $\geq 1 / \geq 1 / \geq 1$ $\geq 2 / \geq 2 / \geq 1$ $\leq 3 / \leq 3 / \leq 2$ (randomly selected) $\geq 1 / \geq 1 / \geq 1$

Facility: <b>Nine Mile Point Unit 1</b>		Scenario No.: <b>NRC-01</b>		Op-Test No.: <b>11/10</b>	
Examiners: _____		Operators: _____			
<b>Initial Conditions:</b> Simulator IC-151					
1. Reactor power is approximately 85%					
2. APRM 14 is bypassed					
3. CRD Pump 11 is out of service					
<b>Turnover:</b>					
1. Return APRM 14 to service					
2. Raise power to 100% with recirculation flow					
Event No.	Malf. No.	Event Type*	Event Description		
1	N/A	N (BOP) N (SRO)	Place APRM 14 in service <b>OP-38C</b>		
2	N/A	R (RO) R (SRO)	Raise power with recirculation flow <b>OP-43B</b>		
3	TC06	C (RO) C (SRO) TS (SRO)	EPR oscillations <b>SOP-31.2, TS 3.1.7.c, COLR</b>		
4	ED07	C (BOP) C (SRO) TS (SRO)	Loss of PB 102 <b>ARP A4-1-6, TS 3.2.7.c, TS 3.1.5.b</b>		
5	ED12A	C (BOP) C (SRO)	Loss of PB 16A after the actions for a loss of PB 102 are taken <b>ARP A4-4-2</b>		
6	PC05 EC01	C (ALL)	Seismic event and steam leak in Drywell <b>SOP-28, EOP-2, EOP-4</b>		
7	PC05 PC04	M (ALL)	Second seismic event and Torus water leak <b>EOP-2, EOP-4</b>		
8	CT02C	C (ALL)	Containment Spray Raw Water pump 121 trip <b>EOP-8</b>		
9	AD07A	C (ALL)	ERV 111 fails to open <b>EOP-8</b>		

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

Facility: <b>Nine Mile Point Unit 1</b>		Scenario No.: <b>NRC-01</b>	Op-Test No.: <b>11/10</b>
1. Total malfunctions (5-8) <b>Events 3-9</b>		7	
2. Malfunctions after EOP entry (1-2) <b>Events 8 and 9</b>		2	
3. Abnormal events (2-4) <b>Events 3-6</b>		4	
4. Major transients (1-2) <b>Event 7</b>		1	
5. EOPs entered/requiring substantive actions (1-2) <b>Events 6-9 (EOP-2, EOP-4)</b>		2	
6. EOP contingencies requiring substantive actions (0-2) <b>Events 8 and 9 (EOP-8)</b>		1	
7. Critical tasks (2-3)		2	
<b>CRITICAL TASK DESCRIPTIONS:</b>			
<p><b>CT-1.0</b> Given a LOCA in the Drywell, the crew will initiate Containment Sprays prior to exceeding the Pressure Suppression Pressure limit, in accordance with N1-EOP-4.</p>			
<p><b>CT-2.0</b> Given a lowering torus water level, the crew will execute N1-EOP-8, RPV Blowdown, when it is determined Torus water level cannot be maintained above eight (8) feet, in accordance with N1-EOP-4.</p>			



Facility: <b>Nine Mile Point Unit 1</b>		Scenario No.: <b>NRC-02</b>		Op-Test No.: <b>11/10</b>	
Examiners: _____		Operators: _____			
<b>Initial Conditions:</b> Simulator IC-152					
1. Reactor power is approximately 100%					
2. EDG 102 is ready for start					
<b>Turnover:</b>					
1. Complete surveillance test N1-ST-M4A					
2. Lower power to 95% with recirculation flow					
Event No.	Malf. No.	Event Type*	Event Description		
1	N/A	N (BOP) N (SRO)	Complete N1-ST-M4A, Emergency Diesel Generator 102 and PB 102 Operability Test <b>ST-M4A</b>		
2	Override	C (BOP) C (SRO) TS (SRO)	EDG 102 governor failure <b>ST-M4A, TS 3.6.3</b>		
3	N/A	R (RO) R (SRO)	Lower power to 95% with recirculation flow <b>OP-43B</b>		
4	RR68B RR01B	I (BOP) I (SRO)	RR pump 12 M/A station failure and delayed pump trip <b>SOP-1.3</b>		
5	Override	C (BOP) C (SRO) TS (SRO)	RR pump trip, RR pump disch valve fails to close <b>SOP-1.3, TS 3.1.7</b>		
6	RP01B	C (RO) C (SRO) TS (SRO)	RPS MG Set trip <b>OP-48, SOP-16.1, TS 3.6.12</b>		
7	RD34 IA01	C (ALL)	Instrument air leak, Reactor scram required <b>SOP-20.1, SOP-1</b>		
8	RD33	M (ALL)	ATWS <b>EOP-2, EOP-3</b>		
9	Overrides	C (ALL)	Feedwater Isolation Valves 11 and 12 fail to isolate <b>EOP-3</b>		

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

Facility: <b>Nine Mile Point Unit 1</b>	Scenario No.: <b>NRC-02</b>	Op-Test No.: <b>11/10</b>
1. Total malfunctions (5-8) <b>Events 2, 4-9</b>	7	
2. Malfunctions after EOP entry (1-2) <b>Event 9</b>	1	
3. Abnormal events (2-4) <b>Events 4-7</b>	4	
4. Major transients (1-2) <b>Event 8</b>	1	
5. EOPs entered/requiring substantive actions (1-2) <b>Event 7 and 8 (EOP-2)</b>	1	
6. EOP contingencies requiring substantive actions (0-2) <b>Events 8 and 9 (EOP-3)</b>	1	
7. Critical tasks (2-3)	3	
<p><b>CRITICAL TASK DESCRIPTIONS:</b></p> <p><b>CT-1.0</b> Given lowering CRD system air pressure, the crew will insert a manual reactor scram before control rods begin drifting, in accordance with N1-ARP-F3 and/or N1-SOP-20.1.</p> <p><b>CT-2.0</b> Given a failure of the reactor to scram with power above 6% and RPV water level above -41 inches, the crew will terminate and prevent all injection except boron and CRD, in accordance with N1-EOP-3.</p> <p><b>CT-3.0</b> Given a failure of the reactor to scram with power above 6%, the crew will lower reactor power by inserting control rods or injecting boron, in accordance with N1-EOP-3.</p>		

Facility: <b>Nine Mile Point Unit 1</b>		Scenario No.: <b>NRC-03</b>		Op-Test No.: <b>11/10</b>	
Examiners: _____		Operators: _____			
<b>Initial Conditions:</b> Simulator IC-153					
1. Reactor power is approximately 100%					
<b>Turnover:</b>					
1. Transfer Powerboard 101 supply from R1014 to R1011 in accordance with N1-OP-30 section H.8.0. Previous shift has completed step H.8.1.					
2. Feedwater pump 11 is out of service for maintenance.					
Event No.	Malf. No.	Event Type*	Event Description		
1	N/A	N (BOP) N (SRO)	Transfer Powerboard 101 supply from R1014 to R1011 <b>OP-30</b>		
2	ED06	C (BOP) C (SRO) TS (SRO)	Powerboard 101 fault <b>SOP-1.3, TS 3.1.7</b>		
3	CW19	I (BOP) I (SRO)	RBCLC Temperature Controller fails to minimum cooling <b>SOP-11.1</b>		
4	AD05	C (BOP) R (RO) R (SRO) TS (SRO)	ERV 111 opens inadvertently <b>SOP-1.4, SOP-1.1, EOP-4, TS 3.1.5.a</b>		
5	EG11	C (ALL)	Degraded 345KV Grid conditions <b>SOP-33B.1, SOP-1</b>		
6	RR29	M (ALL)	Coolant leak in Drywell <b>EOP-2, EOP-4</b>		
7	FW03B	C (ALL)	Trip of Feedwater Pump 12 <b>EOP-2, EOP-8</b>		

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

Facility: <b>Nine Mile Point Unit 1</b>		Scenario No.: <b>NRC-03</b>	Op-Test No.: <b>11/20/10</b>
1. Total malfunctions (5-8) <b>Events 2-7</b>	6		
2. Malfunctions after EOP entry (1-2) <b>Event 7</b>	1		
3. Abnormal events (2-4) <b>Events 2-5</b>	4		
4. Major transients (1-2) <b>Event 6</b>	1		
5. EOPs entered/requiring substantive actions (1-2) <b>Events 6 and 7 (EOP-2, EOP-4)</b>	2		
6. EOP contingencies requiring substantive actions (0-2) <b>Event 7 (EOP-8)</b>	1		
7. Critical tasks (2-3)	3		
<b>CRITICAL TASK DESCRIPTIONS:</b>			
<p>CT-1.0 Given an inadvertently open ERV at power, the crew will close the ERV or insert a manual scram prior to torus temperature exceeding 110°F, in accordance with N1-SOP-1.4.</p> <p>CT-2.0 Given a LOCA in the Drywell, the crew will initiate Containment Sprays prior to exceeding the Pressure Suppression Pressure limit, in accordance with N1-EOP-4.</p> <p>CT-3.0 Given a LOCA with degraded high pressure injection capability, the crew will depressurize the RPV and inject with Preferred and Alternate Injection Systems to restore and maintain RPV water level above -84 inches, in accordance with N1-EOP-2.</p>			

Facility: <b>Nine Mile Point Unit 1</b>		Scenario No.: <b>NRC-04</b>	Op-Test No.: <b>11/10</b>
Examiners: _____		Operators: _____	
<b>Initial Conditions:</b> Simulator IC-154			
1. Reactor power is approximately 85%			
2. Containment Spray Pump 122 is OOS for repair (TS 3.3.7.b, day 1 of 15 day LCO).			
<b>Turnover:</b>			
1. Shutdown Condensate Pump 13 for maintenance due to a motor oil leak			
2. Perform a Rod Sequence Exchange			
Event No.	Malf. No.	Event Type*	Event Description
1	N/A	N (BOP) N (SRO) TS (SRO)	Condensate Pump 13 must be shutdown for maintenance due to a motor oil leak <b>OP-15A, TS 3.1.8</b>
2	N/A	R (RO) R (SRO)	Rod Sequence Exchange <b>OP-5, RMI</b>
3	EG02	C (RO) C (SRO)	Generator Auto Voltage Regulator fails high <b>ARP A7-2-6</b>
4	RR06A RR07A	C (BOP) C (SRO) TS (SRO)	Recirc Pump 11 seal failure requiring shutdown and isolation of the pump <b>SOP-1.2, TS 3.2.5, 3.1.7.e</b>
5	RR92	I (BOP) I (SRO) TS (SRO)	RPV pressure transmitter failure resulting in FWLC deviation <b>SOP-16.1, OP-16, TS 3.1.8</b>
6	CU11	M (ALL)	RWCU break in the Secondary Containment requiring scram <b>EOP-2, EOP-5</b>
7	CU14	C (ALL)	Failure of the RWCU Isolation Valves to automatically isolate, manual isolation will also fail <b>EOP-5, EOP-8</b>
8	TC12	C (ALL)	Turbine Bypass Valves fail to open <b>EOP-2</b>

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

Facility: <b>Nine Mile Point Unit 1</b>		Scenario No.: <b>NRC-04</b>	Op-Test No.: <b>11/10</b>
1. Total malfunctions (5-8) <b>Events 3-8</b>	6		
2. Malfunctions after EOP entry (1-2) <b>Events 7 and 8</b>	2		
3. Abnormal events (2-4) <b>Events 3-5</b>	3		
4. Major transients (1-2) <b>Event 6</b>	1		
5. EOPs entered/requiring substantive actions (1-2) <b>Events 6 and 7 (EOP-2, EOP-5)</b>	2		
6. EOP contingencies requiring substantive actions (0-2) <b>Event 7 (EOP-8)</b>	1		
7. Critical tasks (2-3)	2		
<b>CRITICAL TASK DESCRIPTIONS:</b>			
CT-1.0 Given an un-isolable RWCU leak outside primary containment and one general area temperature above the maximum safe limit, the crew will insert a manual reactor scram, in accordance with N1-EOP-5.			
CT-2.0 Given an un-isolable RWCU leak outside primary containment and two general area temperatures above the maximum safe limit, the crew will execute N1-EOP-8, RPV Blowdown, in accordance with N1-EOP-5.			