UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

December 19, 1996

NOTE TO: NRC Document Control Desk
Mail Stop O-5-D-24

FROM: Laura Hurley, Licensing Assistant
Operations Branch, Region IV

SUBJECT: OPERATOR LICENSING EXAMINATIONS ASMINISTERED ON OCTOBER 7-11, 1996, AT WASHINGTON PUBLIC POWER SUPPLY SYSTEM

DOCKET #50-397

On October 7-11, 1996, Operator Licensing Examinations were administered at the referenced facility. Attached you will find the following information for processing through NUDOCS and distribution to the NRC staff, including the NRC PDR:

Item #1 - a) Facility submitted outline and intial exam submittal, designated for distribution under RIDS Code A070.

b) As given operating examination, designated for distribution under RIDS Code A070.

Item #2 - Examination Report with the as given written examination attached, designated for distribution under RIDS Code IE42.

If you have any questions, please contact Laura Hurley, Licensing Assistant, Operaiions Branch, Region IV at (817) 860-8253.

WASHINGTON PUBLIC POWER SUPPLY SYSTEM
P.O. Box 968 • 3000 George Washington Way • Richland, Washington 99352-0968 • (509) 372-5000

July 26, 1996
GO2-96-148

Docket No. 50-397

Mr. T.P. Gwynn, Director
Division of Reactor Safety
U.S. NRC, Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-8064

Dear Mr. Gwynn:

SUBJECT: **WNP-2 OPERATING LICENSE NPF-21**
PROPOSED PILOT INITIAL LICENSE EXAMINATION OUTLINE

The proposed pilot initial license examination outline for the exam to be administered by the Nuclear Regulatory Commission on October 7, 1996, has been completed. The examination outline is being mailed to Mr. Howard Bundy at Region IV on Friday, July 26, 1996, for evaluation and approval.

Per the requirement in Examiner Standards-201, the proposed examination outline is being sent to Mr. Bundy in a double envelope marked "FOR OFFICIAL USE ONLY" and "TO BE OPENED BY ADDRESSEE ONLY". WNP-2 requests that these materials be withheld from public disclosure until after the examination has been completed.

If you have any comments or concerns, please contact W.D. Shaeffer, Superintendent, Operations Training at (509) 377-8266.

Respectfully,

John P. Albers

J.P. Albers
Nuclear Training Manager (MD 1027)

cc: TO McKernon - NRC/RIV
JL Pellet - NRC/RIV
Document Control Desk - NRC
TG Colburn - NRR
NS Reynolds - Winston and Strawn
NRC Sr. Resident Inspector - 927N
DL Williams - BPA/399

A070 01

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A070 01

Facility: WNP2 **Knowledge and Ability Record Form** Exam date: October 7, 1996

ref: NUREG/BR-0122, Rev. 5

COUNT MATRIX

Summarizing Counts by K/A Group
for
BWR - Senior Reactor Operator

												Total
Plant Wide Generics												14
	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	SG	
Plant Systems I	2	1	2	4	3	2	2	2	2	2	1	23
Plant Systems II	1	1	4	4	0	0	0	2	0	0	1	13
Plant Systems III	0	0	0	1	0	1	0	1	0	0	1	4
Emergency/Abn I	3	6	4	---	---	---	4	4	---	---	5	26
Emergency/Abn II	2	6	2	---	---	---	3	1	---	---	3	17
Totals	8	14	12	9	3	3	9	10	2	2	11	---
Model Total												97

Facility: WNP2 **Knowledge and Ability Record Form** Exam date: October 7, 1996

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PLANT-WIDE GENERIC RESPONSIBILITIES

BWR - Senior Reactor Operator Target: 17% *Actual: 17%

	K/A	Topic	SRO Rating
1.	294001K1.01	Knowledge of how to conduct and verify valve lineups.	3.7
2.	294001K1.02	Knowledge of tagging and clearance procedures.	4.5
3.	294001K1.03	Knowledge of 10 CFR 20 and related facility radiation control requirements.	3.8
4.	294001K1.04	Knowledge of Facility ALARA program.	3.6
5.	294001K1.05	Knowledge of Facility requirements for controlling access to vital/control areas.	3.7
6.	294001K1.13	Knowledge of safety procedures related to oxygen-deficient environment.	3.6
7.	294001K1.16	Knowledge of facility protection requirements including fire brigade and portable fire fighting equipment usage.	3.8
8.	294001A1.01	Ability to obtain and verify control procedure copy.	3.4
9.	294001A1.02	Ability to execute procedural steps.	4.2
10	294001A1.03	Ability to locate and use procedures and directives related to shift staffing and activities.	3.7
11	294001A1.05	Ability to make accurate, clear, and concise verbal reports.	3.8
12	294001A1.09	Ability to coordinate personnel activities inside the Control Room.	4.2
13	294001A1.14	Ability to maintain primary and secondary Plant chemistry within allowable limits.	3.4
14	294001A1.16	Ability to take actions called for in the Facility Emergency Plan, including (if required) supporting or acting as the Emergency Coordinator.	4.7

*NOTE: It is intended that 17 of 100 questions be written utilizing the above 14 selected KAs.

Facility: WNP2 **Knowledge and Ability Record Form** Exam date: October 7, 1996

ref: NUREG/BR-0122, Rev. 5

PLANT SYSTEMS - GROUP II

BWR - Reactor Operator Target: 19% Actual: 19%

	K/A	Topic (Systems - Group II)	RO Rating
1.	201003A2.01	Ability to predict the impact of the following on the *Control Rod and Drive Mechanism*: *Stuck Rod*.	3.4
2.	201003K4.04	*Control Rod and Drive Mechanism* design feature(s) and/or interlocks which provide for *the use of either accumulator or Reactor water to Scram the Control Rod*.	3.6
3.	202001GK.06	Knowledge of bases in Technical Specifications for limiting conditions for operations and safety limits.	3.8
4.	202001A2.14	Ability to predict the impact of the following on the Recirculation System: *High Reactor Pressure (ATWS) Initiation*.	3.9
5.	204000K4.04	*Reactor Water Cleanup System* design feature(s) and/or interlocks which provide for *System Isolation signals*.	3.6
6.	214000K3.03	Knowledge of the effect that a loss or malfunction of *Rod Position Information System* will have on *RMCS*.	3.2
7.	219000K1.06	Physical connections and/or cause-effect relationships between *RHR/LPCI: Torus/Suppression Pool Cooling Mode* and the *Keep Fill System*.	3.2
8.	219000K4.09	*RHR/LPCI: Torus/Suppression Pool Cooling Mode* design feature(s) and/or interlocks which provide for *Heat Exchanger cooling*.	3.3
9.	226001GK.07	Purpose and function of major components and controls in the *RHR/LPCI: Containment Spray System Mode*.	3.5
10.	230000A4.02	Manually operate and/or monitor *RHR/LPCI: Torus/Suppression Pool Spray Valves*.	3.8
11.	245000K4.09	*Main Turbine Generator and Auxiliary Systems* design feature(s) and/or interlocks which provide for *Turbine Control*.	3.2
12.	256000K6.02	Effect that a loss or malfunction of *Circulating Water System* will have on the *Reactor Condensate System*.	3.1
13.	256000GK.07	Purpose and function of major components and controls in the *Reactor Condensate System*.	3.4
14.	262002K4.01	*Uninterruptable Power Supply* design feature(s) and/or interlocks which provide for *transfer from preferred power to alternate power supplies*.	3.4
15.	263000K3.03	Effect that a loss or malfunction of the *D.C. Electrical Distribution System* will have on *systems with D.C. components*.	3.8
16.	272000K1.02	Physical connections and/or cause-effect relationships between *Radiation Monitoring System* and the *Offgas System*.	3.5
17.	286000A2.06	Ability to predict the impact of the following on the *Fire Protection System*: *Low Fire Main Pressure*.	3.1
18.	290001K5.01	Operational implications of *Vacuum Breaker operation* as it applies to Secondary Containment.	3.3

	K/A	Topic (Systems - Group II)	RO Rating
19.	290003A3.01	Monitor automatic operations of the *Control Room HVAC* including: *Initiation/Reconfiguration*.	3.3

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PLANT SYSTEMS - GROUP III

BWR - Reactor Operator Target: 4% Actual: 4%

	K/A	Topic (Systems - Group III)	RO Rating
1.	215001K4.01	*Traversing In-Core Probe* design feature(s) and/or interlocks which provide for *Primary Containment Isolation.*	3.4
2.	233000A2.07	Ability to predict the impact of the following on the *Fuel Pool Cooling and Cleanup System: High Fuel Pool Temperature.*	3.0
3.	288000A2.03	Ability to predict the impact of the following on the *Plant Ventilation System: Loss of Coolant Accident(s).*	3.5
4.	290002K5.01	Operational implications of *Thermal Limits* as it applies to *Reactor Vessel Internals.*	3.5

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EMERGENCY & ABNORMAL PLANT EVOLUTIONS - GROUP I

BWR - Reactor Operator Target: 13% Actual: 13%

	K/A	Topic (Emerg. & Abn. - Group I)	RO Rating
1.	295006G.005	Knowledge of the annunciator alarms and indications, and use of the response instructions.	4.0
2.	295006A1.06	Operate and/or monitor *CRD Hydraulic System* as applied to *SCRAM*.	3.6
3.	295009K2.03	Interrelations between *Low Reactor Water Level* and the following: *Reactor Recirculation System*.	3.2
4.	295009A1.03	Operate and/or monitor *Jet Pump Net Positive Suction Head* as applied to *Low Reactor Water Level*.	3.1
5.	295014A2.01	Determine and/or interpret the following as they apply to *Inadvertent Reactivity Addition*: *Reactor Power*.	4.2
6.	295015A1.02	Operate and/or monitor *Cooldown effects on Reactor Power* as applied to *Incomplete SCRAM*.	4.2
7.	295015K2.08	Interrelations between *Incomplete Scram* and the following: *Neutron monitoring system*.	3.7
8.	295024K3.07	Reason(s) for *Drywell Venting* as applied to *High Drywell Pressure*.	4.0
9.	295024G.011	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.5
10.	295025A2.03	Determine and/or interpret the following as they apply to *High Reactor Pressure*: *Suppression Pool Temperature*.	4.1
11.	295031K1.01	Operational implications of *adequate core cooling* as applied to *Reactor Low Water Level*.	4.7
12.	295037K2.13	Interrelations between *Scram conditions present and Reactor Power above APRM downscale or unknown* and *alternate Boron injection methods*.	4.1
13.	295037A2.01	Determine and/or interpret the following as they apply to *Scram conditions present and Reactor Power above APRM downscale or unknown*: *Reactor Power*.	4.3

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EMERGENCY & ABNORMAL PLANT EVOLUTIONS - GROUP II

BWR - Reactor Operator Target: 19% Actual: 19%

	K/A	Topic (Emerg. & Abn. - Group II)	RO Rating
1.	295001G.010	Ability to perform without reference to procedures those actions that require immediate operation of system components or controls.	3.7
2.	295002K3.01	Reasons for the following responses as they apply to *Loss of Main Condenser Vacuum*: *Reactor Scram.*	3.8
3.	295003A1.03	Operate and/or monitor *Systems necessary to assure safe Plant Shutdown* as applied to *Partial or Complete Loss of A.C.Power.*	4.4
4.	295004K2.03	Interrelations between *Partial or complete Loss of D.C. Power* and *D.C. Bus Loads.*	3.3
5.	295008A1.08	Operate and/or monitor *Feedwater System* as applied to *High Reactor Water Level.*	3.5
6.	295013K2.01	Interrelations between *High Suppression Pool Temperature* and the following: *Suppression Pool Cooling.*	3.6
7.	295016K3.01	Reason(s) for *disabling Control Room controls* as applied to *Control Room Abandonment.*	4.1
8.	295017K3.01	Reason(s) for *System Isolations* as applied to *High Off-Site Release Rate.*	3.6
9.	295018K2.02	Interrelations between *Partial or complete Loss of Component Cooling Water* and *Plant operations.*	3.6
10.	295019A2.01	Determine and/or interpret the following as they apply to *Partial or complete Loss of Instrument Air*: *Instrument Air system pressure.*	3.6
11.	295019G.005	Knowledge of the annunciator alarms and indications, and use of the response instructions.	3.3
12.	295020K2.04	Interrelations between *Inadvertent Containment Isolation* and the following: *RWCU system.*	3.1
13.	295022A1.01	Operate and/or monitor *Reactor Pressure vs. Rod Insertion* as applied to *Loss of CRD Pumps.*	3.4
14.	295026K3.01	Reason(s) for *Emergency/Normal depressurization* as applied to *Suppression Pool High Water Temperature.*	3.8
15.	295028K1.01	Operational implications of *Reactor Water Level measurement* as applied to *High Drywell Temperature.*	3.7
16.	295029K2.06	Interrelations between *High Suppression Pool Water Level* and the following: *SRV's and discharge piping.*	3.5
17.	295030G.007	Ability to explain and apply all system limits and precautions.	3.6
18.	295033K2.03	Interrelations between *High Secondary Containment Area Radiation Levels* and the following: *Secondary Containment Ventilation.*	3.9
19.	295034K2.02	Interrelations between *Secondary Containment Ventilation High Radiation* and the following: *Area Radiation Monitoring System.*	3.9

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EMERGENCY & ABNORMAL PLANT EVOLUTIONS - GROUP III

BWR - Reactor Operator Target: 4% Actual: 4%

	K/A	Topic (Emerg. & Abn. - Group III)	RO Rating
1.	295021G.008	Ability to recognize indications for system operating parameters which are entry-level conditions for Technical Specifications.	3.2
2.	295023K1.01	Operational implications of *Radiation exposure hazards* as applied to *Refueling Accidents*.	3.6
3.	295032K3.03	Reason(s) for *Isolating Affected systems* as applied to *High Secondary Containment Area Temperature*.	3.8
4.	295035A1.02	Operate and/or monitor *Secondary Containment Ventilation System* as applied to *Secondary Containment high differential pressure*.	3.6

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PLANT SYSTEMS - GROUP I

BWR - Senior Reactor Operator Target: 23% Actual: 23%

	K/A	Topic (Systems - Group I)	SRO Rating
1.	202002A2.07	Ability to predict the impact of the following on the Recirculation Flow Control System: *Loss of A.C. power.*	3.3
2.	202002K1.02	Physical connections and/or cause-effect relationships between Recirc. Flow Control System and *Reactor Power.*	4.2
3.	203000K1.13	Physical connections and/or cause-effect relationships between RHR/LPCI: Inj. mode and *Drywell Pressure.*	4.0
4.	209002A3.01	Monitor automatic operations of the High Pressure Core Spray System (HPCS) including: *Valve Operation.*	3.3
5.	209002K4.02	High Pressure Core Spray System (HPCS) design feature(s) and/or interlocks which provide for *preventing over filling the Reactor Vessel.*	3.5
6.	211000K6.03	Effect that a loss or malfunction of *A.C. Power* will have on the Standby Liquid Control System.	3.3
7.	212000A1.11	Predict and/or monitor changes in parameters associated with operating the Reactor Protection System *status lights and alarms.*	3.3
8.	212000K2.01	Electric Power supplies to the Reactor Protection System.	3.3
9.	212000K3.06	Knowledge of the effect that a loss or malfunction of *RPS* will have on the scram air header solenoid operated valves.	4.1
10.	215004A4.01	Manually operate and/or monitor *SRM count rate and period.*	3.8
11.	216000K5.07	Operational implications of *elevated Containment temperature effects on level indication* as it applies to NBI.	3.8
12.	217000A1.03	Predict and/or monitor changes in *Reactor Water Level* parameters associated with operating RCIC.	4.0
13.	218000K5.01	Operational implications of *ADS Logic Operation* as it applies to the Automatic Depressurization System.	3.8
14.	223001A4.13	Manually operate and/or monitor *Hydrogen Recombiners.*	3.4
15.	223001K4.06	Primary Containment System and Auxiliaries design feature(s) and/or interlocks which provide for *maintaining proper containment/secondary containment to Drywell differential pressure.*	3.3
16.	226001GK.07	Purpose and function of major components and controls in the *RHR/LPCI: Containment Spray System Mode.*	3.5
17.	239002K4.05	Relief/Safety Valves design feature(s) and/or interlocks which provide for *SRV operation from more than one location.*	3.7
18.	241000K3.02	Knowledge of the effect that a loss or malfunction of *Reactor/Turbine Pressure Regulating System* will have on Reactor Pressure.	4.3

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	K/A	Topic (Systems - Group I)	SRO Rating
19.	241000A2.03	Ability to predict the impact of the following on the *Reactor/Turbine Pressure Regulating System*: Failed open/closed bypass valve(s).	4.2
20.	261000K4.01	Standby Gas Treatment System design feature(s) and/or interlocks which provide for *automatic system initiation*.	3.8
21.	264000K6.08	Effect that a loss or malfunction of *A.C. Power* will have on the Emergency Diesel Generators.	3.7
22.	264000A3.05	Monitor automatic operations of the Emergency Diesel Generators including: *Load shedding and sequencing*.	3.5
23.	290001K5.01	Operational implications of *Vacuum Breaker operation* as it applies to Secondary Containment.	3.4

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PLANT SYSTEMS - GROUP II

BWR - Senior Reactor Operator Target: 13% Actual: 13%

	K/A	Topic (Systems - Group II)	SRO Rating
1.	201001A2.04	Ability to predict the impact of the following on the CRD Hydraulic System: *Scram Conditions.*	3.9
2.	201001K2.05	Electric Power supplies to the *Alternate Rod Insertion Valves.*	4.5
3.	201002K4.02	*Reactor Manual Control System* design feature(s) and/or interlocks which provide for *Control Rod Blocks.*	3.5
4.	201002K3.01	Knowledge of the effect that a loss or malfunction of *Reactor Manual Control System* will have on the *ability to move Control Rods.*	3.4
5.	202001A2.14	Ability to predict the impact of the following on the Recirculation System: *High Reactor Pressure (ATWS) Initiation.*	4.2
6.	202001GK.06	Knowledge of bases in Technical Specifications for limiting conditions for operations and safety limits.	4.1
7.	204000K4.04	*Reactor Water Cleanup System* design feature(s) and/or interlocks which provide for *System Isolation signals.*	3.6
8.	214000K3.03	Knowledge of the effect that a loss or malfunction of *Rod Position Information System* will have on *RMCS.*	3.2
9.	245000K4.09	*Main Turbine Generator and Auxiliary Systems* design feature(s) and/or interlocks which provide for *Turbine Control.*	3.2
10.	259001K3.01	Knowledge of the effect that a loss or malfunction of *Reactor Feedwater System* will have on Reactor Water Level.	3.9
11.	262002K4.01	*Uninterruptable Power Supply* design feature(s) and/or interlocks which provide for *transfer from preferred power to alternate power supplies.*	3.4
12.	263000K3.03	Effect that a loss or malfunction of the *D.C. Electrical Distribution System* will have on *systems with D.C. components.*	3.8
13.	272000K1.02	Physical connections and/or cause-effect relationships between *Radiation Monitoring System* and the *Offgas System.*	3.5

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PLANT SYSTEMS - GROUP III

BWR - Senior Reactor Operator Target: 4% Actual: 4%

	K/A	Topic (Systems - Group III)	SRO Rating
1.	201003K4.04	*Control Rod and Drive Mechanism* design feature(s) and/or interlocks which provide for the following: *The use of either accumulator or Reactor Water to Scram the control rod.*	3.7
2.	201003A2.01	Ability to predict the impact of the following on the *Control Rod and Drive Mechanism*: *Stuck Rod.*	3.6
3.	256000K6.02	Effect that a loss or malfunction of *Circulating Water System* will have on the *Reactor Condensate System.*	3.1
4.	256000GK.07	Purpose and function of major components and controls in the *Reactor Condensate System.*	3.4

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EMERGENCY & ABNORMAL PLANT EVOLUTIONS - GROUP I

BWR - Senior Reactor Operator Target: 26% Actual: 26%

	K/A	Topic (Emerg. & Abn. - Group I)	SRO Rating
1.	295003K2.02	Interrelations between *Partial or Complete Loss of A.C.Power* and the *Emergency Generators*.	4.2
2.	295003A1.03	Operate and/or monitor *Systems necessary to assure safe Plant Shutdown* as applied to *Partial or Complete Loss of A.C.Power*.	4.4
3.	295006G.005	Knowledge of the annunciator alarms and indications, and use of the response instructions.	4.0
4.	295006A1.06	Operate and/or monitor *CRD Hydraulic System* as applied to *SCRAM*.	3.6
5.	295009K2.03	Interrelations between *Low Reactor Water Level* and the following: *Reactor Recirculation System*.	3.2
6.	295009A1.03	Operate and/or monitor *Jet Pump Net Positive Suction Head* as applied to *Low Reactor Water Level*.	3.1
7.	295013K2.01	Interrelations between *High Suppression Pool Temperature* and the following: *Suppression Pool Cooling*.	3.7
8.	295014A2.01	Determine and/or interpret the following as they apply to *Inadvertent Reactivity Addition*: *Reactor Power*.	4.2
9.	295015A1.02	Operate and/or monitor *Cooldown effects on Reactor Power* as applied to *Incomplete SCRAM*.	4.2
10.	295015K2.08	Interrelations between *Incomplete Scram* and the following: *Neutron monitoring system*.	3.7
11.	295016G.006	Ability to locate and operate components, including local controls.	4.1
12.	295016K3.01	Reason(s) for *disabling Control Room controls* as applied to *Control Room Abandonment*.	4.2
13.	295017K3.01	Reason(s) for *System Isolations* as applied to *High Off-Site Release Rate*.	3.9
14.	295023K1.01	Operational implications of *Radiation exposure hazards* as applied to *Refueling Accidents*.	4.1
15.	295024K3.07	Reason(s) for *Drywell Venting* as applied to *High Drywell Pressure*.	4.0
16.	295024G.011	Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures.	4.5
17.	295025K2.01	Interrelations between *High Reactor Pressure* and the following: *RPS*.	4.1
18.	295025A2.03	Determine and/or interpret the following as they apply to *High Reactor Pressure*: *Suppression Pool Temperature*.	4.1
19.	295026G.012	Ability to utilize symptom based procedures.	4.5
20.	295026K3.01	Reason(s) for *Emergency/Normal depressurization* as applied to *Suppression Pool High Water Temperature*.	4.1

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	K/A	Topic (Emerg. & Abn. - Group I)	SRO Rating
21.	295030K1.03	Operational implications of *Heat Capacity* as applied to *Low Suppression Pool Water Level.*	4.1
22.	295030G.007	Ability to explain and apply all system limits and precautions.	3.9
23.	295031A2.01	Determine and/or interpret the following as they apply to *Reactor Low Water Level: Reactor Water Level.*	4.6
24.	295031K1.01	Operational implications of *adequate core cooling* as applied to *Reactor Low Water Level.*	4.7
25.	295037K2.13	Interrelations between *Scram conditions present and Reactor Power above APRM downscale or unknown* and *alternate Boron injection methods.*	4.1
26.	295037A2.01	Determine and/or interpret the following as they apply to *Scram conditions present and Reactor Power above APRM downscale or unknown: Reactor Power.*	4.3

Facility: WNP2 **Knowledge and Ability Record Form** Exam date: October 7, 1996

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EMERGENCY & ABNORMAL PLANT EVOLUTIONS - GROUP II

BWR - Senior Reactor Operator Target: 17% Actual: 17%

	K/A	Topic (Emerg. & Abn. - Group II)	SRO Rating
1.	295001G.010	Ability to perform without reference to procedures those actions that require immediate operation of system components or controls.	3.7
2.	295002K3.01	Reasons for the following responses as they apply to *Loss of Main Condenser Vacuum*: *Reactor Scram*.	3.8
3.	295004K2.03	Interrelations between *Partial or complete Loss of D.C. Power* and *D.C. Bus Loads*.	3.3
4.	295005K1.02	Operational implications of *Core Thermal Limit considerations* as applied to *Main Turbine Generator Trip*.	3.6
5.	295008A1.08	Operate and/or monitor *Feedwater System* as applied to *High Reactor Water Level*.	3.5
6.	295018K2.02	Interrelations between *Partial or complete Loss of Component Cooling Water* and *Plant operations*.	3.6
7.	295019A2.01	Determine and/or interpret the following as they apply to *Partial or complete Loss of Instrument Air*: *Instrument Air system pressure*.	3.6
8.	295019G.005	Knowledge of the annunciator alarms and indications, and use of the response instructions.	3.3
9.	295020K2.04	Interrelations between *Inadvertent Containment Isolation* and the following: *RWCU system*.	3.1
10.	295021G.008	Ability to recognize indications for system operating parameters which are entry-level conditions for Technical Specifications.	3.9
11.	295022A1.01	Operate and/or monitor *Reactor Pressure vs. Rod Insertion* as applied to *Loss of CRD Pumps*.	3.4
12.	295028K1.01	Operational implications of *Reactor Water Level measurement* as applied to *High Drywell Temperature*.	3.7
13.	295029K2.06	Interrelations between *High Suppression Pool Water Level* and the following: *SRV's and discharge piping*.	3.5
14.	295032K3.03	Reasons for the following responses as they apply to *High Secondary Containment Area Temperature*: *Isolating affected Systems*.	3.9
15.	295033K2.03	Interrelations between *High Secondary Containment Area Radiation Levels* and the following: *Secondary Containment Ventilation*.	3.9
16.	295034K2.02	Interrelations between *Secondary Containment Ventilation High Radiation* and the following: *Area Radiation Monitoring System*.	3.9
17.	295035A1.02	Operate and/or monitor *SBGT* as applied to *Secondary Containment High Differential Pressure*.	3.8

Facility: WNP2 **Knowledge and Ability Record Form** Exam date: October 7, 1996

ref: NUREG/BR-0122, Rev. 5

COUNT MATRIX

Summarizing Counts by K/A Group
for
BWR - Reactor Operator

												Total
Plant Wide Generics												13
	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	SG	
Plant Systems I	2	2	4	5	2	3	2	4	2	2	0	28
Plant Systems II	2	0	2	5	1	1	0	3	1	1	3	19
Plant Systems III	0	0	0	1	1	0	0	2	0	0	0	4
Emergency/Abn I	1	3	1	---	---	---	3	3	---	---	2	13
Emergency/Abn II	1	7	4	---	---	---	3	1	---	---	3	19
Emergency/Abn III	1	0	1	---	---	---	1	0	---	---	1	4
Totals	7	12	12	11	4	4	9	13	3	3	9	---
Model Total												100

Facility: WNP2 **Knowledge and Ability Record Form** Exam date: October 7, 1996

ref: NUREG/BR-0122, Rev. 5

PLANT-WIDE GENERIC RESPONSIBILITIES

BWR - Reactor Operator Target: 13% Actual: 13%

	K/A	Topic	RO Rating
1.	294001K1.02	Knowledge of tagging and clearance procedures.	3.9
2.	294001K1.03	Knowledge of 10CFR20 and related Facility radiation control requirements.	3.3
3.	294001K1.04	Knowledge of Facility ALARA program.	3.3
5.	294001K1.05	Knowledge of Facility requirements for controlling access to vital/control areas.	3.2
6.	294001K1.09	Knowledge of safety procedures related to high pressure.	3.4
7.	294001K1.14	Knowledge of safety procedures related to confined spaces.	3.2
8.	294001K1.16	Knowledge of facility protection requirements including fire brigade and portable fire fighting equipment usage.	3.5
9.	294001A1.02	Ability to execute procedural steps.	4.2
10	294001A1.05	Ability to make accurate, clear, and concise verbal reports.	3.4
11	294001A1.09	Ability to coordinate personnel activities inside the Control Room.	3.3
12	294001A1.13	Ability to locate Control Room switches, controls and indications, and to determine that they are correctly reflecting the desired Plant lineup.	4.5
13	294001A1.15	Ability to use Plant Computer to obtain and evaluate parametric information on system and component status.	3.2

Facility: WNP2 **Knowledge and Ability Record Form** Exam date: October 7, 1996

ref: NUREG/BR-0122, Rev. 5

PLANT SYSTEMS - GROUP I

BWR - Reactor Operator Target: 28% Actual: 28%

	K/A	Topic (Systems - Group I)	RO Rating
1.	201001A2.04	Ability to predict the impact of the following on the CRD Hydraulic System: *Scram Conditions.*	3.8
2.	201001K2.05	Electric Power supplies to the *Alternate Rod Insertion Valves.*	4.5
3.	201002K3.01	Knowledge of the effect that a loss or malfunction of *Reactor Manual Control System* will have on the *ability to move Control Rods.*	3.4
4.	201002K4.02	*Reactor Manual Control System* design feature(s) and/or interlocks which provide for *Control Rod Blocks.*	3.5
5.	202002A2.07	Ability to predict the impact of the following on the Recirculation Flow Control System: *Loss of A.C. power.*	3.3
6.	202002K1.02	Physical connections and/or cause-effect relationships between Recirc. Flow Control System and *Reactor Power.*	4.2
7.	203000K1.13	Physical connections and/or cause-effect relationships between RHR/LPCI: Inj. mode and *Drywell Pressure.*	3.9
8.	209002A3.01	Monitor automatic operations of the High Pressure Core Spray System (HPCS) including: *Valve Operation.*	3.3
9.	209002K4.02	High Pressure Core Spray System (HPCS) design feature(s) and/or interlocks which provide for *preventing over filling the Reactor Vessel.*	3.4
10.	211000K6.03	Effect that a loss or malfunction of *A.C. Power* will have on the Standby Liquid Control System.	3.2
11.	212000A1.11	Predict and/or monitor changes in parameters associated with operating the Reactor Protection System *status lights and alarms.*	3.4
12.	212000K2.01	Electric Power supplies to the *Reactor Protection System.*	3.2
13.	212000K3.06	Knowledge of the effect that a loss or malfunction of *RPS* will have on the scram air header solenoid operated valves.	4.0
14.	215004A4.01	Manually operate and/or monitor *SRM count rate and period.*	3.9
15.	216000K5.07	Operational implications of *elevated Containment temperature effects on level indication* as it applies to NBI.	3.6
16.	217000A1.03	Predict and/or monitor changes in *Reactor Water Level* parameters associated with operating RCIC.	4.0
17.	218000K5.01	Operational implications of *ADS Logic Operation* as it applies to the Automatic Depressurization System.	3.8
18.	223001A4.13	Manually operate and/or monitor *Hydrogen Recombiners.*	3.4
19.	223001K4.06	Primary Containment System and Auxiliaries design feature(s) and/or interlocks which provide for *maintaining proper containment/secondary containment to Drywell differential pressure.*	3.1

Facility: WNP2 **Knowledge and Ability Record Form** Exam date: October 7, 1996

ref: NUREG/BR-0122, Rev. 5

	K/A	Topic (Systems - Group I)	RO Rating
20.	223002K6.07	Effect that a loss or malfunction of *Essential A.C. Power* will have on the Primary Containment Isolation/Nuclear Steam Supply Shut-off System.	3.2
21.	223002A2.10	Ability to predict the impact of the following on the *Primary Containment Isolation/Nuclear Steam Supply Shut-off System*: Loss of Coolant Accident(s).	3.9
22.	239002K4.05	Relief/Safety Valves design feature(s) and/or interlocks which provide for *SRV operation from more than one location.*	3.6
23.	241000K3.02	Knowledge of the effect that a loss or malfunction of *Reactor/Turbine Pressure Regulating System* will have on Reactor Pressure.	4.2
24.	241000A2.03	Ability to predict the impact of the following on the *Reactor/Turbine Pressure Regulating System*: Failed open/closed bypass valve(s).	4.1
25.	259001K3.01	Knowledge of the effect that a loss or malfunction of *Reactor Feedwater System* will have on Reactor Water Level.	3.9
26.	261000K4.01	Standby Gas Treatment System design feature(s) and/or interlocks which provide for *automatic system initiation.*	3.7
27.	264000K6.08	Effect that a loss or malfunction of *A.C. Power* will have on the Emergency Diesel Generators.	3.6
28.	264000A3.05	Monitor automatic operations of the Emergency Diesel Generators including: *Load shedding and sequencing.*	3.4

Examination Level: SRO (Upgrade)

Week of Examination: October 7, 1996

Examiner's Name:_____

JPM#	System	Safety Function	Area	Description of JPM
3	Control Room Ventilation 290003GA.09 (3.6/3.5)	9	Sim. (A/P)	Startup Control Room Ventilation.
2	RPS 212000GA9 (4.2/4.2)	7	Plant	Restart of RPS-MG-1.
7	Emerg. Diesel Generator 264000A4.04 (3.7/3.7)	6	Plant	Perform MANUAL Start of HPCS DG from the Local Panel.
1	Suppression Pool 219000A4.13 (3.9/3.8)	5	Plant (S/D)	Reduce SUPPRESSION POOL Level from the Remote Shutdown Panel.
5	EOP 295015GA.06 (4.1/3.9)	E/A	CR	Override ECCS Valve Logic to throttle RPV Injection.
11	"Conduct of Operations" 294001A1.08 (3.1/3.6)	Admin.	Sim.	Generator Exitation Curve (Spider Curve) interpretation with given situation.

Examiner: _____ Chief Examiner: _____

JPM Checklist per ES-301

1. 10 SRO(I)/RO applicants JPMs w/ 7 Control room and 3 in-plant.
2. 5 SRO(U) JPMs w/ 2 or 3 Control . om and 2 or 3 in-plant.
3. At least 7 different safety functions for SRO(I)/RO's.
4. At least 5 different safety functions for SRO(U) applicants.
5. 1 Control room JPM must be an ESF.
6. For each system selected, select 1 existing OR develop 1 new JPM.
7. At least 1 JPM related to shutdown or low power condition.
8. 1 or 2 JPMs require "alternate paths".
9. At least 1 "in plant" JPM requires EOP or Abnormal actions.
10. At least 1 "in plant" JPM requires escort into rad. controlled area.
11. "Diversify" the prescripted questions among the Ks, As, and Gs.
12. Less than 80% overlap from last NRC Exam.
13. At least 2 NEW or significantly altered JPMs for SRO(I)/RO's.
14. At least 1 NEW or significantly altered JPM for SRO(U).
15. Administrative topics should be evaluated in JPMs whenever possible, rather than prescripted questions.

Examination Level: SRO (Instant)

Week of Examination: October 7, 1996

Examiner's Name:_____

JPM#	System	Safety Function	Area	Description of JPM
6	A.C. Electrical Dist. 262001A4.04 (3.6/3.7)	6	Sim.	Synchronize the MAIN GENERATOR with the GRID.
3	Control Room Ventilation 290003GA.09(3.6/3.5)	9	Sim. (A/P)	Startup Control Room Ventilation.
4	Standby Liquid Control Sys. 211000A4.04(4.5/4.6)	1	Sim. (A/P)	Operate SLC BORON Sytem for RPV Injection.
8	RCIC 217000A2.10 (3.1/3.1) 217000A2.11 (3.1/3.2)	2	Sim.	Initiate RCIC for RPV injection "ARM" and "DEPRESS".
9	RSCS 201004A402 (3.5/3.2)	7	Sim.	Place RSCS into service.
10	LPCI 203000A4.02 (4.1/4.1)	4	Sim.	Align LPCI-C to Standby status.
2	RPS 212000GA9 (4.2/4.2)	7	Plant	Restart of RPS-MG-1.
7	Emerg. Diesel Generator 264000A4.04 (3.7/3.7)	6	Plant	Perform MANUAL Start of HPCS DG from the Local Panel.
1	Suppression Pool 219000A4.13 (3.9/3.8)	5	Plant (S/D)	Reduce SUPPRESSION POOL Level from the Remote Shutdown Panel.
5	EOP 295015GA.06 (4.1/3.9)	E/A	CR	Override ECCS Valve Logic to throttle RPV Injection.
11	"Conduct of Operations" 294001A1.08 (3.1/3.6)	Admin.	Sim.	Generator Exitation Curve (Spider Curve) interpretation with given situation.
Alternate (12)	RFW 259001A4.02 (3.9/3.7)	2	Sim.	Reactor Feed Pump Quick Start following a manual trip.

Examiner: _____ Chief Examiner: _____

JPM Checklist per ES-301

1. 10 SRO(I)/RO applicants JPMs w/ 7 Control room and 3 in-plant.
2. 5 SRO(U) JPMs w/ 2 or 3 Control room and 2 or 3 in-plant.
3. At least 7 different safety functions for SRO(I)/RO's.
4. At least 5 different safety functions for SRO(U) applicants.
6. 1 Control room JPM must be an ESF.
6. For each system selected, select 1 existing OR develop 1 new JPM.
7. At least 1 JPM related to shutdown or low power condition.
8. 1 or 2 JPMs require "alternate paths".
9. At least 1 "in plant" JPM requires EOP or Abnormal actions.
10. At least 1 "in plant" JPM requires escort into rad. controlled area.
11. "Diversify" the prescripted questions among the Es, As, and Gs.
12. Less than 80% overlap from last NRC Exam.
13. At least 2 NEW or significantly altered JPMs for SRO(I)/RO's.
14. At least 1 NEW or significantly altered JPM for SRO(U).
15. Administrative topics should be evaluated in JPMs whenever possible, rather than prescripted questions.

Examination Level: RO

Week of Examination: October 7, 1996

Examiner's Name:_____

JPM#	System	Safety Function	Area	Description of JPM
6	A.C. Electrical Dist. 262001A4.04 (3.6/3.7)	6	Sim.	Synchronize the MAIN GENERATOR with the GRID.
3	Control Room Ventilation 290003GA.09(3.6/3.5)	9	Sim. (A/P)	Startup Control Room Ventilation.
4	Standby Liquid Control Sys. 211000A4.04(4.5/4.6)	1	Sim. (A/P)	Operate SLC BORON Sytem for RPV Injection.
8	RCIC 217000A2.10 (3.1/3.1) 217000A2.11 (3.1/3.2)	2	Sim.	Initiate RCIC for RPV injection "ARM" and "DEPRESS".
9	RSCS 201004A402 (3.5/3.2)	7	Sim.	Place RSCS into service.
10	LPCI 203000A4.02 (4.1/4.1)	4	Sim.	Align LPCI-C to Standby status.
2	RPS 212000GA9 (4.2/4.2)	7	Plant	Restart of RPS-MG-1.
7	Emerg. Diesel Generator 264000A4.04 (3.7/3.7)	6	Plant	Perform MANUAL Start of HPCS DG from the Local Panel.
1	Suppression Pool 219000A4.13 (3.9/3.8)	5	Plant (S/D)	Reduce SUPPRESSION POOL Level from the Remote Shutdown Panel.
5	EOP 295015GA.06 (4.1/3.9)	E/A	CR	Override ECCS Valve Logic to throttle RPV Injection.
11	"Conduct of Operations" 294001A1.08 (3.1/3.6)	Admin.	Sim.	Generator Exitation Curve (Spider Curve) interpretation with given situation.
Alternate (12)	RFW 259001A4.02 (3.9/3.7)	2	Sim.	Reactor Feed Pump Quick Start following a manual trip.

Examiner: _____ Chief Examiner: _____

JPM Checklist per ES-301

1. 10 SRO(I)/RO applicants JPMs w/ 7 Control room and 3 in-plant.
2. 5 SRO(U) JPMs w/ 2 or 3 Control room and 2 or 3 in-plant.
3. At least 7 different safety functions for SRO(I)/RO's.
4. At least 5 different safety functions for SRO(U) applicants.
5. 1 Control room JPM must be an ESF.
6. For each system selected, select 1 existing OR develop 1 new JPM.
7. At least 1 JPM related to shutdown or low power condition.
8. 1 or 2 JPMs require "alternate paths".
9. At least 1 "in plant" JPM requires EOP or Abnormal actions.
10. At least 1 "in plant" JPM requires escort into rad. controlled area.
11. "Diversify" the prescripted questions among the Ks, As, and Gs.
12. Less than 30% overlap from last NRC Exam.
13. At least 2 NEW or significantly altered JPMs for SRO(I)/RO's.
14. At least 1 NEW or significantly altered JPM for SRO(U).
15. Administrative topics should be evaluated in JPMs whenever possible, rather than prescripted questions.

JPM CROSS REFERENCE

Pilot Exam JPM #	Requal JPM #	Validation Times
1	LR000145/82-RJE-0004	5 Minutes
2	LR000251/82-RJE-0043	6 Minutes
3	LR000209/82-RJE-0106	6 Minutes
4	LR000217/82-RJE-0133	5 Minutes
5	LR000233/82-RJE-0174	9 Minutes
6	LR000172/82-RJE-0041	9 Minutes
7	LR000199/82-RJE-0087	7 Minutes
8	LR000302/82-RJE-0054	3 Minutes
9	LR000195/82-RJE-0082	9 Minutes
10	LR000159/82-RJE-0024	8 Minutes
11 (Admin.)	To Be Developed	
12 (Alternate)	LR000131/NONE	16 Minutes

TUESDAY

SRO(U):	JPM # 1 Plant	SRO(I):	JPM # 1 Plant	RO:	JPM # 1 Plant
	JPM # 2 Plant		JPM # 2 Plant		JPM # 2 Plant
	JPM # 7 Plant		JPM # 7 Plant		JPM # 7 Plant
	JPM # 5 CR		JPM # 5 CR		JPM # 5 CR
	JPM # 3 Sim.		JPM # 3 Sim.		JPM # 3 Sim.
	JPM # 11 Sim.		JPM # 9 Sim.		JPM # 9 Sim.
			JPM # 11 Sim.		JPM # 11 Sim.

Simulator JPM's 3 & 9 were chosen such that they can be performed with two Candidates at a time performing alternating JPM's.

WEDNESDAY

SRO(I):	JPM # 4 Sim.	RO:	JPM # 4 Sim.
	JPM # 10 Sim.		JPM # 10 Sim.
	JPM # 6 Sim.		JPM # 6 Sim.
	JPM # 8 Sim.		JPM # 8 Sim.

JPM's for this day are grouped such that they can be performed with two Candidates at a time performing alternating JPM's.

Facility: WNP2 **ADMINISTRATIVE TOPICS - OUTLINE** **ES-301-1**

Examination Level: RO/SRO (Circle one)

Administrative Topic/Subject Description		Describe method of evaluation: 1. ONE Administrative JPM, OR 2. TWO Administrative Questions
A.1	"Conduct of Operations"	294001K1.07 (3.3/3.6) - Planned follow-up questions for In-plant JPM.
		294001K1.07 (3.3/3.6) - Planned follow-up questions for In-plant JPM.
	"Conduct of Operations"	294001A1.08 (3.1/3.6) - Simulator JPM.
A.2	"Equipment Control"	294001A1.07 (3.0/3.7) - Planned follow-up questions on Simulator scenarios.
		294001A1.07 (3.0/3.7) - Planned follow-up questions on Simulator scenarios.
A.3	"Radiation Control"	294001K1.04 (3.3/3.6) - Planned follow-up questions for In-plant JPM.
		294001K1.04 (3.3/3.6) - Planned follow-up questions for In-plant JPM.
A.4	"Emergency Plan"	294001A1.16 (2.9/4.7) - Planned follow-up questions on Simulator scenarios.
		294001A1.16 (2.9/4.7) - Planned follow-up questions on Simulator scenarios.

Examiner: _____ Chief Examiner: _____

JPM Checklist per ES-301

1. 10 SRO(I)/RO applicants JPMs w/ 7 Control room and 3 in-plant.
2. 5 SRO(U) JPMs w/ 2 or 3 Control room and 2 or 3 in-plant.
3. At least 7 different safety functions for SRO(I)/RO's.
4. At least 5 different safety functions for SRO(U) applicants.
5. 1 Control room JPM must be an ESF.
6. For each system selected, select 1 existing OR develop 1 new JPM.
7. At least 1 JPM related to shutdown or low power condition.
8. 1 or 2 JPMs require "alternate paths"
9. At least 1 "in plant" JPM requires EOP or Abnormal actions.
10. At least 1 "in plant" JPM requires escort into rad. controlled area.
11. "Diversify" the prescripted questions among the Ks, As, and Gs.
12. Less than 30% overlap from last NRC Exam.
13. At least 2 NEW or significantly altered JPMs for SRO(I)/RO's.
14. At least 1 NEW or significantly altered JPM for SRO(U).
15. Administrative topics should be evaluated in JPMs whenever possible, rather than prescripted questions.

SCENARIO NO. 01 - Small Steam Leak in the Drywell.
(ref: minor modification of LR000120 rev. 0)

Initial conditions: Plant operating at 100% power. No major evolutions planned/no major equipment is out of service. Plant is in full compliance with all T.S. and regulatory requirements.

Event no.	Type*	Event Description
1.	I	Blown fuse in RC-1.
2.	M	Small Steam leak in the Drywell.
3.	I/C	APRM "E" failure.
4.	N/R	Scram Reactor per PPM 3.3.1 prior to high D/W pressure. Potential entry into PPM 5.1.1 and PPM 5.2.1.
5.	N	Initiate WW/DW Sprays as required.
6.	C/M	MSIV isolation on high temp in the Steam Tunnel, establish RPV/P control with SRV's and RPV/L control with CBP's and/or RCIC.

Simulator Checklist per ES-301

1. Each SRO-I and RO applicant rotates to "lead" RO position.
2. Initial conditions should include; STARTUP, LOW POWER and FULL POWER.
3. EACH scenario must excersise EACH applicant on: Normal evolution, reactivity manipulation, inst. failure, component failure and major plant transient.
4. Each SRO-I MUST have a significant reactivity change.
5. Target Quantitative Attributes (per Scenario)

a.	Total Malfunctions	=	5 to 8
b.	Malfunctions after EOP entry	=	1 to 2
c.	Abnormal Events	=	2 to 4
d.	Major Transients	=	1 to 2
e.	EOP's entered/requiring substantive action	=	1 to 2
f.	EOP contingencies requiring substantive action	=	0 to 2

Examiner: _____ Chief Examiner: _____

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

SCENARIO NO. 02 - ATWS, Emergency Depress.
(ref: significant modification of LR000134 rev. 0)

Initial conditions: 60% Power, RCIC OOS for 12 hours for small steam leak repair.

Event no.	Type*	Event Description
1.	R	Continue Plant Shutdown per Load Dispatch.
2.	N	Remove second Reactor Feedwater Pump per Procedure.
3.	C	LPCS-P-2 shaft shear.
4.	C	RHR Loop 'A' suction line break, unisolable.
5.	M	Manual scram, Hydraulic ATWS.
6.	I	LPCS-V-5 fails to open forcing RHR B to be used per PPM 5.5.26 and manual operation of RHR-V-3B and RHR-V-48 B.

Simulator Checklist per ES-301

1. Each SRO-I and RO applicant rotates to "lead" RO position.
2. Initial conditions should include; STARTUP, LOW POWER and FULL POWER.
3. EACH scenario must excersise EACH applicant on: Normal evolution, reactivity manipulation, inst. failure, component failure and major plant transient.
4. Each SRO-I MUST have a significant reactivity change.
5. Target Quantitative Attributes (per Scenario)

a.	Total Malfunctions	⇒	5 to 8
b.	Malfunctions after EOP entry	⇒	1 to 2
c.	Abnormal Events	⇒	2 to 4
d.	Major Transients	⇒	1 to 2
e.	EOP's entered/requiring substantive action	⇒	1 to 2
f.	EOP contingencies requiring substantive action	⇒	0 to 2

Examiner: _____ Chief Examiner: _____

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

SCENARIO NO. 03 - Single Loop Operation, Loss of CAS.
(ref: significant modification of LR000096 rev. 0)

Initial conditions: Reactor Plant Startup is in progress, PPM 3.1.2 completed through section 4.8, Reactor power ≈ 24%, SLC-P-1B is OOS.

Event no.	Type*	Event Description
1.	R/N	Continue Start-up per PPM 3.1.2.
2.	I	RFW-LI-606A, RPV/L Monitor narrow range fails low.
3.	C	RRC "A" trips (PPM 2.2.1).
4.	C	Loss of CAS.
5.	M	Control Rod Drift/MSIV closure, entry into PPM 5.1.1, Electric ATWS, entry into PPM 5.1.2.
6.	C	RFW-V-10A & B fail closed.

Simulator Checklist per ES-301

1. Each SRO-I and RO applicant rotates to "lead" RO position.
2. Initial conditions should include: STARTUP, LOW POWER and FULL POWER.
3. EACH scenario must excersise EACH applicant on: Normal evolution, reactivity manipulation, inst. failure, component failure and major plant transient.
4. Each SRO-I MUST have a significant reactivity change.
5. Target Quantitative Attributes (per Scenario)

a.	Total Malfunctions	⇒	5 to 8
b.	Malfunctions after EOP entry	⇒	1 to 2
c.	Abnormal Events	⇒	2 to 4
d.	Major Transients	⇒	1 to 2
e.	EOP's entered/requiring substantive action	⇒	1 to 2
f.	EOP contingencies requiring substantive action	⇒	0 to 2

Examiner: _____ Chief Examiner: _____

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

SCENARIO NO. 04 - Small LOCA, unisolable RCIC steam leak.
(ref: significant modification of LR000140 rev. 0)

Initial conditions: Plant Turnover during Start-up (Power ≈ 4%). APRM "C" OOS, I&C working.

Event no.	Type*	Event Description
1.	N	RCIC full flow surveillance.
2.	R	Rod withdrawl for plant start-up.
3.	I/C	Loss of SM-8 due to a ground.
4.	C/M	RCIC steam leak downstream of RCIC-V-45.
5.	C	RCIC-V-8 Failure to close.
6.	M	Small break LOCA.
7.	I	HPCS-V-4 fails to auto open.

Simulator Checklis. per ES-301

1. Each SRO-I and RO applicant rotates to "lead" RO position.
2. Initial conditions should include; STARTUP, LOW POWER and FULL POWER.
3. EACH scenario must excersise EACH applicant on: Normal evolution, reactivity manipulation, inst. failure, component failure and major plant transient.
4. Each SRO-I MUST have a significant reactivity change.
5. Target Quantitative Attributes (per Scenario)

a.	Total Malfunctions	⇒	5 to 8
b.	Malfunctions after EOP entry	⇒	1 to 2
c.	Abnormal Events	⇒	2 to 4
d.	Major Transients	⇒	1 to 2
e.	EOP's entered/requiring substantive action	⇒	1 to 2
f.	EOP contingencies requiring substantive action	⇒	0 to 2

Examiner: _____ Chief Examiner: _____

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

SCENARIO NO. 05 - Loss of Control Room Annunciation, LOCA, ED on TAF.
(ref: significant modification of LR000125)

Initial conditions: Power ≈ 96%, EOC coast down. Suppression Pool temp ≈ 81°F. Maintenance just completed on CRD-P-1A.

Event no.	Type*	Event Description
1.	N	Surveillance 7.4.3.1.1.50, RPS & Isolation Reactor Vessel Level Low, Level 3; RCIC Isolation, Level 8 - CFT is in progress currently at Step 7.1.13.
2.	N	Start CRD-P-1A and secure CRD-P-1B.
3.	I/C	Loss of annunciators on P601, 602 and 603 due to ground on S1-2.
4.	I/R	Inadvertent initiation of HPCS due to instrument failure.
5.	M	Recirc. suction line break.
6.	C	RHR-P-2A Shaft Shear.

Simulator Checklist per ES-301

1. Each SRO-I and RO applicant rotates to "lead" RO position.
2. Initial conditions should include; STARTUP, LOW POWER and FULL POWER.
3. EACH scenario must excersise EACH applicant on: Normal evolution, reactivity manipulation, inst. failure, component failure and major plant transient.
4. Each SRO-I MUST have a significant reactivity change.
5. Target Quantitative Attributes (per Scenario)

a.	Total Malfunctions	=	5 to 8
b.	Malfunctions after EOP entry	=	1 to 2
c.	Abnormal Events	=	2 to 4
d.	Major Transients	=	1 to 2
e.	EOP's entered/requiring substantive action	=	1 to 2
f.	EOP contingencies requiring substantive action	=	0 to 2

Examiner: _____ Chief Examiner: _____

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