

Facility: Browns Ferry NPPDate of Examination: July 6 – 30, 2009Examination Level (circle one): RO (SRO) Operating Test Number: HLT 0801

Administrative Topic (see Note)	Type Code *	Describe activity to be performed
Conduct of Operations	M	Determine Adequate Performance of License Reactivation JPM 541 (RO / SRO)
Conduct of Operations	P	Evaluate Recombiner Performance JPM 510 (RO/SRO)
Equipment Control	D	Perform Jet Pump Surveillance 2-SR-3.4.2.1 JPM 120F (RO / SRO)
Radiation Control	N	Calculate the maximum permissible stay time within emergency dose limits and determine the approving authority JPM 528 (RO / SRO)
Emergency Plan	N, S	<i>Classify the Event per the REP (Primary System Leakage (Torus Pressure) Exceeding PSP Curve)</i> <i>JPM 487TC (SRO Only)</i>

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
- (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs and RO retakes)
- (N)ew or (M)odified from bank (≥ 1)
- (P)revious 2 exams (≤ 1 ; randomly selected)
- (S)imulator

Submitted 5/21/09, RSB

SRO only JPMs shown in italics

Administrative Topics:**a. Determine Adequate Performance of License Reactivation**

- **Modified:** OPDP-10 is a new procedure that removed information from OPDP-1, Conduct of Operations; and modified critical data in JPM
- OPDP-10, License Status Maintenance, Reactivation and Proficiency for Non-Licensed Positions, Rev. 0, Appendix E
- **G2.1.4 Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status, 10CFR55, etc. (CFR: 41.10 / 43.2) IMPORTANCE: RO 3.3 SRO 3.8**

b. Evaluate Recombiner Performance

- Previous: JPM revised to newest revision of 3-OI-66
- 3-OI-66, Off-Gas System, Rev 57
- **G2.1.7 Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation. (CFR: 41.5 / 43.5 / 45.12 / 45.13) IMPORTANCE RO 4.4 SRO 4.7**

c. Perform Jet Pump Surveillance 2-SR-3.4.2.1

- Direct: JPM revised to newest revision of 2-SR-3.4.2.1
- 2-SR-3.4.2.1, Jet Pump Operability, Rev 25
- **G2.2.12 Knowledge of of Surveillance Procedures. (CFR: 41.10 / 43.3 / 45.13) IMPORTANCE: RO 3.7 SRO 4.1**

d. Calculate the maximum permissible stay time within emergency dose limits and determine the approving authority

- New: JPM - Classroom
- EPIP-15, EMERGENCY EXPOSURE, Rev 9
- **G 2.3.4 Knowledge of radiation exposure limits under normal or emergency conditions. (CFR: 41.12 / 43.4 / 45.10) IMPORTANCE RO 3.2 SRO 3.7**

Administrative Topics: (continued)**e. Classify the Event per the REP (Primary Sys. Leakage (Torus Pressure)
Exceeding PSP Curve)**

- *New JPM – Simulator*
- *EPIP-1, Emergency Classification Procedure, Rev. 43, Primary Containment 2.0, Section 2.1*
- *EPIP-4, Site Area Emergency, Rev. 31*
- *SRO Only*
- **G2.4.38 Ability to take actions called for in the facility emergency plan, including supporting or acting as emergency coordinator if required. (CFR: 41.10 / 43.5 / 45.11) IMPORTANCE: SRO 4.4**

Facility: Browns Ferry NPPDate of Examination: July 6 – 30, 2009Examination Level (circle one): RO (SRO) Operating Test Number: HLT 0801

Administrative Topic (see Note)	Type Code *	Describe activity to be performed
Conduct of Operations	M	Determine Adequate Performance of License Reactivation JPM 541 (RO / SRO)
Conduct of Operations	D	Perform Jet Pump Surveillance 2-SR-3.4.2.1 JPM 120F (RO / SRO)
Equipment Control	P	Determine Correct Method of Verification on a Given System JPM 550 (RO / SRO)
Radiation Control	N	Calculate the maximum permissible stay time within emergency dose limits and determine the approving authority JPM 528 (RO / SRO)
Emergency Plan	N, S	<i>Classify the Event per the REP (Primary System Leakage (Torus Pressure) Exceeding PSP Curve)</i> <i>JPM 487TC (SRO Only)</i>

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:

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- (S)imulator

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Submitted on
5/11/09

SRO only JPMs shown in italics

Administrative Topics:**a. Determine Adequate Performance of License Reactivation**

- **Modified:** OPDP-10 is a new procedure that removed information from OPDP-1, Conduct of Operations; and modified critical data in JPM
- OPDP-10, License Status Maintenance, Reactivation and Proficiency for Non-Licensed Positions, Rev. 0, Appendix E
- **G2.1.4 Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status, 10CFR55, etc. (CFR: 41.10 / 43.2) IMPORTANCE: RO 3.3 SRO 3.8**

b. Perform Jet Pump Surveillance 2-SR-3.4.2.1

- **Direct:** JPM revised to newest revision of 2-SR-3.4.2.1
- 2-SR-3.4.2.1, Jet Pump Operability, Rev 25
- **G2.1.7 Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation. (CFR: 41.5 / 43.5 / 45.12 / 45.13) IMPORTANCE RO 4.4 SRO 4.7**

c. Determine Correct Method of Verification on a Given System

- **Previous NRC Exam:** HLT 0707 (Modified slightly based on NRC feedback)
- SPP-10.3, Verification Program, Rev. 1, Sections 3.3.1, 3.4.2, and 3.4.3
- **G2.2.14 Knowledge of the process for controlling equipment configuration or status. (CFR: 41.10 / 43.3 / 45.13) IMPORTANCE: RO 3.9 SRO 4.3**

d. Calculate the maximum permissible stay time within emergency dose limits and determine the approving authority

- **New:** JPM - Classroom
- EPIP-15, EMERGENCY EXPOSURE, Rev 9
- **G 2.3.4 Knowledge of radiation exposure limits under normal or emergency conditions. (CFR: 41.12 / 43.4 / 45.10) IMPORTANCE RO 3.2 SRO 3.7**

Administrative Topics: (continued)**e. Classify the Event per the REP (Primary Sys. Leakage (Torus Pressure)
Exceeding PSP Curve)**

- *New JPM – Simulator*
- *EPIP-1, Emergency Classification Procedure, Rev. 43, Primary Containment 2.0, Section 2.1*
- *EPIP-4, Site Area Emergency, Rev. 31*
- *SRO Only*
- **G2.4.38 Ability to take actions called for in the facility emergency plan, including supporting or acting as emergency coordinator if required. (CFR: 41.10 / 43.5 / 45.11) IMPORTANCE: SRO 4.4**

DRAFT**ES-301****Administrative Topics Outline****Form ES-301-1**Facility: Browns Ferry NPPDate of Examination: July 6 – 30, 2009Examination Level (circle one): RO (SRO) Operating Test Number: HLT 0801

Administrative Topic (see Note)	Type Code *	Describe activity to be performed
Conduct of Operations	M	Determine Adequate Performance of License Reactivation JPM 541 (RO / SRO)
Conduct of Operations	D	Conduct of Operations Question – Required Turnover Information JPM 512 (RO / SRO)
Equipment Control	P	Determine Correct Method of Verification on a Given System JPM 550 (RO / SRO)
Radiation Control	D	Determine the Dose Limitation for Declared and Undeclared Pregnant Female Employees and Their Eligibility for Overtime JPM 511 (RO / SRO)
Emergency Plan	N, S	<i>Classify the Event per the REP (Primary System Leakage (Torus Pressure) Exceeding PSP Curve)</i> <i>JPM 487TC (SRO Only)</i>

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* Type Codes & Criteria:

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- (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs and RO retakes)
- (N)ew or (M)odified from bank (≥ 1)
- (P)revious 2 exams (≤ 1 ; randomly selected)
- (S)imulator

SRO only JPMs shown in italics

Administrative Topics:

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a. Determine Adequate Performance of License Reactivation

- **Modified:** OPDP-10 is a new procedure that removed information from OPDP-1, Conduct of Operations; and modified critical data in JPM
- OPDP-10, License Status Maintenance, Reactivation and Proficiency for Non-Licensed Positions, Rev. 0, Appendix E
- **G2.1.4 Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status, 10CFR55, etc. (CFR: 41.10 / 43.2) IMPORTANCE: RO 3.3 SRO 3.8**

b. Conduct of Operations Question – Required Turnover Information

- Direct from Bank
- OPDP-1, Conduct of Operations, Rev. 12, section 7.3.L
- **G2.1.3 Knowledge of shift or short-term relief turnover practices. (CFR: 41.10 / 45.13) IMPORTANCE: RO 3.7 SRO 3.9**

c. Determine Correct Method of Verification on a Given System

- Previous NRC Exam: HLT 0707 (Modified slightly based on NRC feedback)
- SPP-10.3, Verification Program, Rev. 1, Sections 3.3.1, 3.4.2, and 3.4.3
- **G2.2.14 Knowledge of the process for controlling equipment configuration or status. (CFR: 41.10 / 43.3 / 45.13) IMPORTANCE: RO 3.9 SRO 4.3**

d. Determine the Dose Limitation for Declared and Undeclared Pregnant Female Employees and Their Eligibility for Overtime

- Direct from Bank
- SPP-5.1, Radiological Controls, Rev. 6, Section 3.4.1
- **G2.3.4 Knowledge of radiation exposure limits under normal or emergency conditions. (CFR: 41.12 / 43.4 / 45.10) IMPORTANCE: RO 3.2 SRO 3.7**

Administrative Topics: (continued)

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e. *Classify the Event per the REP (Primary Sys. Leakage (Torus Pressure) Exceeding PSP Curve)*

- *New JPM – Simulator*
- *EPIP-1, Emergency Classification Procedure, Rev. 43, Primary Containment 2.0, Section 2.1*
- *EPIP-4, Site Area Emergency, Rev. 31*
- *SRO Only*
- ***G2.4.38 Ability to take actions called for in the facility emergency plan, including supporting or acting as emergency coordinator if required. (CFR: 41.10 / 43.5 / 45.11) IMPORTANCE: SRO 4.4***

Facility: Browns Ferry NPPDate of Examination: July 6 – 30, 2009Exam Level (circle one): RO / SRO-I / SRO-UOperating Test No.: HLT 0801**Control Room Systems® (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)**

System / JPM Title	Type Code*	Safety Function
a. Alternate RPV Injection – Standby Coolant	S, E, EN, L, N	2
b. RWM Functional Test for Startup 3-SR-3.3.2.1.2	S, L, N	7
c. Place RCIC in Test Mode From Standby for Alternate RPV Pressure Control	S, A, D, E, L	3
d. Start and Inject SLC Solution Into the RPV	S, A, M, E, L	1
e. Emergency Ventilate Primary Containment	S, D, E, L	5
f. Parallel D/G With System 4KV S/D Board at Panel 9-23	S, A, D	6
g. Off-Gas Post-Treatment Radiation HI-HI-HI	S, A, D, E, L	9
h. Placing Standby Steam Jet Air Ejector in Operation	S, E, N	4

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

i. Shift From 'A' Set of CRD Stabilizing Valves to 'B' Set	D, E, L, R	1
j. Place B2-3 ± 24V Neutron Monitoring Battery Charger in Service to Battery Board 3	A, N	6
k. Bypass RCIC Low Pressure Isolation 3-EOI Appendix-16A	D, E, EN, L, R	2

@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1
(EN)gineered safety feature	- / - / ≥ 1 (control room system)
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

Submitted 5/21/09 [Signature]

Control Room Systems:**a. Alternate RPV Injection – Standby Coolant (JPM 347 U3)**

- New / Emergency or Abnormal In-Plant / Low-Power / Engineered Safety Feature / Simulator
- 3-EOI Appendix-7D, Alternate RPV Injection System Lineup Standby Coolant, Rev. 2
- **203000 RHR/LPCI: Injection Mode (Plant Specific) A4.07 Ability to manually operate and/or monitor in the control room: Reactor Water Level IMPORTANCE: RO 4.5 SRO 4.5**

b. RWM Functional Test for Startup 3-SR-3.3.2.1.2 (JPM 399 U3)

- New / Low-Power / Simulator
- 3-SR-3.3.2.1.2, RWM Functional Test for Startup, Rev. 3
- **201006 Rod Worth Minimizer System (RWM) (Plant Specific) A2.05 Ability to (a) predict the impacts of the following on the ROD WORTH MINIMIZER SYSTEM (RWM); and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Out of sequence rod movement: Plant-Specific (Not BWR-6) IMPORTANCE: RO 3.1 SRO 3.5**

c. Place RCIC in Test Mode From Standby for Alternate RPV Pressure Control (JPM 43F U2)

- Direct from bank / Emergency or Abnormal In-Plant / Low-Power / Simulator
- Alternate Path: RCIC Trip Throttle Valve (71-9) is tripped and must be reset and opened. RCIC Flow Controller fails while in service and candidate must take manual control
- 2-EOI Appendix-11B, Alternate RPV Pressure Control Systems RCIC Test Mode, Rev. 5
- **241000 Reactor/Turbine Pressure Regulating System A4.02 Ability to manually operate and/or monitor in the control room: Reactor pressure IMPORTANCE: RO 4.1 SRO 4.1**

d. Start and Inject SLC Solution Into the RPV (JPM 613F U2)

- Modified / Emergency or Abnormal In-Plant / Low-Power / Simulator
- Alternate Path: must start other pump due to no flow
- 2-EOI Appendix-3A, SLC Injection, Rev. 5
- **211000 Standby Liquid Control A4.08 Ability to manually operate and/or monitor in the control room: System initiation: Plant-specific IMPORTANCE: RO 4.2 SRO 4.2**

e. Emergency Ventilate Primary Containment (JPM 55 U2)

- Direct from bank / Emergency or Abnormal In-Plant / Low-Power / Simulator
- 2-EOI Appendix-13, Emergency Venting Primary Containment, Rev. 6
- **223001 Primary Containment System and Auxiliaries A2.07 Ability to (a) predict the impacts of the following on the PRIMARY CONTAINMENT SYSTEM AND AUXILIARIES; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: High drywell pressure IMPORTANCE: RO 4.2 SRO 4.3**

f. Parallel D/G With System 4KV S/D Board at Panel 9-23 (JPM 104F U2)

- Direct from bank / Simulator
- Alternate Path: Once paralleled with offsite source, a voltage transient will occur requiring candidate to trip the output breaker
- 0-OI-82, Standby Diesel Generator System, Rev. 99, Section 8.1
- **264000 Emergency Generators (Diesel/Jet) A4.04 Ability to manually operate and/or monitor in the control room: Manual start, loading, and stopping of emergency generator: Plant-specific IMPORTANCE: RO 3.7 SRO 3.7**

g. Off-Gas Post-Treatment Radiation HI-HI-HI (JPM 390F U3)

- Direct from bank / Emergency or Abnormal In-Plant / Low-Power / Simulator
- Alternate Path: Offgas System Isolation Valve, 3-FCV-66-28 fails to close automatically requiring candidate to close manually
- 3-ARP-9-4C, Panel 9-4 3-XA-55-4C, Rev. 29, Window 35 (Page 45 of 45) and 3-AOI-66-2, Offgas Post Treatment Radiation Hi Hi Hi, Rev. 9
- **271000 Offgas System A2.04 Ability to (a) predict the impacts of the following on the OFFGAS SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Offgas system high radiation IMPORTANCE: RO 3.7 SRO 4.1**

h. Placing Standby Steam Jet Air Ejector in Operation (JPM 346 U3)

- New / Emergency or Abnormal In-Plant / Simulator
- 3-OI-66, Off-Gas System, Rev. 56, Section 8.4
- **239001 Main and Reheat Steam System A2.08 Ability to (a) predict the impacts of the following on the MAIN AND REHEAT STEAM SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Low condenser vacuum IMPORTANCE: RO 3.6 SRO 3.6**

In-Plant Systems:**i. Shift From 'A' Set of CRD Stabilizing Valves to 'B' Set (JPM 113 U2)**

- Direct from bank / Emergency or Abnormal In-Plant / Low-Power / RCA Entry
- 2-OI-85, Control Rod Drive System, Rev. 112, Section 6.4
- **201001 Control Rod Drive Hydraulic System A3.01 Ability to monitor automatic operations of the CONTROL ROD DRIVE HYDRAULIC SYSTEM including: Valve operation IMPORTANCE: RO 3.0 SRO 3.0**

j. Place B2-3 + 24V Neutron Monitoring Battery Charger in Service to Battery Board 3 (JPM 308F U3)

- New
- Alternate Path: When the Battery Charger is placed in service, voltage and amps will be out-of-specification requiring candidate to open breakers and notify the Unit Supervisor
- 0-OI-57D, DC Electrical System, Rev. 121, Section 5.13
- **263000 D.C. Electrical Distribution K1.02 Knowledge of the physical connections and/or cause-effect relationships between D.C. ELECTRICAL DISTRIBUTION and the following: Battery charger and battery IMPORTANCE: RO 3.2 SRO 3.3**

k. Bypass RCIC Low Pressure Isolation 3-EOI Appendix-16A (JPM 323 U3)

- Direct from bank / Emergency or Abnormal In-Plant / Low-Power / **EN**gineered Safety Feature / RCA Entry
- 3-EOI Appendix-16A, Bypassing RCIC Low RPV Pressure Isolation Interlocks, Rev. 1
- **217000 Reactor Core Isolation Cooling System (RCIC) A2.03 Ability to (a) predict the impacts of the following on the REACTOR CORE ISOLATION COOLING SYSTEM (RCIC); and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Valve closures IMPORTANCE: RO 3.4 SRO 3.3**

Facility: Browns Ferry NPPDate of Examination: July 6 – 30, 2009Exam Level (circle one): RO / SRO-I / SRO-U Operating Test No.: HLT 0801**Control Room Systems® (8 for RO); (7 for SRO-I); (2 or 3 for SRO-U, including 1 ESF)**

System / JPM Title	Type Code*	Safety Function
a. Start and Inject SLC Solution Into the RPV	S, A, M, E, L	1
b. Alternate RPV Injection – Standby Coolant	S, E, EN, L, N	2
c. Place RCIC in Test Mode From Standby for Alternate RPV Pressure Control	S, A, D, E, L	3
d. Placing Standby Steam Jet Air Ejector in Operation	S, E, N	4
e. Emergency Ventilate Primary Containment	S, D, E, L	5
f. Parallel D/G With System 4KV S/D Board at Panel 9-23	S, A, D	6
g. RWM Functional Test for Startup 3-SR-3.3.2.1.2	S, L, N	7
h. Off-Gas Post-Treatment Radiation HI-HI-HI	S, A, D, E, L	9

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

i. Shift From 'A' Set of CRD Stabilizing Valves to 'B' Set	D, E, L, R	1
j. Bypass RCIC Low Pressure Isolation 3-EOI Appendix-16A	D, E, EN, L, R	2
k. Place B2-3 ± 24V Neutron Monitoring Battery Charger in Service to Battery Board 3	A, N	6

@ All RO and SRO-I control room (and in-plant) systems must be different and serve different safety functions; all 5 SRO-U systems must serve different safety functions; in-plant systems and functions may overlap those tested in the control room.

* Type Codes	Criteria for RO / SRO-I / SRO-U
(A)lternate path	4-6 / 4-6 / 2-3
(C)ontrol room	
(D)irect from bank	≤ 9 / ≤ 8 / ≤ 4
(E)mergency or abnormal in-plant	≥ 1 / ≥ 1 / ≥ 1
(EN)gineered safety feature	- / - / ≥ 1 (control room system)
(L)ow-Power / Shutdown	≥ 1 / ≥ 1 / ≥ 1
(N)ew or (M)odified from bank including 1(A)	≥ 2 / ≥ 2 / ≥ 1
(P)revious 2 exams	≤ 3 / ≤ 3 / ≤ 2 (randomly selected)
(R)CA	≥ 1 / ≥ 1 / ≥ 1
(S)imulator	

Control Room Systems:**a. Start and Inject SLC Solution Into the RPV (JPM 613F U2)**

- **Modified / Emergency or Abnormal In-Plant / Low-Power / Simulator**
- **Alternate Path:** must start other pump due to no flow
- **2-EOI Appendix-3A, SLC Injection, Rev. 5**
- **211000 Standby Liquid Control A4.08 Ability to manually operate and/or monitor in the control room: System initiation: Plant-specific IMPORTANCE: RO 4.2 SRO 4.2**

b. Alternate RPV Injection – Standby Coolant (JPM 347 U3)

- **New / Emergency or Abnormal In-Plant / Low-Power / Engineered Safety Feature / Simulator**
- **3-EOI Appendix-7D, Alternate RPV Injection System Lineup Standby Coolant, Rev. 2**
- **203000 RHR/LPCI: Injection Mode (Plant Specific) A4.07 Ability to manually operate and/or monitor in the control room: Reactor Water Level IMPORTANCE: RO 4.5 SRO 4.5**

c. Place RCIC in Test Mode From Standby for Alternate RPV Pressure Control (JPM 43F U2)

- **Direct from bank / Emergency or Abnormal In-Plant / Low-Power / Simulator**
- **Alternate Path:** RCIC Trip Throttle Valve (71-9) is tripped and must be reset and opened. RCIC Flow Controller fails while in service and candidate must take manual control
- **2-EOI Appendix-11B, Alternate RPV Pressure Control Systems RCIC Test Mode, Rev. 5**
- **241000 Reactor/Turbine Pressure Regulating System A4.02 Ability to manually operate and/or monitor in the control room: Reactor pressure IMPORTANCE: RO 4.1 SRO 4.1**

d. Placing Standby Steam Jet Air Ejector in Operation (JPM 346 U3)

- **New / Emergency or Abnormal In-Plant / Simulator**
- **3-OI-66, Off-Gas System, Rev. 56, Section 8.4**
- **239001 Main and Reheat Steam System A2.08 Ability to (a) predict the impacts of the following on the MAIN AND REHEAT STEAM SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Low condenser vacuum IMPORTANCE: RO 3.6 SRO 3.6**

e. Emergency Ventilate Primary Containment (JPM 55 U2)

- Direct from bank / Emergency or Abnormal In-Plant / Low-Power / Simulator
- 2-EOI Appendix-13, Emergency Venting Primary Containment, Rev. 6
- **223001 Primary Containment System and Auxiliaries A2.07 Ability to (a) predict the impacts of the following on the PRIMARY CONTAINMENT SYSTEM AND AUXILIARIES; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: High drywell pressure IMPORTANCE: RO 4.2 SRO 4.3**

f. Parallel D/G With System 4KV S/D Board at Panel 9-23 (JPM 104F U2)

- Direct from bank / Simulator
- Alternate Path: Once paralleled with offsite source, a voltage transient will occur requiring candidate to trip the output breaker
- 0-OI-82, Standby Diesel Generator System, Rev. 99, Section 8.1
- **264000 Emergency Generators (Diesel/Jet) A4.04 Ability to manually operate and/or monitor in the control room: Manual start, loading, and stopping of emergency generator: Plant-specific IMPORTANCE: RO 3.7 SRO 3.7**

Reason for tripping Time from

g. RWM Functional Test for Startup 3-SR-3.3.2.1.2 (JPM 399 U3)

- New / Low-Power / Simulator
- 3-SR-3.3.2.1.2, RWM Functional Test for Startup, Rev. 3
- **201006 Rod Worth Minimizer System (RWM) (Plant Specific) A2.05 Ability to (a) predict the impacts of the following on the ROD WORTH MINIMIZER SYSTEM (RWM); and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Out of sequence rod movement: Plant-Specific (Not BWR-6) IMPORTANCE: RO 3.1 SRO 3.5**

h. Off-Gas Post-Treatment Radiation HI-HI-HI (JPM 390F U3)

- Direct from bank / Emergency or Abnormal In-Plant / Low-Power / Simulator
- Alternate Path: Offgas System Isolation Valve, 3-FCV-66-28 fails to close automatically requiring candidate to close manually
- 3-ARP-9-4C, Panel 9-4 3-XA-55-4C, Rev. 29, Window 35 (Page 45 of 45) and 3-AOI-66-2, Offgas Post Treatment Radiation Hi Hi Hi, Rev. 9
- **271000 Offgas System A2.04 Ability to (a) predict the impacts of the following on the OFFGAS SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Offgas system high radiation IMPORTANCE: RO 3.7 SRO 4.1**

In-Plant Systems:

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- i. **Shift From 'A' Set of CRD Stabilizing Valves to 'B' Set (JPM 113 U2)**
 - Direct from bank / Emergency or Abnormal In-Plant / Low-Power / RCA Entry
 - 2-OI-85, Control Rod Drive System, Rev. 112, Section 6.4
 - **201001 Control Rod Drive Hydraulic System A3.01 Ability to monitor automatic operations of the CONTROL ROD DRIVE HYDRAULIC SYSTEM including: Valve operation IMPORTANCE: RO 3.0 SRO 3.0**
- j. **Bypass RCIC Low Pressure Isolation 3-EOI Appendix-16A (JPM 323 U3)**
 - Direct from bank / Emergency or Abnormal In-Plant / Low-Power / **EN**gineered Safety Feature / RCA Entry
 - 3-EOI Appendix-16A, Bypassing RCIC Low RPV Pressure Isolation Interlocks, Rev. 1
 - **217000 Reactor Core Isolation Cooling System (RCIC) A2.03 Ability to (a) predict the impacts of the following on the REACTOR CORE ISOLATION COOLING SYSTEM (RCIC); and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: Valve closures IMPORTANCE: RO 3.4 SRO 3.3**
- k. **Place B2-3 + 24V Neutron Monitoring Battery Charger in Service to Battery Board 3 (JPM 308F U3)**
 - New
 - Alternate Path: When the Battery Charger is placed in service, voltage and amps will be out-of-specification requiring candidate to open breakers and notify the Unit Supervisor
 - 0-OI-57D, DC Electrical System, Rev. 121, Section 5.13
 - **263000 D.C. Electrical Distribution K1.02 Knowledge of the physical connections and/or cause-effect relationships between D.C. ELECTRICAL DISTRIBUTION and the following: Battery charger and battery IMPORTANCE: RO 3.2 SRO 3.3**

Facility:	Browns Ferry NPP				Date of Exam: July 06 – 30, 2009													
Tier	Group	RO K/A Category Points											SRO-Only Points					
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2		G*	Total	
1. Emergency & Abnormal Plant Evolutions	1	4	3	4	N/A			3	2	N/A		4	20	4		3	7	
	2	2	1	1				1	1			1	7	2	1	3		
	Tier Totals	6	4	5				4	3			5	27	6	4	10		
2. Plant Systems	1	4	2	3	2	2	3	2	2	2	2	2	26	3		2	5	
	2	2	1	1	1	1	1	1	1	1	1	1	12	0	2	1	3	
	Tier Totals	6	3	4	3	3	4	3	3	3	3	3	38	5		3	8	
3. Generic Knowledge and Abilities Categories					1		2		3		4		10	1	2	3	4	7
					2		2		3		3			2	2	2	1	

- Notes:
1. Ensure that at least two topics from every 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/evolutions that are not included on the outline should be added. Refer to Section D.1.b of ES-401 for guidance regarding the elimination of inappropriate K/A statements.
 4. Select topics from as many systems and evolutions as possible; sample every system or evolution in the group before selecting a second topic for any system or evolution.
 5. Absent a plant-specific priority, only those K/As having an importance rating (IR) of 2.5 or higher shall be selected. Use the RO and SRO ratings for the RO and SRO-only portions, respectively.
 6. Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.
 - 7.* The generic (G) K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system. Refer to Section D.1.b of ES-401 for the applicable K/As.
 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. Use duplicate pages for RO and SRO-only exams.
 9. For Tier 3, select topics from Section 2 of the K/A catalog, and enter the K/A numbers, descriptions, IRs, and point totals (#) on Form ES-401-3. Limit SRO selections to K/As that are linked to 10 CFR 55.43.

ES-401							BWR Examination Outline Emergency and Abnormal Plant Evolutions – Tier 1/Group 1 (RO / SRO)		Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#	
295001 Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4				1			AA1.02 (10CFR 55.41.7) Ability to operate and/or monitor the following as they apply to PARTIAL OR COMPLETE LOSS OF FORCED CORE FLOW CIRCULATION: ♦ RPS	3.3	1	
295003 Partial or Complete Loss of AC / 6	1					1	AK1.03 (10CFR 55.41.8) Knowledge of the operational implications of the following concepts as they apply to PARTIAL OR COMPLETE LOSS OF AC POWER: ♦ Under voltage / degraded voltage effects on electrical loads	2.9	2	
							G2.4.50 (10CFR 55.43.5 - SRO Only) <i>Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.</i>	4.0	76	
295004 Partial or Total Loss of DC Pwr / 6			1				AK3.02 (10CFR 55.41.5) Knowledge of the reasons for the following responses as they apply to PARTIAL OR COMPLETE LOSS OF DC POWER: ♦ Ground isolation / fault determination	2.9	3	
295005 Main Turbine Generator Trip / 3						1	G2.4.21 (10CFR 55.41.7) 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	4	
295006 SCRAM / 1		1					AK2.02 (10CFR 55.41.7) Knowledge of the interrelations between SCRAM and the following: ♦ Reactor water level control system	3.8	5	

SRO only K/As shown in italics

ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions – Tier 1/Group 1 (RO / SRO)						Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
295016 Control Room Abandonment / 7						1	G2.4.30 (10CFR 55.41.10) Knowledge of events related to system operation/status that must be reported to internal organizations or external agencies, such as the State, the NRC, or the transmission system operator.	2.7	6
						1	G2.4.3 (10CFR 55.43.5 - SRO Only) <i>Ability to identify post-accident instrumentation.</i>	3.9	77
295018 Partial or Total Loss of CCW / 8				1	1		AA1.02 (10CFR 55.41.7) Ability to operate and/or monitor the following as they apply to PARTIAL OR COMPLETE LOSS OF COMPONENT COOLING WATER: ♦ System loads	3.3	7
							AA2.01 (10CFR 55.43.5 - SRO Only) <i>Ability to determine and/or interpret the following as they apply to PARTIAL OR COMPLETE LOSS OF COMPONENT COOLING WATER:</i> ♦ Component temperatures	3.4	78
295019 Partial or Total Loss of Inst. Air / 8		1					AK2.18 (10CFR 55.41.7) Knowledge of the interrelations between PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR and the following: ♦ ADS: Plant-Specific	3.5	8
295021 Loss of Shutdown Cooling / 4						1	G2.2.4 (10CFR 55.41.7) (multi-unit license) Ability to explain the variations in control board/control room layouts, systems, instrumentation, and procedural actions between units at a facility.	3.6	9

SRO only K/As shown in italics

ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions – Tier 1/Group 1 (RO / SRO)						Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
295023 Refueling Acc / 8				1	1		AA1.04 (10CFR 55.41.7) Ability to operate and/or monitor the following as they apply to REFUELING ACCIDENTS: ♦ Radiation monitoring equipment	3.4	10
							AA2.01 (10CFR 55.43.5 - SRO Only) Ability to determine and/or interpret the following as they apply to REFUELING ACCIDENTS: ♦ Area radiation levels	4.0	79
295024 High Drywell Pressure / 5					1		EA2.03 (10CFR 55.41.10) Ability to determine and/or interpret the following as they apply to HIGH DRYWELL PRESSURE: ♦ Suppression pool level	3.8	11
295025 High Reactor Pressure / 3		1			1		EK2.04 (10CFR 55.41.7) Knowledge of the interrelations between HIGH REACTOR PRESSURE and the following: ♦ ARI/RPT/ATWS: Plant-Specific	3.9	12
							EA2.01 (10CFR 55.43.5 - SRO Only) Ability to determine and/or interpret the following as they apply to HIGH REACTOR PRESSURE: ♦ Reactor pressure	4.3	80
295026 Suppression Pool High Water Temp. / 5			1				EK3.02 (10CFR 55.41.5) <i>“Details in Record of Rejected K/As”</i> Knowledge of the reasons for the following responses as they apply to SUPPRESSION POOL HIGH WATER TEMPERATURE: ♦ Suppression pool cooling	3.9	13
295027 High Containment Temperature / 5	–	–	–	–	–	–	N/A for BFN – K/A for Mark III Containments ONLY	-----	-----

SRO only K/As shown in italics

ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions – Tier 1/Group 1 (RO / SRO)						Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
295028 High Drywell Temperature / 5	1				1		EK1.01 (10CFR 55.41.8) Knowledge of the operational implications of the following concepts as they apply to HIGH DRYWELL TEMPERATURE: ♦ Reactor water level measurement	3.5	14
							EA2.01 (10CFR 55.43.5 - SRO Only) <i>**Details in Record of Rejected K/As**</i> Ability to determine and/or interpret the following as they apply to HIGH DRYWELL TEMPERATURE: ♦ Drywell temperature	4.1	81
295030 Low Suppression Pool Wtr Lvl / 5			1				EK3.03 (10CFR 55.41.5) Knowledge of the reasons for the following responses as they apply to LOW SUPPRESSION POOL WATER LEVEL: ♦ RCIC operation: Plant-Specific	3.6	15
295031 Reactor Low Water Level / 2					1		EA2.03 (10CFR 55.41.10) Ability to determine and/or interpret the following as they apply to REACTOR LOW WATER LEVEL: ♦ Reactor pressure	4.2	16
295037 SCRAM Condition Present and Power Above APRM Downscale or Unknown / 1						1	G2.2.12 (10CFR 55.41.10) Knowledge of surveillance procedures.	3.7	17
295038 High Off-site Release Rate / 9	1						EK1.03 (10CFR 55.41.10) <i>**Details in Record of Rejected K/As**</i> Knowledge of the operational implications of the following concepts as they apply to HIGH OFF-SITE RELEASE RATE: ♦ Meteorological effects on off-site release	2.8	18

SRO only K/As shown in italics

ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions – Tier 1/Group 1 (RO / SRO)							Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#	
600000 Plant Fire On Site / 8			1				AK3.04 (10CFR 55.41.5) Knowledge of the reasons for the following responses as they apply to PLANT FIRE ON SITE: ♦ Actions contained in the abnormal procedure for plant fire on site	2.8	19	
700000 Generator Voltage and Electric Grid Disturbances / 6	1					1	AK1.01 (10CFR 55.41.5) Knowledge of the operational implications of the following concepts as they apply to GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES: ♦ Definition of terms: volts, watts, amps, VARs, power factor	3.3	20	
							G2.4.31 (10CFR 55.43.5 - SRO Only) <i>Knowledge of annunciator alarms, indications, or response procedures.</i>	4.1	82	
K/A Category Totals: (RO)	4	3	4	3	2	4	Group Point Total: (RO)		20	
K/A Category Totals: (SRO)					4	3	Group Point Total: (SRO)		7	

SRO only K/As shown in italics

ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions – Tier 1/Group 2 (RO / SRO)						Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
295002 Loss of Main Condenser Vac / 3	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
295007 High Reactor Pressure / 3	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
295008 High Reactor Water Level / 2	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
295009 Low Reactor Water Level / 2		1					AK2.04 (10CFR 55.41.7) Knowledge of the interrelations between LOW REACTOR WATER LEVEL and the following: ♦ Reactor water cleanup	2.6	21
295010 High Drywell Pressure / 5						1	G2.4.49 (10CFR 55.41.10) Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.	4.6	22
295011 High Containment Temp / 5	--	--	--	--	--	--	N/A for BFN – K/A for Mark III Containments ONLY-----	-----	-----
295012 High Drywell Temperature / 5	1					1	AK1.01 (10CFR 55.41.9) Knowledge of the operational implications of the following concepts as they apply to HIGH DRYWELL TEMPERATURE: ♦ Pressure / temperature relationship	3.3	23
							G2.4.34 (10CFR 55.43.5 - SRO Only) <i>Knowledge of RO tasks performed outside the main control room during an emergency and the resultant operational effects.</i>	4.1	83
295013 High Suppression Pool Temp. / 5						1	AA2.02 (10 CFR 55.43.5 - SRO Only) <i>Ability to determine and/or interpret the following as they apply to HIGH SUPPRESSION POOL TEMPERATURE:</i> ♦ Localized heating / stratification	3.5	84
295014 Inadvertent Reactivity Addition / 1	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----

SRO only K/As shown in italics

ES-401		BWR Examination Outline Emergency and Abnormal Plant Evolutions – Tier 1/Group 2 (RO / SRO)						Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#
295015 Incomplete SCRAM / 1	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
295017 High Off-site Release Rate / 9			1				AK3.03 (10CFR 55.41.5) Knowledge of the reasons for the following responses as they apply to HIGH OFF-SITE RELEASE RATE: ♦ Implementation of the site emergency plan	3.3	24
295020 Inadvertent Cont. Isolation / 5 & 7	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
295022 Loss of CRD Pumps / 1					1		AA2.03 (10CFR 55.41.10) Ability to determine and/or interpret the following as they apply to LOSS OF CRD PUMPS: ♦ CRD mechanism temperatures	3.1	25
295029 High Suppression Pool Wtr Lvl / 5				1			EA1.04 (10CFR 55.41.7) Ability to operate and/or monitor the following as they apply to HIGH SUPPRESSION POOL WATER LEVEL: ♦ RCIC: Plant-Specific	3.4	26
295032 High Secondary Containment Area Temperature / 5	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
295033 High Secondary Containment Area Radiation Levels / 9					1		EA2.03 (10 CFR 55.43.5 - SRO Only) <i>Ability to determine and/or interpret the following as they apply to HIGH SECONDARY CONTAINMENT AREA RADIATION LEVELS:</i> ♦ <i>Cause of high area radiation</i>	4.2	85
295034 Secondary Containment Ventilation High Radiation / 9	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
295035 Secondary Containment High Differential Pressure / 5	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----

SRO only K/As shown in italics

ES-401							BWR Examination Outline Emergency and Abnormal Plant Evolutions – Tier 1/Group 2 (RO / SRO)			Form ES-401-1	
E/APE # / Name / Safety Function	K 1	K 2	K 3	A 1	A 2	G	K/A Topic(s)	IR	#		
295036 Secondary Containment High Sump/Area Water Level / 5	1						EK1.01 (10CFR 55.41.10) Knowledge of the operational implications of the following concepts as they apply to SECONDARY CONTAINMENT HIGH SUMP/AREA WATER LEVEL: ♦ Radiation releases	2.9	27		
500000 High CTMT Hydrogen Conc. / 5	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----		
K/A Category Totals: (RO)	2	1	1	1	1	1	Group Point Total: (RO)		7		
K/A Category Totals: (SRO)					2	1	Group Point Total: (SRO)		3		

SRO only K/As shown in italics

BWR Examination Outline Plant Systems – Tier 2/Group 1 (RO / SRO)													Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
203000 RHR/LPCI: Injection Mode					1							K5.02 (10CFR 55.41.5) <i>**Details in Record of Rejected K/As**</i> Knowledge of the operational implications of the following concepts as they apply to RHR / LPCI: INJECTION MODE (PLANT SPECIFIC): ♦ Core cooling methods	3.5	28
205000 Shutdown Cooling	1										1	K2.02 (10CFR 55.41.7) Knowledge of electrical power supplies to the following: ♦ Motor operated valves	2.5	29
												A4.03 (10CFR 55.41.7) <i>**Details in Record of Rejected K/As**</i> Ability to manually operate and/or monitor in the control room: ♦ SDC / RHR discharge valves	3.6	30
206000 HPCI				1				1				K4.03 (10CFR 55.41.7) <i>**Details in Record of Rejected K/As**</i> Knowledge of HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEM design feature(s) and/or interlocks which provide for the following: ♦ Resetting turbine trips: BWR-2,3,4	4.2	31
												A2.16 (10CFR 55.43.5 - SRO Only) <i>Ability to (a) predict the impacts of the following on the HIGH PRESSURE COOLANT INJECTION (HPCI) SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations:</i> ♦ High drywell pressure: BWR-2,3,4	4.1	86
207000 Isolation (Emergency) Condenser												N/A for BFN – No Isolation Condenser(s)		

SRO only K/As shown in italics

BWR Examination Outline Plant Systems – Tier 2/Group 1 (RO / SRO)													Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
209001 LPCS	1											K1.12 (10CFR 55.41.5) Knowledge of the physical connections and/or cause-effect relationships between the LOW PRESSURE CORE SPRAY (LPCS) SYSTEM and the following: ♦ ECCS room coolers	2.9	32
209002 HPCS	--	--	--	--	--	--	--	--	--	--	--	N/A for BFN – No HPCS System-----	-----	-----
211000 SLC										1		A4.08 (10CFR 55.41.7) Ability to manually operate and/or monitor in the control room: ♦ System initiation: Plant-Specific	4.2	33
212000 RPS			1					1				K3.11 (10CFR 55.41.7) Knowledge of the effect that a loss or malfunction of the REACTOR PROTECTION SYSTEM (RPS) will have on the following: ♦ Recirculation system	3.0	34
												A2.20 (10CFR 55.43.5 - SRO Only) <i>Ability to (a) predict the impacts of the following on the REACTOR PROTECTION SYSTEM (RPS); and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations:</i> ♦ Full system activation (full-SCRAM)	4.2	87
215003 IRM				1								K4.04 (10CFR 55.41.7) Knowledge of INTERMEDIATE RANGE MONITOR (IRM) SYSTEM design feature(s) and/or interlocks which provide for the following: ♦ Varying system sensitivity levels using range switches	2.9	35

SRO only K/As shown in italics

ES-401												BWR Examination Outline Plant Systems – Tier 2/Group 1 (RO / SRO)		Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)		IR	#
215004 Source Range Monitor									1			A3.01 (10CFR 55.41.7) Ability to monitor automatic operations of the SOURCE RANGE MONITOR (SRM) SYSTEM including: ♦ Meters and recorders		3.2	36
215005 APRM / LPRM								1				A2.07 (10CFR 55.41.5) Ability to (a) predict the impacts of the following on the AVERAGE POWER RANGE MONITOR / LOCAL POWER RANGE MONITOR (APRM / LPRM) SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: ♦ Recirculation flow channels flow mismatch		3.2	37

SRO only K/As shown in italics

ES-401			BWR Examination Outline Plant Systems – Tier 2/Group 1 (RO / SRO)										Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
217000 RCIC			2								1	K3.02 (10CFR 55.41.7) Knowledge of the effect that a loss or malfunction of the REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM will have on the following: ♦ Reactor vessel pressure	3.6	38
												K3.04 (10CFR 55.41.7) (<i>Unit Differences</i>) Knowledge of the effect that a loss or malfunction of the REACTOR CORE ISOLATION COOLING (RCIC) SYSTEM will have on the following: ♦ Adequate core cooling	3.6	39
												G2.4.41 (10CFR 55.43.5 - SRO Only) <i>Knowledge of the emergency action level thresholds and classifications.</i>	4.6	88
218000 ADS	1											K1.02 (10CFR 55.41.5) Knowledge of the physical connections and/or cause-effect relationships between the AUTOMATIC DEPRESSURIZATION SYSTEM (ADS) and the following: ♦ Low pressure core spray: Plant-Specific	4.0	40

SRO only K/As shown in italics

ES-401												BWR Examination Outline Plant Systems – Tier 2/Group 1 (RO / SRO)		Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)		IR	#
223002 PCIS/Nuclear Steam Supply Shutoff	2											K1.03 (10CFR 55.41.5) Knowledge of the physical connections and/or cause-effect relationships between the PRIMARY CONTAINMENT ISOLATION SYSTEM (PCIS) / NUCLEAR STEAM SUPPLY SHUT-OFF and the following: ♦ Plant ventilation		3.0	41
												K1.13 (10CFR 55.41.7) Knowledge of the physical connections and/or cause-effect relationships between the PRIMARY CONTAINMENT ISOLATION SYSTEM (PCIS) / NUCLEAR STEAM SUPPLY SHUT-OFF and the following: ♦ Traversing in-core probe system		2.7	42
239002 SRVs							1				1	A1.01 (10CFR 55.41.5) Ability to predict and/or monitor changes in parameters associated with operating the RELIEF / SAFETY VALVES (SRVs) controls including: ♦ Tail pipe temperature		3.3	43
												G2.4.45 (10CFR 55.43.5 - SRO Only) <i>Ability to prioritize and interpret the significance of each annunciator or alarm.</i>		4.3	89
259002 Reactor Water Level Control											1	G2.4.45 (10CFR 55.41.10) Ability to prioritize and interpret the significance of each annunciator or alarm.		4.1	44

SRO only K/As shown in italics

ES-401												BWR Examination Outline Plant Systems – Tier 2/Group 1 (RO / SRO)												Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#											
261000 SGTS						1		1				K6.05 (10CFR 55.41.7) **Details in Record of Rejected K/As** Knowledge of the effect that a loss or malfunction of the following will have on the STANDBY GAS TREATMENT SYSTEM (SGTS): ♦ Reactor protection system: Plant-Specific A2.11 (10CFR 55.43.5 - SRO Only) <i>Ability to (a) predict the impacts of the following on the STANDBY GAS TREATMENT SYSTEM (SGTS); and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations:</i> ♦ High containment pressure	3.1	45											
													3.3	90											
262001 AC Electrical Distribution									1		1	A3.04 (10CFR 55.41.7) **Details in Record of Rejected K/As** Ability to monitor automatic operations of the A.C. ELECTRICAL DISTRIBUTION SYSTEM including: ♦ Load sequencing G2.2.39 (10CFR 55.41.10) Knowledge of less than or equal to one hour Technical Specification action statements for systems.	3.4	46											
													3.9	47											

SRO only K/As shown in italics

ES-401 BWR Examination Outline Plant Systems – Tier 2/Group 1 (RO / SRO)													Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
262002 UPS (AC/DC)						2						K6.02 (10CFR 55.41.7) Knowledge of the effect that a loss or malfunction of the following will have on the UNINTERRUPTABLE POWER SUPPLY (UPS) (A.C. / D.C.): ♦ D.C. electrical power	2.8	48
												K6.03 (10CFR 55.41.7) Knowledge of the effect that a loss or malfunction of the following will have on the UNINTERRUPTABLE POWER SUPPLY (UPS) (A.C. / D.C.): ♦ Static inverter	2.7	49
263000 DC Electrical Distribution								1				A2.01 (10CFR 55.41.5) Ability to (a) predict the impacts of the following on the D.C. ELECTRICAL DISTRIBUTION SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: ♦ Grounds	2.8	50
264000 EDGs					1							K5.05 (10CFR 55.41.5) Knowledge of the operational implications of the following concepts as they apply to EMERGENCY GENERATORS (DIESEL / JET): ♦ Paralleling A.C. power sources	3.4	51
300000 Instrument Air		1										K2.01 (10CFR 55.41.7) Knowledge of electrical power supplies to the following: ♦ Instrument air compressor	2.8	52

SRO only K/As shown in italics

ES-401												BWR Examination Outline Plant Systems – Tier 2/Group 1 (RO / SRO)		Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)		IR	#
400000 Component Cooling Water							1					A1.01 (10CFR 55.41.5) Ability to predict and/or monitor changes in parameters associated with operating the COMPONENT COOLING WATER SYSTEM controls including: ♦ CCW flow rate		2.8	53
K/A Category Point Totals: (RO)	4	2	3	2	2	3	2	2	2	2	2	Group Point Total: (RO)			26
K/A Category Point Totals: (SRO)								3			2	Group Point Total: (SRO)			5

ES-401		BWR Examination Outline Plant Systems – Tier 2/Group 2 (RO / SRO)										Form ES-401-1		
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
201001 CRD Hydraulic						1						K6.04 (10CFR 55.41.7) Knowledge of the effect that a loss or malfunction of the following will have on the CONTROL ROD DRIVE HYDRAULIC SYSTEM: ♦ RPS	3.6	54
201002 RMCS	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
201003 Control Rod and Drive Mechanism	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
201004 RSCS	--	--	--	--	--	--	--	--	--	--	--	N/A for BFN – BWR 4/5 ONLY-----	-----	-----
201005 RCIS	--	--	--	--	--	--	--	--	--	--	--	N/A for BFN – BWR 6 ONLY-----	-----	-----
201006 RWM	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
202001 Recirculation							1					A2.10 (10CFR 55.43.5 - SRO Only) Ability to (a) predict the impacts of the following on the RECIRCULATION SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: ♦ Recirculation pump seal failure	3.9	91
202002 Recirculation Flow Control	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
204000 RWCU	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
214000 RPIS	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
215001 Traversing In-core Probe									1			A3.03 (10CFR 55.41.7) Ability to monitor automatic operations of the TRAVERSING IN-CORE PROBE including: ♦ Valve operation: Not-BWR1	2.5	55

SRO only K/As shown in italics

BWR Examination Outline Plant Systems – Tier 2/Group 2 (RO / SRO)													Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
215002 RBM	1							1				K1.02 (10CFR 55.41.6) Knowledge of the physical connections and/or cause-effect relationships between ROD BLOCK MONITOR SYSTEM and the following: <ul style="list-style-type: none"> ♦ LPRM: BWR-3,4,5 A2.05 (10CFR 55.43.5 - SRO Only) <i>Ability to (a) predict the impacts of the following on the ROD BLOCK MONITOR SYSTEM; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations:</i> <ul style="list-style-type: none"> ♦ RBM high or inoperable: BWR-3,4,5 	3.2	56
216000 Nuclear Boiler Inst.	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
219000 RHR/LPCI: Torus/Pool Cooling Mode		1										K2.02 (10CFR 55.41.7) Knowledge of electrical power supplies to the following: <ul style="list-style-type: none"> ♦ Pumps 	3.1	57
223001 Primary CTMT and Aux.	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
226001 RHR/LPCI: CTMT Spray Mode	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
230000 RHR/LPCI: Torus/Pool Spray Mode	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
233000 Fuel Pool Cooling/Cleanup											1	G2.4.35 (10CFR 55.43.5 - SRO Only) Knowledge of local auxiliary operator tasks during an emergency and the resultant operational effects.	4.0	93
234000 Fuel Handling Equipment	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----
239001 Main and Reheat Steam	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----	-----	-----

SRO only K/As shown in italics

ES-401 BWR Examination Outline Plant Systems – Tier 2/Group 2 (RO / SRO)													Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)	IR	#
239003 MSIV Leakage Control				1								K4.02 (10CFR 55.41.7) Knowledge of MSIV LEAKAGE CONTROL SYSTEM design feature(s) and/or interlocks which provide for the following: ♦ Performance of intended safety function following any single active component failure: BWR-4,5,6(P-Spec)	3.0	58
241000 Reactor/Turbine Pressure Regulator							1					A1.01 (10CFR 55.41.5) <i>**Details in Record of Rejected K/As**</i> Ability to predict and/or monitor changes in parameters associated with operating the REACTOR / TURBINE PRESSURE REGULATING SYSTEM controls including: ♦ Reactor pressure	3.9	59
245000 Main Turbine Gen. / Aux.					1							K5.07 (10CFR 55.41.5) Knowledge of the operational implications of the following concepts as they apply to MAIN TURBINE GENERATOR AND AUXILIARY SYSTEMS: ♦ Generator operations and limitations	2.6	60
256000 Reactor Condensate											1	G2.1.30 (10CFR 55.41.7) Ability to locate and operate components, including local controls.	4.4	61
259001 Reactor Feedwater	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED	-----	-----
268000 Radwaste	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED	-----	-----
271000 Offgas											1	A4.06 (10CFR 55.41.7) Ability to manually operate and/or monitor in the control room: ♦ System indicating lights and alarms	3.3	62

SRO only K/As shown in italics

ES-401												BWR Examination Outline Plant Systems – Tier 2/Group 2 (RO / SRO)		Form ES-401-1	
System # / Name	K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G	K/A Topic(s)		IR	#
272000 Radiation Monitoring	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----		-----	-----
286000 Fire Protection	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----		-----	-----
288000 Plant Ventilation								1				A2.05 (10CFR 55.41.5) Ability to (a) predict the impacts of the following on the PLANT VENTILATION SYSTEMS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal conditions or operations: ♦ Extreme outside weather conditions: Plant-Specific		2.6	63
290001 Secondary CTMT			1									K3.01 (10CFR 55.41.7) Knowledge of the effect that a loss or malfunction of the SECONDARY CONTAINMENT will have on the following: ♦ Off-site radioactive release rates		4.0	64
290003 Control Room HVAC	--	--	--	--	--	--	--	--	--	--	--	NOT RANDOMLY SELECTED-----		-----	-----
290002 Reactor Vessel Internals	1											K1.04 (10CFR 55.41.5) Knowledge of the physical connections and/or cause-effect relationships between REACTOR VESSEL INTERNALS and the following: ♦ HPCI: Plant-Specific		3.4	65
K/A Category Point Totals: (RO)	2	1	1	1	1	1	1	1	1	1	1	Group Point Total: (RO)			12
K/A Category Point Totals: (SRO)								2			1	Group Point Total: (SRO)			3

SRO only K/As shown in italics

Facility: Browns Ferry NPP		Date of Exam: July 6 - 30, 2009				
Category	K/A #	Topic	RO		SRO-Only	
			IR	#	IR	#
1. Conduct of Operations	2.1.	G2.1.39 (10CFR 55.41.10) Knowledge of conservative decision making practices. G2.1.13 (10CFR 55.43.5 – SRO Only) <i>Knowledge of facility requirements for controlling vital/controlled access.</i>	3.6	66	3.2	94
	2.1.	G2.1.6 (10CFR 55.41.10) Ability to manage the control room crew during transients. G2.1.4 (10CFR 55.43.2 – SRO Only) <i>Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status, 10CFR55, etc.</i>	3.8	67	3.8	95
	2.1.	NOT RANDOMLY SELECTED	---	---	---	---
	2.1.	NOT RANDOMLY SELECTED	---	---	---	---
	2.1.	NOT RANDOMLY SELECTED	---	---	---	---
	2.1.	NOT RANDOMLY SELECTED	---	---	---	---
	Subtotal			2		2
	2. Equipment Control	2.2.	G2.2.20 (10CFR 55.41.10) Knowledge of the process for managing troubleshooting activities. G2.2.19 (10CFR 55.43.5 – SRO Only) <i>Knowledge of maintenance work order requirements.</i>	2.6	68	3.4
2.2.		G2.2.22 (10CFR 55.41.5) Knowledge of limiting conditions for operations and safety limits. G2.2.23 (10CFR 55.43.2 – SRO Only) <i>Ability to track Technical Specification limiting conditions for operations.</i>	4.0	69	4.6	97
2.2.		NOT RANDOMLY SELECTED	---	---	---	---
2.2.		NOT RANDOMLY SELECTED	---	---	---	---
2.2.		NOT RANDOMLY SELECTED	---	---	---	---
2.2.		NOT RANDOMLY SELECTED	---	---	---	---
Subtotal			2		2	

SRO only K/As shown in italics

Facility: Browns Ferry NPP		Date of Exam: July 6 - 30, 2009				
Category	K/A #	Topic	RO		SRO-Only	
			IR	#	IR	#
3. Radiation Control	2.3	G2.3.14 (10CFR 55.41.12) Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities. G2.3.11 (10CFR 55.43.4 – SRO Only) <i>Ability to control radiation releases.</i>	3.4	70	4.3	98
	2.3	G2.3.4 (10CFR 55.41.12) Knowledge of radiation exposure limits under normal or emergency conditions. G2.3.7 (10CFR 55.43.4/5 – SRO Only) <i>Ability to comply with radiation work permit requirements during normal or abnormal conditions.</i>	3.2	71	3.6	99
	2.3	G2.3.7 (10CFR 55.41.12) Ability to comply with radiation work permit requirements during normal or abnormal conditions.	3.5	72	---	---
	2.3	NOT RANDOMLY SELECTED-----	---	---	---	---
	2.3	NOT RANDOMLY SELECTED-----	---	---	---	---
	2.3	NOT RANDOMLY SELECTED-----	---	---	---	---
	Subtotal			3		2
	4. Emergency Procedures / Plan	2.4.	G2.4.18 (10CFR 55.41.10) Knowledge of the specific bases for EOPs. G2.4.8 (10CFR 55.43.5 – SRO Only) <i>Knowledge of how abnormal operating procedures are used in conjunction with EOPs.</i>	3.3	73	4.5
2.4.		G2.4.26 (10CFR 55.41.10) Knowledge of facility protection requirements including fire brigade and portable fire fighting equipment usage.	3.1	74	---	---
2.4.		G2.4.6 (10CFR 55.41.10) Knowledge of EOP mitigation strategies.	3.7	75	---	---
2.4.		NOT RANDOMLY SELECTED-----	---	---	---	---
2.4.		NOT RANDOMLY SELECTED-----	---	---	---	---
2.4.		NOT RANDOMLY SELECTED-----	---	---	---	---
Subtotal			3		1	
Tier 3 Point Total			10		7	

SRO only K/As shown in italics

DRAFT

ES-401, Rev. 9

BWR Examination Outline

Form ES-401-1

Facility: <i>Browns Ferry</i> Date of Exam: <i>2009</i> <i>Draft</i>																	
Tier	Group	RO K/A Category Points											SRO-Only Points				
		K 1	K 2	K 3	K 4	K 5	K 6	A 1	A 2	A 3	A 4	G *	Total	A2	G*	Total	
1. Emergency & Abnormal Plant Evolutions	1	4	3	4	N/A			3	2	N/A			4	20	4	3	7
	2	2	1	1				1	1				1	7	2	1	3
	Tier Totals		6	4				5	4				3	5	27	6	4
	2. Plant Systems	1	4	2	3	2	2	3	2	2	2	2	2	26	3	2	5
2		2	1	1	1	1	1	1	1	1	1	1	12	0	2	3	
Tier Totals		6	3	4	3	3	4	3	3	3	3	3	38	5	3	8	
3. Generic Knowledge and Abilities Categories					1	2	3	4	10	1	2	3	4	7			
					2	2	3	3		2	2	2	1				

- Ensure that at least two topics from every applicable K/A category are sampled within each tier of the RO and SRO-only outlines (i.e., except for one category in Tier 3 of the SRO-only outline, the **Tier Totals** in each K/A category shall not be less than two).
- 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.
- Systems/evolutions within each group are identified on the associated outline; systems or evolutions that do not apply at the facility should be deleted and justified; operationally important, site-specific systems that are not included on the outline should be added. Refer to ES-401, Attachment 2, for guidance regarding the elimination of inappropriate K/A statements.
- 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.
- Absent a plant-specific priority, only those K/As having an importance rating (IR) of 2.5 or higher shall be selected. Use the RO and SRO ratings for the RO and SRO-only portions, respectively.
- Select SRO topics for Tiers 1 and 2 from the shaded systems and K/A categories.
- *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.
- On the following pages, enter the K/A numbers, a brief description of each topic, the topics= importance ratings (IRs) for the applicable license level, and the point totals (#) for each system and category. Enter the group and tier totals for each category in the table above; if fuel handling equipment is sampled in other than Category A2 or G* on the SRO-only exam, enter it on the left side of Column A2 for Tier 2, Group 2 (Note # 1 does not apply). Use duplicate pages for RO and SRO-only exams.
- For Tier 3, select topics from Section 2 of the K/A catalog, and enter the K/A numbers, descriptions, IRs, and point totals (#) on Form ES-401-3. Limit SRO selections to K/As that are linked to 10 CFR 55.43.

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REV. 0.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
295001AA1.	Partial or Complete Loss of Forced Core Flow Circulation / 1 & 4	3.3	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RPS.....
				Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)										
295003AK1.	Partial or Complete Loss of AC / 6	2.9	3.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Under voltage/degraded voltage effects on electrical loads.....
				Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)										
295004AK3.	Partial or Total Loss of DC Pwr / 6	2.9	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ground isolation/fault determination.....
				Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)										
295005G2.4	Main Turbine Generator Trip / 3	4.0	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the parameters and logic used to assess the status of safety functions
				This is a Generic, no stem statement is associated.										
295006AK2.	SCRAM / 1	3.8	3.8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor water level control system.....
				Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)										
295016G2.4	Control Room Abandonment / 7	2.7	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of events related to system operations/status that must be reported to internal organizations or outside agencies.
				This is a Generic, no stem statement is associated.										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
295018AA1.	Partial or Total Loss of CCW / 8	3.3	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	System loads.....
	Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)													
295019AK2.	Partial or Total Loss of Inst. Air / 8	3.5	3.5	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ADS: Plant-Specific.....
	Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)													
295021G2.2	Loss of Shutdown Cooling / 4	3.6	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(multi-unit) Ability to explain the variations in control board layouts, systems, instrumentation and procedural actions between units at a facility.
	This is a Generic, no stem statement is associated.													
295023AA1.	Refueling Acc Cooling Mode / 8	3.4	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation monitoring equipment.....
	Ability to operate and / or monitor the following as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)													
295024EA2.	High Drywell Pressure / 5	3.8	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Suppression pool level.....
	Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)													
295025EK2.	High Reactor Pressure / 3	3.9	4.1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ARI/RPT/ATWS: Plant-Specific.....
	Knowledge of the interrelations between (EMERGENCY PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)													

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
295027EK3.	High Containment Temperature / 5	3.2	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment spray: Plant-Specific.....
Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)														
295028EK1.	High Drywell Temperature / 5	3.5	3.7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor water level measurement.....
Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)														
295030EK3.	Low Suppression Pool Wtr Lvl / 5	3.6	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RCIC operation: Plant-Specific.....
Knowledge of the reasons for the following responses as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)														
295031EA2.	Reactor Low Water Level / 2	4.2	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor pressure.....
Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)														
295037G2.2	SCRAM Condition Present and Power Above APRM Downscale or Unknown / 1	3.7	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of surveillance procedures.
This is a Generic, no stem statement is associated.														
295038EK1.	High Off-site Release Rate / 9	2.5	3.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Biological effects of radioisotope ingestion.....
Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)														

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
600000AK3.	Plant Fire On Site / 8	2.8	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Actions contained in the abnormal procedure for plant fire on site
				Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)										
700000AK1.	Generator Voltage and Electric Grid Disturbancecs	3.3	3.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Definition of the terms: volts, watts, amps, VARS, power factor
				Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
295009AK2.	Low Reactor Water Level / 2	2.6	2.6	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor water cleanup.....
				Knowledge of the interrelations between (ABNORMAL PLANT EVOLUTION) and the following:(CFR: 41.7 / 45.7 / 45.8)										
295010G2.4	High Drywell Pressure / 5	4.6	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.
				This is a Generic, no stem statement is associated.										
295012AK1.	High Drywell Temperature / 5	3.3	3.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pressure/temperature relationship.....
				Knowledge of the operational implications of the following concepts as they apply to the (ABNORMAL PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)										
295017AK3.	High Off-site Release Rate / 9	3.3	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Implementation of site emergency plan.....
				Knowledge of the reasons for the following responses as they apply to (ABNORMAL PLANT EVOLUTION):(CFR: 41.5 / 41.10 / 45.6 / 45.13)										
295022AA2.	Loss of CRD Pumps / 1	3.1	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CRD mechanism temperatures.....
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
295029EA1.	High Suppression Pool Wtr Lvl / 5	3.4	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RCIC: Plant-Specific.....
				Ability to operate and / or monitor the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.7 / 45.5 / 45.6)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											

295036EK1.	Secondary Containment High Sump/Area Water Level / 5	2.9	3.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Radiation releases.....
Knowledge of the operational implications of the following concepts as they apply to the EMERGENCY PLANT EVOLUTION):(CFR: 41.8 to 41.10 / 45.3)														

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
203000K5.0	RHR/LPCI: Injection Mode	2.7	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Testable check valve operation
				Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)										
205000K2.0	Shutdown Cooling	2.5	2.7	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Motor operated valves
				Knowledge of electrical power supplies to the following:(CFR: 41.7)										
206000K4.1	HPCI	3.1	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Minimizing fission product concentration in the condensate storage tank (valve closures on system initiation): BWR-2,3,4(P-Spec)
				Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)										
207000A4.0	Isolation (Emergency) Condenser	3	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Primary and shell sidetemperatures: BWR-2,3
				Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)										
209001K1.1	LPCS	2.9	3.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	ECCS room coolers
				Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)										
209002A3.0	HPCS	3.7	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	System flow: BWR-5,6
				Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)										
211000A4.0	SLC	4.2	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	System initiation: Plant-Specific
				Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
212000K3.1	RPS	3.0	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recirculation system
Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)														
215003K4.0	IRM	2.9	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Varying system sensitivity levels using range switches
Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)														
215004A3.0	Source Range Monitor	3.2	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Meters and recorders
Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)														
215005A2.0	APRM / LPRM	3.2	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recirculation flow channels flow mismatch
Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)														
217000K3.0	RCIC	3.6	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Adequate core cooling
Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)														
217000K3.0	RCIC	3.6	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor vessel pressure
Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)														

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
218000K1.0	ADS	4.0	4.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Low pressure core spray: Plant-Specific
				Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)										
223002K1.0	PCIS/Nuclear Steam Supply Shutoff	3.0	3.2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Plant ventilation
				Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)										
223002K1.1	PCIS/Nuclear Steam Supply Shutoff	2.7	2.9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Traversing in-core probe system
				Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)										
239002A1.0	SRVs	3.3	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Tail pipe temperature
				Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)										
259002G2.4	Reactor Water Level Control	4.1	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to prioritize and interpret the significance of each annunciator or alarm.
				This is a Generic, no stem statement is associated.										
261000K6.0	SGTS	3.1	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Primary containment high pressure: Plant-Specific
				Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
262001G2.2	AC Electrical Distribution	3.9	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of less than one hour technical specification action statements for systems.
				This is a Generic, no stem statement is associated.										
262002K6.0	UPS (AC/DC)	2.8	3.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	D.C. electrical power
				Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)										
262002K6.0	UPS (AC/DC)	2.7	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Static inverter
				Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)										
263000A2.0	DC Electrical Distribution	2.8	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Grounds
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										
264000K5.0	EDGs	3.4	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Paralleling A.C. power sources
				Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)										
300000K2.0	Instrument Air	2.8	2.8	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Instrument air compressor
				Knowledge of electrical power supplies to the following:(CFR: 41.7)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											

400000A1.0	Component Cooling Water	2.8	2.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	CCW flow rate
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Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
201001K6.0	CRD Hydraulic	3.6	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RPS
Knowledge of the effect that a loss or malfunction of the following will have on the (SYSTEM):(CFR: 41.7 / 45.7)														
201004A1.0	RSCS	3.3	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor manual control system: BWR-4,5
Ability to predict and/or monitor changes in parameters associated with operating the (SYSTEM) controls including:(CFR: 41.5 / 45.5)														
215001A3.0	Traversing In-core Probe	2.5	2.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Valve operation: Not-BWR1
Ability to monitor automatic operations of the (SYSTEM) including:(CFR: 41.7 / 45.5)														
215002K1.0	RBM	3.2	3.1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LPRM: BWR-3,4,5
Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)														
219000K2.0	RHR/LPCI: Torus/Pool Cooling Mode	3.1	3.3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Pumps
Knowledge of electrical power supplies to the following:(CFR: 41.7)														
239003K4.0	MSIV Leakage Control	3	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Performance of intended safety function following any single active component failure: BWR-4,5,6(P-Spec)
Knowledge of (SYSTEM) design feature(s) and or interlock(s) which provide for the following:(CFR: 41.7)														
245000K5.0	Main Turbine Gen. / Aux.	2.6	2.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Generator operations and limitations
Knowledge of the operational implications of the following concepts as they apply to the (SYSTEM):(CFR: 41.5 / 45.7)														

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
256000G2.1	Reactor Condensate	4.4	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to locate and operate components, including local controls.
				This is a Generic, no stem statement is associated.										
271000A4.0	Offgas	3.3	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	System indicating lights and alarms
				Ability to manually operate and/or monitor in the control room:(CFR: 41.7 / 45.5 to 45.8)										
288000A2.0	Plant Ventilation	2.6	2.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Extreme outside weather conditions: Plant-Specific
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										
290001K3.0	Secondary CTMT	4.0	4.4	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Off-site radioactive release rates
				Knowledge of the effect that a loss or malfunction of the (SYSTEM) will have on the following:(CFR: 41.7 / 45.6)										
290002K1.0	Reactor Vessel Internals	3.4	3.5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	HPCI: Plant-Specific
				Knowledge of the physical connections and/or cause-effect relationships between (SYSTEM) and the following:(CFR: 41.2 to 41.9 / 45.7 to 45.8)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
G2.1.39	Conduct of operations	3.6	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of conservative decision making practices
G2.1.6	Conduct of operations	3.8	4.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to manage the control room crew during plant transients.
G2.2.20	Equipment Control	2.6	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the process for managing troubleshooting activities.
G2.2.22	Equipment Control	4.0	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of limiting conditions for operations and safety limits.
G2.3.14	Radiation Control	3.4	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiation or contamination hazards that may arise during normal, abnormal, or emergency conditions or activities
G2.3.4	Radiation Control	3.2	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of radiation exposure limits under normal and emergency conditions
G2.3.7	Radiation Control	3.5	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to comply with radiation work permit requirements during normal or abnormal conditions

KA	NAME / SAFETY FUNCTION:	IR		K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO												
G2.4.18	Emergency Procedures/Plans	3.3	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the specific bases for EOPs.
G2.4.26	Emergency Procedures/Plans	3.1	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of facility protection requirements including fire brigade and portable fire fighting equipment usage.
G2.4.6	Emergency Procedures/Plans	3.7	4.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge symptom based EOP mitigation strategies.

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
295003G2.4.50	Partial or Complete Loss of AC / 6	4.2	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.
				This is a Generic, no stem statement is associated.										
295016G2.4.3	Control Room Abandonment / 7	3.7	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to identify post-accident instrumentation.
				This is a Generic, no stem statement is associated.										
295018AA2.01	Partial or Total Loss of CCW / 8	3.3	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Component temperatures.....
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
295023AA2.01	Refueling Acc Cooling Mode / 8	3.6	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Area radiation levels.....
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
295025EA2.01	High Reactor Pressure / 3	4.3	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reactor pressure.....
				Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
295027EA2.01	High Containment Temperature / 5	3.7	3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Containment temperature: Mark-III.....
				Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											

700000G2.4.31	Generator Voltage and Electric Grid Disturbancecs
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4.2

4.1

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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This is a Generic, no stem statement is associated.

Knowledge of annunciators alarms, indications or response procedures

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
295012G2.4.34	High Drywell Temperature / 5	4.2	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of RO tasks performed outside the main control room during an emergency and the resultant operational effects
				This is a Generic, no stem statement is associated.										
295013AA2.02	High Suppression Pool Temp. / 5	3.2	3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Localized heating/stratification.....
				Ability to determine and interpret the following as they apply to ABNORMAL PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										
295033EA2.03	High Secondary Containment Area Radiation Levels / 9	3.7	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cause of high area radiation.....
				Ability to determine and interpret the following as they apply to (EMERGENCY PLANT EVOLUTION):(CFR: 41.10 / 43.5 / 45.13)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
206000A2.16	HPCI	4	4.1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High drywell pressure: BWR-2,3,4
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										
212000A2.20	RPS	4.1	4.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Full system activation (full-SCRAM)
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										
217000G2.4.41	RCIC	2.9	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of the emergency action level thresholds and classifications.
				This is a Generic, no stem statement is associated.										
239002G2.4.45	SRVs	4.1	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to prioritize and interpret the significance of each annunciator or alarm.
				This is a Generic, no stem statement is associated.										
261000A2.11	SGTS	3.2	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	High containment pressure
				Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)										

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
202001A2.10	Recirculation	3.5	3.9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recirculation pump seal failure
<p>Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)</p>														
215002A2.05	RBM	3.2	3.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	RBM high or inoperable: BWR-3,4,5
<p>Ability to (a) predict the impacts of the following on the (SYSTEM) and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those abnormal operation:(CFR: 41.5 / 43.5 / 45.3 / 45.13)</p>														
233000G2.4.35	Fuel Pool Cooling/Cleanup	3.8	4.0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of local auxiliary operator tasks during emergency and the resultant operational effects
<p>This is a Generic, no stem statement is associated.</p>														

KA	NAME / SAFETY FUNCTION:	IR	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	TOPIC:
		RO	SRO											
G2.1.13	Conduct of operations	2.5	3.2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of facility requirements for controlling vital / controlled access.
G2.1.4	Conduct of operations	3.3	3.8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of individual licensed operator responsibilities related to shift staffing, such as medical requirements, "no-solo" operation, maintenance of active license status, 10CFR55 etc.
G2.2.19	Equipment Control	2.3	3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of maintenance work order requirements.
G2.2.23	Equipment Control	3.1	4.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to track Technical Specification limiting conditions for operations.
G2.3.11	Radiation Control	3.8	4.3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to control radiation releases
G2.3.7	Radiation Control	3.5	3.6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Ability to comply with radiation work permit requirements during normal or abnormal conditions
G2.4.8	Emergency Procedures/Plans	3.8	4.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Knowledge of how abnormal operating procedures are used in conjunction with EOPs.