ES-301 **Administrative Topics Outline** **Form ES-301-1**

Facility: **GRAND GULF NUCLEAR STATION**		Date of Examination: **06/28/2010**
Examination Level: RO **X** SRO ☐		Operating Test Number: **6/10**
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	S; N	Perform 06-OP-1R20-W-0001-02, *Attachment II of weekly AC/DC Lineup for ESF 21 Transformer Retest* GJPM-OPS-ADMR91.00 K/A 2.1.20: 4.6
Conduct of Operations	R; N	Review Cooldown Record GJPM-OPS-ADMR92.00 K/A2.1.25: 3.9
Equipment Control	R; M	Determine Tagging Requirements & Prepare Tagout Tags Sheet for SRV B21-F047L GJPM-OPS-ADMR93.00 K/A 2.2.13: 4.1
Radiation Control		N/A
Emergency Procedures/Plan	R; M	Primary Containment Water Level Determination EOP Attachment 29 GJPM-OPS-ADMR94.00 K/A 2.4.21: 4.0
NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.		
* Type Codes & Criteria:	(C)ontrol room, (S)imulator, or Class(R)oom (D)irect from bank (≤ 3 for ROs; ≤ 4 for SROs & RO retakes) (N)ew or (M)odified from bank (≥ 1) (P)revious 2 exams (≤ 1; randomly selected)	

Facility: **GRAND GULF NUCLEAR STATION**		Date of Examination: **06/28/2010**
Examination Level: RO ☐ SRO **X**		Operating Test Number: **6/10**
Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	R; N	Determine Fire Watch Requirements GJPM-OPS-ADMS95.00 K/A 2.1.2: 4.4
Conduct of Operations	R; M	Determine Plant Safety Index Risk Color with the EOOS Risk Monitor Not Available GJPM-OPS-ADMS96.00 K/A2.1.25: 4.2
Equipment Control	R; M	Determine LCO Actions and Initiate a Manual LCO Tracking Report GJPM-OPS-ADMS97.00 K/A 2.2.22: 4.7
Radiation Control	R; M	Determine Protective Action Recommendations GJPM-OPS-ADMS88.00 K/A 2.3.13: 3.8
Emergency Procedures/Plan	R; M	Determine Entry into Site Emergency Plan and Complete Initial Notification Forms as applicable GJPM-OPS-EAL27.00 K/A 2.4.41: 4.6

NOTE: All items (5 total) are required for SROs. RO applicants require only 4 items unless they are retaking only the administrative topics, when all 5 are required.

* Type Codes & Criteria:

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

Facility: **GRAND GULF NUCLEAR STATION**	Date of Examination: **6/28/2010**
Exam Level: RO **X** SRO-I ☐ SRO-U ☐	Operating Test No.: **6/10**

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. 201005/201001/295022 Operate CRD System/RCIS to Achieve Criticality and Commence Reactor Heatup	S; L; M; A	1
b. 295030/223001 Raise Suppression Pool Level using HPCS	S; M; A	5
c. 217000 Restore RCIC to Standby following Steam Supply Isolation	S; M	2
d. 202001 Rapid Restart of Recirc Pump A to Mitigate Thermal Stratification	S; L; M	4
e. 262001 Align Buses 16AB and 17AC to ESF Transformer	*S; M; A*	*6*
f. 212000 Transfer RPS B to Normal Power Source and RPS A to Alternate Power Source	S; M; A	7
g. 400000 Align CCW to FPCCU Heat Exchanger A	S; N; A	8
h. 21272000 Perform Area Radiation Monitor Functional Test	*S; N*	*9*
In-Plant Systems@ (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. 295016 Perform Remote Shutdown Panel Area Actions for Security Code Orange	E; N	7
j. 295015 EP Attachment 22 – Locally Scram Control Rods	R; E; D	1
k. 295019 Install Nitrogen Bottle on ADS Air Supply	R; E; D	3

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

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

Facility: **GRAND GULF NUCLEAR STATION** Date of Examination: **6/28/2010**

Exam Level: RO ☐ SRO-I **X** SRO-U ☐ Operating Test No.: **6/10**

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. 201005/201001/295022 Operate CRD System/RCIS to Achieve Criticality and Commence Reactor Heatup	S; L; M; A	1
b. 295030/223001 Raise Suppression Pool Level using HPCS	S; M; A	5
c. 217000 Restore RCIC to Standby following Steam Supply Isolation	S; M	2
d. 202001 Rapid Restart of Recirc Pump A to Mitigate Thermal Stratification	S; L; M	4
e. *262001 Align Buses 16AB and 17AC to ESF Transformer 21*	*S; M; A*	*6*
f. 212000 Transfer RPS B to Normal Power Source and RPS A to Alternate Power Source	S; M; A	7
g. 400000 Align CCW to FPCCU Heat Exchanger A	S; N; A	8
h. N/A		
In-Plant Systems@ (3 for RO); (3 for SRO-I); (3 or 2 for SRO-U)		
i. 295016 Perform Remote Shutdown Panel Area Actions for Security Code Orange	E; N	7
j. 295015 EP Attachment 22 – Locally Scram Control Rods	R; E; D	1
k. 295019 Install Nitrogen Bottle on ADS Air Supply	R; E; D	3

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

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

Facility: **GRAND GULF NUCLEAR STATION** Scenario No.: **2** Op-Test No.: **06/10**

Examiners: _____ Operators: _____
_____ _____
_____ _____

Objectives: To evaluate the candidates' ability to operate the facility in response to the following evolutions:

1. Place the second Reactor Feed Pump (A) on the Master Level Controller.
2. Raise reactor power by withdrawing control rods.
3. Respond to a control rod drifting *out*.
4. Respond to a spurious HPCS initiation followed by HPCS pump trip.
5. Respond to loss of Service Transformers 11 and 21.
6. Respond to a trip of Division 1 Diesel Generator.
7. Respond to LOCA in the Drywell.
8. Respond to a failure Division 2 ECCS to automatically initiate.

Initial Conditions: Reactor Power is 50%.

INOPERABLE Equipment

None

Turnover:

The plant is at 50% power during startup. Reactor Recirc pumps are in fast speed with core flow 60%. Both Circ Water Pumps are in service. After assuming the shift, place RFP A on the Master Level Controller per IOI 03-1-01-2 step 5.16.1 and SOI 04-1-01-N21 section 4.6.4 immediately following turnover. Then, power ascension is to continue with withdrawing control rods in accordance with the Control Rod Movement Sequence per IOI 03-1-01-2 and the Reactivity Management Plan for startup. There is no out of service equipment, and EOOS is green. A Division 1 work week is in effect.

Event No.	Malf. No.	Event Type*	Event Description
1		N(BOP)	Place Reactor Feed Pump A on the Master Level Controller (IOI 03-1-01-2 step 5.16.1 and SOI 04-1-01-N21-1 section 4.6.4)
2		R(ACRO)	Raise reactor power to approximately 55% by withdrawing control rods. (Control Rod Movement Sequence)
3	***z161161_40_25***	C(ACRO)	Respond to control rod 40-*25* drift *out* (ONEP 05-1-02-IV-1 sections 2.2/3.2; Tech Spec 3.1.3)
4	**e22052** **e22053**	C(*SS*)	Respond to a spurious HPCS initiation and HPCS pump trip (02-S-01-27 step 6.6.3, ARI 04-1-02-1H13-P601-16A-H3, Tech Spec 3.5.1)
5	**r21133a** **r21133b**	M(ALL)	Respond to a trip of Service Transformers 11 and 21 (ONEPs 05-1-02-I-4, 05-1-02-I-1, 05-1-02-I-2; EP-2)
6	**n41141a**	C (BOP)	Respond to trip of Division 1 Diesel Generator (ONEP 05-1-02-I-4)
7	**rr063a@4.92**	M(ALL)	Respond to a LOCA in the drywell (EP-2, EP-3)
8	**rr040f@0** **rr041f@100**	I(ACRO)	Respond to failure of Division 2 ECCS to automatically initiate (EN-OP-115)

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

Critical Tasks

- *Open at least seven SRVs before RPV level drops to -210" Fuel Zone Range.*

- *Manually initiate Division 2 ECCS prior to RPV pressure going below 300 psig.*

Facility: **GRAND GULF NUCLEAR STATION** Scenario No.: **5** Op-Test No.: **06/10**

Examiners: _____ Operators: _____
_____ _____
_____ _____

Objectives: To evaluate the candidates' ability to operate the facility in response to the following evolutions:

1. Raise reactor power to 100% using Recirc Flow Control Valves.
2. Respond to failure of RPS RPV Level Transmitter A.
3. Respond to Thyristor Voltage Regulator (TVR) trip to manual.
4. Respond to Recirc Pump A trip.
5. Respond to Thermal Hydraulic Instability.
6. Respond to a failure of the Reactor Mode Switch to initiate Scram.
7. Respond to Hydraulic Block ATWS above 4% power.
8. Respond to a SLC piping rupture.

Initial Conditions: Reactor Power is 90%.

INOPERABLE Equipment

None

Turnover:

The plant is at 90% power. Reactor power is to be raised to 100%. Pre-conditioning conditions are established for 100% power operation. There is no out of service equipment and EOOS is green. A Division 1 work week is in effect.

Event No.	Malf. No.	Event Type*	Event Description
1		R(ACRO)	Raise reactor power to 100% using Recirc Flow Control Valves (IOI 03-1-01-2 Attachment VIII)
2	**lt b21n080a_b**	C(*ACRO)*	Respond to failure of RPS RPV Level Transmitter A. (ARI 04-1-02-1H13-P6804A2-D4; 5A-C1; 7A-A2; Tech Spec 3.3.1.1; 3.3.6.1; TR3.1.5).
3	**n41102**	C(BOP)	Respond to TVR trip from Automatic to Manual (ARI 04-1-02-1H13-P680-9A-C15, SOI 04-1-01-N40-1 section 5.2) (GGNS Scram 10/2008)
4	**rr012a**	C(BOP)	Respond to trip of Recirc Pump A (ARI 04-1-02-P680-3A-B4, ONEP 05-1-02-III-3; Tech Spec 3.4.1)
5	**rr165 @ 5 – 100 over 5 minutes** ***c71162***	C(ACRO)	Respond to Thermal Hydraulic Instability (ONEP 05-1-02-III-3, 05-1-02-I-1, 05-1-02-I-2)
6	**di_1c71m602 RUN**	C(ACRO)	Respond to a failure of the Reactor Mode Switch to scram the Reactor. (EN-OP-115)
7	**c11164 @ 30**	M(ALL)	Respond to ATWS to insert control rods with power above 4% (EP-2A)
8	**c41263 @ 60**	C (BOP)	Respond to leak in SLC piping (EP-2A)

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

Critical Tasks

- *When Thermal Hydraulic Instability is observed, inserts a manual scram.*
- *Insert control rods by manual scram and/or normal rod insertion via RCIS.*

Facility: **GRAND GULF NUCLEAR STATION** Scenario No.: **6** Op-Test No.: **06/10**

Examiners: _____ Operators: _____
_____ _____
_____ _____

Objectives: To evaluate the candidates' ability to operate the facility in response to the following evolutions:

1. Raise reactor power to 85% using Recirc Flow Control Valves.
2. Place the third Condensate and Condensate Booster Pump in service.
3. Respond to APRM A failed upscale.
4. Respond to trip of ESF Transformer11.
5. Respond to a loss of Main Condenser Vacuum.
6. Respond to a LOCA with reduced injection systems.
7. Respond to failure of RCIC to auto start.

Initial Conditions: Reactor Power is 80%.

INOPERABLE Equipment

None

Turnover:

The plant is at 80% power. Reactor power is to be raised to 85%. Pre-conditioning conditions are established for 100% power operation.
Condensate Pump B and Condensate Booster Pump B pre-start checks are complete.
Condensate Cleanup is ready for the third Condensate and Booster Pump operation.
IOI 03-1-01-2 Attachment II step 6.6 is complete. There is no out of service equipment and EOOS is green. A Division 1 work week is in effect.

Event No.	Malf. No.	Event Type*	Event Description
1		R(ACRO)	Raise reactor power to 85% using Recirc Flow Control Valves (IOI 03-1-01-2 Attachment II)
2		N(BOP)	Place the third Condensate and Condensate Booster Pump in service. (SOI 04-1-01-N19-1 section 4.3).
3	**c51009a**	C(ACRO)	Respond to APRM A failed upscale (ARI 04-1-02-P680-5A-A11; B10; Tech Spec/TR 3.3.1.1; TR 3.3.2.1)
4	**r21134g**	C(BOP)	Respond to trip of ESF Transformer 11. (ARI 04-1-02-1H13-P807 4A-B2; E6-, ONEP 05-1-02-I-4; Tech Spec 3.8.1) (SOER 10-1 Large Power Transformer Reliability)
5	**fw163a @ 5 ramp to 100 over 14 minutes**	C(ACRO)	Respond to a loss of Main Condenser Vacuum (ONEP 05-1-02-V-8)
6	**rr063a@ 10 over 2 minutes**	M(ALL)	Respond to a LOCA with reduced injection systems. (EP-2/3)
7	**e51043**	C(ACRO)	Respond to failure of RCIC to auto start (EP-2; SOI 04-1-01-E51-1)

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

Critical Tasks

- *Reduce RPV Pressure to within capability of Condensate or Low Pressure ECCS to allow RPV level restoration.*

- *Restore and maintain RPV level above -191" using available injection systems.*