ES-301, Rev. 9 **Administrative Topics Outline** **Form ES-301-1**

Facility: Vogtle	Date of Examination: July / August 2007
Examination Level: SRO	Operating Test Number: 2007-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M	Title: Perform QPTR Calculation Description: Perform Quadrant Power Tilt Ration (QPTR) Calculation. SRO will also determine the appropriate Tech Spec Actions to be taken. K/A: G2.1.7 (3.7 / 4.0)
Conduct of Operations	D	Title: Perform Loss of Safety Function Determination Description: A Train "A" Safety Related component will be tagged out when a 120V AC 1E Vital Bus is required to be put on the regulated transformer (alternate source). The candidate will have to perform a LOSF Evaluation and determine that a loss of safety functions exists. K/A: G2.1.33 (3.4 / 4.0)
Equipment Control	N	Title: Perform Emergency Boration Flow Path Verification Description: The plant will be in Mode 4 with CVCS components tagged out. Failure of another component will require performance of a boric acid flow path verification. This verification will be UNSATISFACTORY and require notification of the Unit SS. K/A: G2.2.12 (3.0 / 3.4)
Radiation Control	N	Title: Perform Stay Time Calculation to Limit Dose to the Public During a Declared Emergency Description: The SRO will have to calculate the stay time to prevent exceeding Emergency Exposure Limits to limit dose to the public during isolation of a LOCA Outside Containment and venting of an RHR pump. Candidate will have to fill out 91301-C Authorization form. K/A: 2.3.1 (2.6 / 3.0)
Emergency Plan	N	Title: Make Emergency Classification, PAR Recommendations, Fill Out ENN form. Description: K/A: The candidate will be given conditions requiring classification of a General Emergency (or upgrade Site to a General). A General Emergency declaration requires that a PAR recommendation be made. G2.4.38 (2.2 / 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 ≤ ≤
(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)
(S)imulator ≤

ES-301, Rev. 9 **Administrative Topics Outline** **Form ES-301-1**

Facility: Vogtle	Date of Examination: July / August 2007
Examination Level: RO	Operating Test Number: 2007-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M	Title: Perform QPTR Calculation Description: Perform Quadrant Power Tilt Ration (QPTR) Calculation (this could be done in class setting or simulator, if in simulator could be set up where Human Performance Factors come into play. K/A: G2.1.7 (3.7 / 4.0)
Conduct of Operations	N/A	Not applicable for this examination.
Equipment Control	N	Title: Perform Emergency Boration Flow Path Verification Description: The plant will be in Mode 4 with CVCS components tagged out. Failure of another component will require performance of a boric acid flow path verification. This verification will be Unsatisfactory and require notification of the Unit SS. K/A: G2.2.12 (3.0 / 3.4)
Radiation Control	M	Title: Perform Stay Time Calculation to Protect Valuable Equipment During a Declared Emergency Description: An RHR pump will require local manual operations to vent the pump during an emergency. Candidate will be given transit dose rates to and from area along with dose rates in pump room. Candidate will calculate stay time without exceeding 10R dose limits. K/A: 2.3.1 (2.6 / 3.0)
Emergency Plan	M	Title: Make Emergency Notifications with Total Failure of the ENN. Description: An ENN Notification is required and the candidate will experience the inability to reach multiple agencies requiring notification. This will require the candidate to use the backup conference bridge since two or more agencies cannot be reached with the ENN. K/A: G2.4.43 (2.8 / 3.5)

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 & RO retakes)
(N)ew or (M)odified from bank (≥ 1)
(P)revious 2 exams (≤ 1; randomly selected)
(S)imulator

Facility: Vogtle	Date of Examination: July / August 2007
Exam Level (circle one): RO / SRO-I / SRO-U (see each JPM)	Operating Test No.: 2007-301

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. Perform Control Rod Operability Test. Two Rods will drop during exercise requiring a reactor trip from QMCB. (RO / SRO-I) K/A: 001A2.11 (4.4 / 4.7)	N, A, S	1 Reactivity
b. Transfer ECCS Pumps to Hot Leg Recirculation. Multiple Train "A" Components Fail to Align (RO / SRO-I / SRO-U) K/A: 006A4.05 (3.9 / 3.8)	D, A, E, L, S	2 Inventory Control
c. Isolate SI Accumulators during Post LOCA Cool down, Depress. Two valves won't have power and will require vent of accumulator. (RO / SRO-I / SRO-U) K/A: 062A4.07 (3.1 / 3.1)	N, A, E, L, S	3 Pressure Control
d. Identify and Isolate SG during SGTR. MSIV and TDAFW steam supply will not shut requiring RNO actions. (RO / SRO-I) K/A: 035A4.06 (4.5 / 4.6)	D, A, E, L, S	4P (Primary) - Heat Removal
e. Swap AFW Pump Suctions to the Alternate Source. CST level will require suction and mini flow swap to the alternate CST source. (RO / SRO-I) K/A: 061A1.04 (3.9 / 3.9)	N, E, L, S	4S (Secondary) Heat Removal
f. Post LOCA Containment Hydrogen Purge Operation. High CNMT Hydrogen Concentration will require Purge operations. (RO / SRO-I / SRO-U) K/A: 028A2.03 (3.4 / 4.0)	M, E, L, S	5 Containment
g. Synchronize Main Generator to the Grid. Field amps not indicated on one phase requires Main Turbine trip. (RO) K/A: 062A4.07 (3.1 / 3.1)	D, A, S	6 Electrical
h. Respond to High Containment Radiation. (RO / SRO-I) K/A: 072A3.01 (2.9 / 3.1)	D, E, L, S	7 Instrumentation

	CR/Sim	In-Plant	Total
RO	8	3	11
SRO-instant	7	3	10
SRO-upgrade	3	2	5

In-Plant Systems@ (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. Locally Manually Trip Reactor during ATWT. The trip breakers won't open requiring opening of the MG Set Output Breakers. (RO / SRO-I / SRO-U) K/A: 029EA1.12 (4.1 / 4.0)	M, A, E	1 Reactivity Control
j. Minimize Environmental and Secondary System Contamination Following a SGTR. (RO / SRO-I) K/A: 062A4.07 (3.1 / 3.1)	D, E, L	4S (Secondary) Heat Removal
k. Remove 120V AC 1E Inverter from service during Loss of All AC. This JPM will also require candidate to open the battery breaker due to < 105 V DC on 1E bus. (RO / SRO-I / SRO-U) K/A: 062A2.08 (2.7 / 3.0)	N, R, E, L	6 Electrical

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

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

- 6 alt path
- 5 direct from bank
- 9 Emerg
- 8 Low Power/SD
- 4 New
- Ø from Previous 2 exams
- 1 RCA

Facility: Vogtle	Date of Examination: July / August 2007
Exam Level (circle one): RO / SRO-I / SRO-U (see each JPM)	Operating Test No.: 2007-301

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. Perform Control Rod Operability Test. Two Rods will drop during exercise requiring a reactor trip from QMCB. (RO / SRO-I) K/A: 001A2.11 (4.4 / 4.7)	N, A, S	1
b. Transfer ECCS Pumps to Hot Leg Recirculation. Multiple Train "A" Components Fail to Align (RO / SRO-I / SRO-U) K/A: 006A4.05 (3.9 / 3.8)	D, A, E, L, S	2
c. Isolate SI Accumulators during Post LOCA Cool down, Depress. Two valves won't have power and will require vent of accumulator. (RO / SRO-I / SRO-U) K/A: 062A4.07 (3.1 / 3.1)	N, A, E, L, S	3
d. Identify and Isolate SG during SGTR. MSIV and TDAFW steam supply will not shut requiring RNO actions. (RO / SRO-I) K/A: 035A4.06 (4.5 / 4.6)	D, A, E, L, S	4P
e. Swap AFW Pump Suctions to the Alternate Source. CST level will require suction and mini flow swap to the alternate CST source. (RO / SRO-I) K/A: 061A1.04 (3.9 / 3.9)	N, E, L, S	4S
f. Post LOCA Containment Hydrogen Purge Operation. High CNMT Hydrogen Concentration will require Purge operations. (RO / SRO-I / SRO-U) K/A: 028A2.03 (3.4 / 4.0)	M, E, L, S	5
g. Synchronize Main Generator to the Grid. Field amps not indicated on one phase requires Main Turbine trip. (RO / SRO-I) K/A: 062A4.07 (3.1 / 3.1)	D, A, S	6
h. Respond to High Containment Radiation. (RO / SRO-I) K/A: 072A3.01 (2.9 / 3.1)	D, E, L, S	7

In-Plant Systems@ (3 for RO; 3 for SRO-I; 3 or 2 for SRO-U)		
i. Locally Manually Trip Reactor during ATWT. The trip breakers won't open requiring opening of the MG Set Output Breakers. (RO / SRO-I / SRO-U) K/A: 029EA1.12 (4.1 / 4.0)	M, A, E	1
j. Minimize Environmental and Secondary System Contamination Following a SGTR. (RO / SRO-I) K/A: 062A4.07 (3.1 / 3.1)	D, E, L	4S
k. Remove 120V AC 1E Inverter from service during Loss of All AC. This JPM will also require candidate to open the battery breaker due to < 105 V DC on 1E bus. (RO / SRO-I / SRO-U) K/A: 062A2.08 (2.7 / 3.0)	N, R, E, L	6

@ All control room (and in-plant) systems must be different and 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
(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	

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-13130-003

PERFORM POST-LOCA CONTAINMENT HYDROGEN PURGE
THIS IS A MODIFIED JPM FOR THE HL-14 NRC EXAM

Revision 0

June 12, 2007

Written By: Thad N. Thompson Date: 6/12/2007

Approved By: R. Lee Mansfield Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	A LOCA has occurred on Unit 1. Containment Hydrogen concentration cannot be reduced below 4% by any other method.
Assigned Task:	The USS has directed you to perform Post-LOCA Containment Hydrogen Purge Operations to reduce Containmnet Hydrogen concentration per SOP-13130-1, "Post Accident Hydrogen Control" section 4.4.3 for "Post LOCA Containment Hydrogen Purge System Operation".

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Perform Post-LOCA Hydrogen Purge System Operations

REVISION: 0 June 12, 2007

COMPLETION TIME: 15 minutes

Application: RO/SRO
K/A Number: 028A2.03 RO: 3.4 SRO: 4.0

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on 13130-1. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS: 1. 13130, Post-Accident Hydrogen Control

SIMULATOR SETUP: 1. Reset to IC 136, HL-14 NRC Exam pre-snapped

Setup Time: 20 minutes

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: A LOCA has occurred on Unit 1. Containment Hydrogen concentration cannot be reduced below 4% by any other method.

ASSIGNED TASK: The USS has directed you to perform "Post-LOCA Containment Hydrogen Purge Operations to reduce Containment Hydrogen concentration per SOP-13130-1, "Post Accident Hydrogen Control" section 4.4.3 for "Post LOCA Containment Hydrogen Purge System Operation".

JPM STEPS

START TIME: _____

STEP 1
SAT ☐ UNSAT ☐

Appropriate procedure selected

☐ • 13130, Section 4.4.3 selected **(#)**

CUE:
(#) "Steps 4.4.3.1 through 4.4.3.7 have already been performed".

STEP 2
CRITICAL (♦)
SAT ☐ UNSAT ☐

What is the position of 1-VIS-26 24A1 & B

Aligns local valves and Containment IRC valves for Post-LOCA purge release.

☐ ♦ Verifies 1-HV-2624A and 1-HV-2624B are closed until personnel have comple... operations
☐ ♦ Requests unlock and open of 1-1508-U4-012 POST LOCA PURGE CTB ISO
☐ • Verifies ZLB for 1-1508-U4-012 red light illuminated.
☐ • Verifies conditions of Gaseous Waste Permit are met **(# 2)**
☐ ♦ Resets CVI using the CVI RAD handswitches on QMCB "C" panel. (**NOTE** below)
☐ ♦ Opens **either** 1-HV-2624A **or** 1-HV-2624B CTB POST LOCA PURGE EXH IRC ISO VLV

Will he Take Be required to Act...

CUE:
(# 1) The SS has dispatched someone to locally open 1-1508-U4-012.

(# 2) The SS has verified the Gaseous Waste Permit conditions are met.

NOTE: The CVI reset handswitches on the QMCB "A" panel will NOT reset CVI from rad to allow opening 1-HV-2624A or 1-HV-2624B.

STEP 3
CRITICAL (♦)
SAT ☐ UNSAT ☐

Initiates Post-LOCA Containment Hydrogen Purge

☐ ♦ Places 1-HS-2693 to the MOD position (CNMT POST LOCA PURGE EXH DUCT CONTROL VLV)
☐ • Verifies Post-LOCA Purge flow rises to between 450 and 500 scfm using 1-UI-2693B.
☐ • Monitors 1-UI-2693B, plant vent flow in compliance with Gaseous Release Permit. **(#)**

CUE:
(#) The SS will have an operator monitor plant vent stack flow.

STEP 4
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Resets CIA and aligns / establishes Service Air to Containment.

☐ ♦ Resets CIA

☐ • Opens SERVICE AIR CNMT HDR ISOL 1-HV-9385 by performing the following sequence.

☐ ♦ Place HS-9385A on the QPCP to the OPEN position.
☐ ♦ HOLDS 1-HS-9385B on the QPCP until 1-HV-9385 is fully open. (**NOTE** below)

☐ ♦ Opens **either** 1-HV-9380A **OR** 1-HV-9380B on QPCP (SERVICE AIR CNMT POST LOCA PURGE)

☐ • Monitors Air Header pressures on the QMCB using 1-PI-9377 and 1-PI-9361. **(#)**

NOTE: If the correct sequence is not performed, 1-HV-9385 will NOT open.

CUE: **(#)** The SS will have another operator monitor air pressure and complete the prodedure.

STEP 5
SAT ☐ UNSAT ☐

Report to USS

☐ • Post-LOCA Containment Hydrogen Purge is in Service.

STOP TIME: _____

Field Notes

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-13610-001

TRANSFER AFW PUMP SUCTION TO CONDENSATE STORAGE TANK 2
THIS IS A NEW JPM WRITTEN FOR HL-14 NRC EXAM

Revision 0

June 12, 2007

Written By : Thad N. Thompson Date: 6/12/2007

Approved By : R. Lee Mansfied Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	A reactor trip has occurred due to a feed water transient. CST # 1 has developed a leak and level is currently < 15% requiring AFW pump suction swap per the EOP Fold Out Page to prevent a Loss of Secondary Heat Sink.
Assigned Task:	The SS has directed you to Perform SOP-13610-1 "Auxiliary Feedwater System" and Transfer AFW pump suction to CST # 2.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Transfer AFW Pump Suction To Condensate Storage Tank 2

REVISION: 0 June 12, 2007

COMPLETION TIME: 10 minutes

Application: RO/SRO
K/A Number: 061A1.04 RO: 3.9 SRO: 3.9

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on 13610-1. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS: 1. 13610-1, Auxiliary Feedwater System

SIMULATOR SETUP: 1. IC # 135 for HL-14 NRC Exam pre-snapped.

Setup time 5 minutes

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: A reactor trip has occurred due to a feed water transient. CST # 1 has developed a leak and level is currently < 15% requiring AFW pump suction swap per the EOP Fold Out Page to prevent a Loss of Secondary Heat Sink.

ASSIGNED TASK: The SS has directed you to "Perform SOP-13610-1, "Auxiliary Feedwater System" and Transfer AFW Pump Suction to CST # 2.

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Selects section for swapping CST suction and performs transfer of MDAFW "A" suctions.

☐ • Selects section 4.4.1, "Transferring AFW pump Suction To And From Condensate Storage Tank 2".
☐ ♦ Opens 1-HV-5119, CST-2 SUPPLY TO MDAFW PMP-A using 1-HS-5119A.
☐ • Requests IV for opening of 1-HV-5119. **(# 1)**
☐ ♦ Requests closure of MDAFW 3 SUCT FROM CST 1, 1-HV-5095. **(# 2)**
☐ • Requests IV for closure of 1-HV-5095. **(# 1)**
☐ ♦ Requests unlock, open, and relock AFW MDAFW PUMP A RECIRC TO CST-2, 1-1302-U4-185. **(# 2)**
☐ • Requests IV for opening of 1-1302-U4-185. **(# 1)**
☐ ♦ Requests unlock, close, and relock AFW MDAFW PUMP A RECIRC TO CST-2, 1-1302-U4-180. **(# 2)**
☐ • Requests IV for opening of 1-1302-U4-180. **(# 1)**

NOTE: Operation of 1-HV-5095, 1-1302-U4-185, 1-1302-U4-180 are all LOCAL actions at the CST.

CUES:
(# 1).. The SS will have an operator IV the step.
(# 2).. The SS will have an operator locally operate the valve.

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Performs transfer of MDAFW "B" suctions.

☐ ♦ Opens 1-HV-5118, CST-2 SUPPLY TO MDAFW PMP-B using 1-HS-5118A.
☐ • Requests IV for opening of 1-HV-5118. **(# 1)**
☐ ♦ Requests closure of MDAFW 2 SUCT FROM CST 1, 1-HV-5094. **(# 2)**
☐ • Requests IV for closure of 1-HV-5094. **(# 1)**
☐ ♦ Requests unlock, open, and relock AFW MDAFW PUMP B RECIRC TO CST-2, 1-1302-U4-184. **(# 2)**
☐ • Requests IV for opening of 1-1302-U4-184. **(# 1)**
☐ ♦ Requests unlock, close, and relock AFW MDAFW PUMP B RECIRC TO CST-2, 1-1302-U4-181. **(# 2)**
☐ • Requests IV for opening of 1-1302-U4-181. **(# 1)**

NOTE: Operation of 1-HV-5094, 1-1302-U4-184, 1-1302-U4-181 are all LOCAL actions at the CST.

CUES:
(# 1).. The SS will have an operator IV the step.
(# 2).. The SS will have an operator locally operate the valve.

STEP 3
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Performs transfer of TDAFW pump suctions.

☐ ♦Opens 1-HV-5113, CST-2 SUPPLY TO TDAFW using 1-HS-5113A.
☐ • Requests IV for opening of 1-HV-5113. **(# 1)**
☐ ♦Requests closure of TDAFW PMP SUCT FROM CST 1, 1-HV-5093. **(# 2)**
☐ • Requests IV for closure of 1-HV-5093. **(# 1)**
☐ ♦Requests unlock, open, and relock AFW TDAFW PUMP RECIRC TO CST-2, 1-1302-U4-183. **(# 2)**
☐ • Requests IV for opening of 1-1302-U4-183. **(# 1)**
☐ ♦Requests unlock, close, and relock AFW TDAFW PUMP RECIRC TO CST-2, 1-1302-U4-182. **(# 2)**
☐ • Requests IV for opening of 1-1302-U4-182. **(# 1)**

NOTE: Operation of 1-HV-5093, 1-1302-U4-183, 1-1302-U4-182 are all LOCAL actions at the CST.

CUES:
(# 1).. The SS will have an operator IV the step.
(# 2).. The SS will have an operator locally operate the valve.

STEP 4
Non-CRITICAL (•)
SAT ☐ **UNSAT** ☐

Informs SS.

☐ • Informs SS Transfer of AFW pumps suctions to CST 2 is complete.

STOP TIME: _____

Field Notes

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-13830-002

SYNCHRONIZE THE MAIN GENERATOR TO THE GRID (FAULTED PATH)

Revision 0

June 12, 2007

Written By	: Thad N. Thompson	Date:	6/12/2007
Approved By	: R. Lee Mansfield	Date:	June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	A plant startup is in progress. The unit has been stabilized at approximately 25% power. The System Operator has given approval to synchronize to the grid. Main Generator field excitation has already been established by the previous shift.
Assigned Task:	The USS has directed you to "Synchronize the Main Generator to the power grid, and assume 60 to 80 MWe using 13830 section 4.1.3".

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Synchronize Main Generator to the Grid

REVISION: 0 June 12, 2007

COMPLETION TIME: 25 minutes

Application: RO/SRO
K/A Number: 062A4.07 RO: 3.1 SRO: 3.1

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 13830-1. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:

1. 13830, Main Generator Operation
2. Synch Switches

SIMULATOR SETUP:

1. Reset to IC # 137 pre-snapped for HL-14 NRC Exam
2. Freeze simulator

Setup time: 5 minutes

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: A plant startup is in progress. The unit has been stabilized at approximately 25% power. The System Operator has given approval to synchronize to the grid.

ASSIGNED TASK: The USS has directed you to "Establish field excitation, synchronize to the power grid and assume 60 to 80 MWe using 13830 section 4.1.3".

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Synchronize the Main Generator to the Grid per section 4.1.3

- ☐ • Selects a PCB for synchronizing. ***(1), (2)***
- ☐ ♦ Place synch switch SS-BUS1 in position R
- ☐ ♦ Place synch scope switch SS-U1 in position I
- ☐ • Verify rotation of Synch scope 1SI-40125
- ☐ • Place Volt/Freq switch VS-US1 in BUS1
- ☐ • 230 KV system voltage observed on EI-40124
- ☐ • Place Volt/Freq switch VS-US1 in UNIT 1
- ☐ • Generator voltage observed on EI-40124
- ☐ ♦ AC Raise/Lower switch adjusted to establish Unit voltage 0 - 1 KV > 230 KV system voltage

CUE:

(1) SS reports "The Generator Field Ground Detector Relay testing has been completed."
(2) If asked, "Close PCB 161710".

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Adjust generator voltage
Note; When simulated, the cue given will require the operator to raise turbine speed to achieve the desired rotation.

- ☐ • 230 KV system frequency observed on SI-40125
- ☐ ♦ Turbine control Increase Load / Decrease Load pushbuttons adjusted to attain slow clockwise rotation on SI-40125

CUE:

© "SI-40125 is rotating slowly counter clock wise".

STEP 3
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Synchronize main generator to the grid

☐ ♦ Place Synch selector TS-US1 in 161710 (161810) ***(1)***
☐ • Verify Synch scope rotating slowly clockwise (≈10 sec rotation)
☐ • Verify Red Auto Synch light lit at 12 o'clock
☐ ♦ Auto synch pushbutton PB-161710 (PB-161810) depressed
☐ • Verify current indicated on each phase (1II-40127, 40128, & 40129)

CUE:
(1) USS states "Use automatic Synchronization".

STEP 4
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Verifies PCB not properly closed and Trips the Main Turbine.

☐ ♦ Observes Phase B (1II-4028) not reading amps on meter or IPC Point (J2833)
☐ ♦ Depresses the TRIP pushbutton on the Main Turbine Control Panel

STEP 4
SAT ☐ UNSAT ☐

Report to USS

☐ • Main Turbine tripped due to improper PCB closure. Initiate 18011-C, Turbine Trip Below P-9.

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-14410-001

PERFORM CONTROL ROD OPERABILITY TEST
(FAULTED PATH)
THIS IS A NEW JPM WRITTEN FOR HL-14 NRC EXAM

Revision 0

June 12, 2007

Written By : Thad N. Thompson Date: 6/12/2007

Approved By : R. Lee Mansfied Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	The Unit is at 100% power . OSP-14410-1, "Control Rod Operability Test" is to be performed. An SO is stationed at the P to A Converter to obtain Control Bank position readings. All prerequisites and intial conditions have been verified.
Assigned Task:	The SS has directed you to Perform OSP-14410-1 "Control Rod Operability Test" starting with CBA.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Perform Control Rod Operability Test

REVISION: 0 June 12, 2007

COMPLETION TIME: 10 minutes

Application: RO/SRO
K/A Number: 001A2.10 RO: 4.4 SRO: 4.7

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on 14410-1. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS: 1. 14410-1, Control Rod Operability Test

SIMULATOR SETUP: 1. IC # 131 for HL-14 NRC Exam pre-snapped.

Setup time 5 minutes

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: The Unit is at 100% power. OSP-14410-1, "Control Rod Operability Test" is to be performed. An SO is stationed at the P to A Converter to obtain Control Bank position readings. All prerequisites and initial conditions have been verified.

ASSIGNED TASK: The SS has directed you to "Perform OSP-14410-1, "Control Rod Operability Test" starting with CBA.

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Records CBA Initial Group Counter, Individual rod positions, and the P/A Converter.

☐ • Records the INITIAL CBA Group Step Counter and individual DRPI readings on Data Sheet 1.
☐ • Records the INITIAL CBA P / A Converter reading. **(#)**
☐ ♦ Places ROD BANK SELECTOR SW 1-HS-40041 to CBA.

CUES:
(#).. The SO at the P/A Converter reports "CBA is at 228 steps".

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Inserts CBA at least 10 steps and verifies rod motion on DRPI, records data.

☐ ♦ Using ROD MOTION SWITCH 1-HS-40040 inserts CBA at least 10 steps.
☐ • Checks RODS IN light is lit and a change in position for CBA occurs on DRPI.
☐ • Records the TEST Group Step Counter and DRPI reading for CBA on Data Sheet 1. **(#)**

CUES:
(#).. The SO at the P/A Converter reports "CBA is at 218 steps". Unless inserted to another position.

STEP 3
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Initiates CBA withdrawal to original position.

☐ ♦ Using ROD MOTION SWITCH 1-HS-40040 initiates withdrawal of CBA.
☐ • Checks RODS OUT light is lit and a change in position for CBA occurs on DRPI.

STEP 4
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Initiates manual reactor trip when 2 CBA rods drop.

☐ • Observes 2 CBA rods drop.
☐ • Attempts MANUAL reactor trip using "C" panel Reactor Trip handswitch.
☐ ♦ MANUALLY trips the reactor using "A" panel Reactor Trip handswitch.

NOTE: The candidate may open AOP-18003 and initiate steps of section A for Dropped Control Rods in Mode 1 prior to initiating the reactor trip. This would be satisfactory performance. IF, the candidate continues past step A2 of this procedure without performing a reactor trip, performance would be UNSAT.

STEP 5
Non-CRITICAL (•)
SAT ☐ **UNSAT** ☐

Informs SS.

☐ • Informs SS of manual reactor trip due to 2 dropped rods in CBA.

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-19012-001

ISOLATE SI ACCUMULATORS DURING POST LOCA COOLDOWN
(FAULTED PATH)
THIS IS A NEW JPM WRITTEN FOR HL-14 NRC EXAM

Revision 0

June 12, 2007

Written By : Thad N. Thompson Date: 6/12/2007

Approved By : R. Lee Mansfied Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	Unit 1 was at 100% power when a LOCA occurred. After transition to 19012-C, Post LOCA Cooldown and Depressurization, a 1E Emergency bus was de-energized. The crew is performing the steps to isolate SI Accumulators per 19012-C. An SO has closed the ACCUM ISO VALVE MOV breakers.
Assigned Task:	The SS has directed you to "Perform step # 38 of 19012-C, and Isolate the SI Accumulators".

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Isolate SI Accumulators During Post LOCA Cooldown

REVISION: 0 June 12, 2007

COMPLETION TIME: 10 minutes

Application: RO/SRO
K/A Number: 062A4.07 RO: 3.1 SRO: 3.1

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on 19012-C. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS: 1. 19012-C, Post LOCA Cooldown and Depressurization.

SIMULATOR SETUP: 1. IC # 133 for HL-14 NRC Exam pre-snapped.

Setup time 20 minutes

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: Unit 1 was at 100% power when a LOCA occurred. After transition to 19012-C, Post LOCA Cooldown and Depressurization, a 1E Emergency Bus was de-energized. The crew is performing the steps to Isolate SI Accumulators per 19012-C. An SO has closed the ACCUM ISO VALVE MOV breakers.

ASSIGNED TASK: The SS has directed you to "Perform step # 38 of 19012-C, and Isolate the SI Accumulators."

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Resets SI and closes Accumulator Isolation valves that have power.

☐ • Checks if SI is reset.
☐ ♦ Place HV-8808A in CLOSED position
☐ ♦ Place HV-8808C in CLOSED position

CUES:
©.. After HS placed in Close position, "The green light is lit and the red light is not lit."

STEP 2
SAT ☐ UNSAT ☐

Vents any non-isolable accumulators.

☐ • Verifies N2 supply valve HV-8880 is closed. **(1)**
☐ ♦ Places either HV-8875B or HV-8875F in the OPEN position **(2)**
☐ ♦ Places either HV-8875D or HV-8875H in the OPEN position **(2)**
☐ ♦ Places either HV-0943A or HV-0943B the in OPEN position **(3)**

CUES:
(1) "The green light is lit and the red light is not lit" after each valve is identified.
(2) "The red lights is lit and the green light is not lit" after each valve is identified.
(3) "The red UP arrow is lit, the green down arrow is extinguished" after the valve is identified.

STEP 3
Non-CRITICAL (•)
SAT ☐ **UNSAT** ☐

Isolate Aux Building Ventilation System at QHVC

☐ • Requests SO to OPEN the ACCUM ISO VLV MOV breakers.

CUES:
©... "The SS will dispatch an SO to open the Accumulator Isolation valve breakers."

STEP 4
SAT ☐ UNSAT ☐

Report to SS

☐ • 19012-C, step # 38 for Isolation of SI Accumulators has been completed.

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-19014-003

TRANSFER ECCS PUMPS TO HOT LEG RECIRCULATION WITH FAILURE OF TRAIN A RHR & SI ALIGNMENTS (FAULTED JPM)

Revision 1

June 12, 2007

Written By : Thad N. Thompson Date: 6/12/07

Approved By: R. Lee Mansfield Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	A large break LOCA occurred ≈ 7.5 hours ago. The crew is in 19010-C.
Assigned Task:	The SS has directed you to "Transfer the ECCS pumps to hot leg recirculation using 19014."

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE:	Transfer ECCS Pumps to Hot Leg Recirculation with Failure of Train A RHR & SI Alignments
REVISION:	0 June 12, 2007
COMPLETION TIME:	8 minutes
Application:	RO/SRO
K/A Number:	064A4.05 RO: 3.9 SRO: 3.8

Evaluation Method	[ ] Performed	[ ] Simulated		
Evaluation Location	[ ] Simulator	[ ] Control Room	[ ] Unit 1	[ ] Unit 2
Performance Time:	_____minutes			

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 19014-C. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:

1. 19014, Transfer to Hot Leg Recirculation

SIMULATOR SETUP:

1. Reset to IC14 (IC # 132 for HL-14 NRC Exam pre-snapped)
2. Place all Lockout Switches in ON
3. Insert malfunction RC03C at 100% severity (DBA LOCA)
4. Trip all RCPs
5. Allow CNMT Emergency Sump to increase to ≈ 20"
6. Use R.F. TK02 to set RWST level @ 39%
7. Perform 19013-C steps 1 through 10
8. Use malfunction CV-17/18 for LOCAL control of 112D&E
9. Override HS8716A to CLOSE
10. Override HS8802A to CLOSE
10. Ack/Reset alarms
11. Freeze simulator

Setup time: 20 minutes

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: A large break LOCA occurred ≈ 7.5 hours ago. The crew is in 19010.

ASSIGNED TASK: The SS has directed you to "Transfer the ECCS pumps to hot leg recirculation using 19014."

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Align RHR for hot leg recirculation

Note: The operators would have positioned all lockout switches to ON by reaching step 19 of 19010.

☐ ♦ Cold leg injections HV-8809A and HV-8809B CLOSED
☐ ♦ RHR Train B to Hotleg Crossover Isolation, HV-8716B OPEN
☐ ♦ Identify RHR Train A to Hotleg Crossover Isolation, HV-8716A will NOT OPEN
☐ ♦ Re-open HV-8809A per RNO 1B direction
☐ ♦ Hot leg injection HV-8840 OPEN

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Stop SIP A

☐ ♦ SIP A Stopped

STEP 3
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Align Train A SI for hot leg recirculation

☐ ♦ Crossconnect HV-8821A CLOSED
☐ ♦ Identify that Hot leg injection HV-8802A will NOT OPEN
☐ • Ensure Cold Leg Injection HV-8835 OPEN
☐ ♦ Crossconnect HV-8821A OPEN

STEP 4
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Start SIP A

☐ ♦ SIP A Running
☐ • Train A SI flow verified > 100 gpm

CUES:
© Indicate Train A SI flow ≈ 400 gpm."

STEP 5
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Stop SIP B

☐ ♦ SIP B Stopped

STEP 6
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Align Train B SI for hot leg recirculation

☐ ♦ Crossconnect HV-8821B CLOSED
☐ • Hot Leg Injection HV-8802B OPEN

STEP 7
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Start SIP B

☐ ♦ SIP B Running
☐ • Train B SI flow verified > 100 gpm
☐ ♦ Determines that both SI trains not aligned to HL Recirc and leaves HV-8835 OPEN

CUES:
© Indicate Train B SI flow ≈ 400 gpm.

STEP 8
SAT ☐ UNSAT ☐

Report to SS

☐ • Train B ECCS aligned for Hot Leg Recirc
☐ • Train A SIS must remain aligned for Cold Leg Recirc

STOP TIME: _____

Field Notes:

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-19030-005

ISOLATE A RUPTURED STEAM GENERATOR WITH FAILURE OF TDAFW STEAM AND MSIVS TO CLOSE (FAULTED JPM)

Revision 1

June 12, 2007

Written By : Thad N. Thompson Date: 6/12/07

Approved By : R. Lee Mansfield Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

THIS IS A TIME CRITICAL JPM

Initial Conditions:	A turbine trip/reactor trip occurred from 100% power. While the crew was attempting to stabilize the plant, a low PRZR pressure SI occurred. The crew was transitioned from 19000, E-0 to 19030.
Assigned Task:	The SS has directed you to "Isolate the ruptured SG using 19030."

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Isolate a Ruptured Steam Generator With Failure of TDAFW Steam and MSIVs to Close

REVISION: 0 June 12, 2007

COMPLETION TIME: **12 minutes** **TIME CRITICAL** ⏲

The time limit is based on FSAR Chapter 15, Table 15.6.3-1

Application:	RO/SRO				
Task Number:	37011				
K/A Number:	038EA1.32	RO	4.6	SRO	4.7
10CFR55.45 Ref.:	9				

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on 19030-C. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:

1. 19030-C, Steam Generator Tube Rupture

SIMULATOR SETUP:

1. Reset to IC14 (IC 134 for HL-14 NRC Exam, pre-snapped)
2. INSERT OVERRIDE ON 1HV-3016A TO OPEN
3. INSERT OVERRIDE ON 1HV-3016B TO OPEN
4. INSERT OVERRIDE ON 1HV-3019 TO OPEN
5. Insert malfunction SG01B at 50% severity
6. Initiate manual Rx trip and SI
7. Throttle AFW flow to 200 gpm an **ALL** SGs
8. Verify ruptured SG level > 10%
9. Ack/Reset alarms
10. Freeze simulator

Setup time: 10 minutes

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

◷ ***This is a TIME CRITICAL JPM*** ◷

INITIAL CONDITIONS: A turbine trip/reactor trip occurred from 75% power. While the crew was attempting to stabilize the plant, a low PRZR pressure SI occurred. The crew was transitioned from 19000, E-0 to 19030.

ASSIGNED TASK: The SS has directed you to "Isolate the ruptured SG using 19030."

JPM STEPS

STEP 1
SAT ☐ UNSAT ☐

Determine RCP operational status

Note: Performance of this step is optional based on the Initial Conditions given to the operator.

☐ • Verify at least one CCP/SIP running
☐ • RCS pressure verified > 1375 psig
☐ • Determine RCPs to remain running

STEP 2
CRITICAL (♦)
SAT ☐ UNSAT ☐

Identify ruptured steam generator

☐ ♦ SG # 2 identified as ruptured based on uncontrolled level rise

CUES:
© Provide indication SG # 2 NR level is ↑ rapidly.

START TIME: _____ **TIME CRITICAL** ◷

STEP 3
CRITICAL (♦)
SAT ☐ UNSAT ☐

Adjust ARV setpoint

Note: The ARV should be allowed to control pressure automatically. Placing the controller in Manual and closing the ARV is considered UNSAT.

☐ ♦ ARV controller PIC-3010 in AUTO (see note above)
☐ ♦ Adjust PIC-3010 potentiometer at 7.73 (≈ 1160 psig)
☐ • Check ARV PV-3010 closed

STEP 4
CRITICAL (♦)
SAT ☐ UNSAT ☐

Attempt to Shut TDAFW steam supply, Shut T & T valve per RNO

☐ • Checks at least one MDAFW pump running and capable of feeding SG(s) needed for cooldown.
☐ ♦ TDAFW steam supply HV-3019A identified will **NOT** close
☐ ♦ Places T & T valve HS-15111 to the **CLOSE** position.

STEP 5
SAT ☐ UNSAT ☐

Isolate SG blowdown
Note: Positioning the handswitch to CLOSE should be performed for satisfactory completion.

☐ • Place SGBD isolations HV-7603A, B, C, D in close position

STEP 6
CRITICAL (♦)
SAT ☐ UNSAT ☐

Attempt to shut MSL isolation and bypass valves

☐ ♦ MSIVs HV-3016A and HV-3016B identified will **NOT** shut.
☐ • MSBVs HV-13007A and HV-13007B closed

STEP 6
CRITICAL (♦)
SAT ☐ UNSAT ☐

Performs Step 3 RNO when MSIV for SG # 2 does not shut

☐ ♦ Shuts all remaining MSIVs (HV-3006A & B, 3026A & B, 3036A & B)
☐ ♦ Shuts all remaining MSBVs (HV-13005A & B, 13006A & B, 13008A & B)
☐ ♦ Verifies shut all steam dump valves on ZLB-2 and closes dumps if not shut. ***(1)***
☐ • Verifies HV-6194A Aux and Main Steam Sparger valve
☐ ♦ Shuts SJAE valves by selecting HS-4084A (HV-4084B closed by ZLB) to OFF ***(2)***
☐ • Verifies shut MSR A & C Reheat Steam Source Stop Valves (HS-6030 verified in CLOSE)
☐ • Verifies shut MSR B & D Reheat Steam Source Stop Valves (HS-6015 verified in CLOSE)
☐ • Use intact ARV for steam dump (control of Tave)
☐ ♦ Goes to step # 11 of 19030-C, versus transition to 19131-C, SGTR with LOCA Subcooled Recovery

NOTE:

(1) If Steams Dumps are open (expected), the operator can close by either:
- Selecting OFF / RESET on handswitch, or
- Selecting Steam Pressue Mode and using the 1PIC-507 controller.

(2) Taking the SJAE HS-4084A (HV-4084B) to close will satisfy this step. The valves for this are long winded and the candidate does not have to wait for these to close to proceed as he has no further control over the valves from the QMCB.

CUES:

(#) If necessary, state "Another operator will verify the SJAE valves go fully shut".

JPM STEPS

STEP 8
CRITICAL (♦)
SAT ☐ UNSAT ☐

Isolates AFW flow to SG # 2

☐ • Check ruptured SG # 2 NR level > 10%
☐ ♦ MDAFW throttle valve HV-5132 closed *(1)*
☐ • TDAFW throttle valve HV-5125 closed
☐ • AFW flow to ruptured SG at 0 gpm

NOTE: *(1)* This is the stop time for time critical as there are no further valves required for isolation unless the student has missed performing a step or incorrectly performed a step.

STOP TIME: _____

STEP 9
SAT ☐ UNSAT ☐

Checks ruptured SG(s) isolated from intact SG(s).

☐ • Intact SG(s), to be used for RCS cooldown, ISOLATED.
☐ • Checks TDAFW pump steam supply from ruptured SG(s) – CLOSED.

STEP 10
SAT ☐ UNSAT ☐

Report to SS

☐ • Ruptured SG isolated

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-19253-001

RESPOND TO CONTAINMENT HIGH RADIATION

Revision 7

June 12, 2007

Written By : Thad N. Thompson Date: 6/12/2007

Approved By : R. Lee Mansfied Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	Unit 1 was at 100% power when a LOCA occurred. After transition to 19010-C, Containment Area Rad Monitors RE-002 and RE-003 indicated radiation levels in Containment had reached 750 mR/hr.
Assigned Task:	The SS has directed you to "Perform 19253-C, Response to High Containment Radiation Level."

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Respond to Containment High Radiation

REVISION: 7 June 12, 2007

COMPLETION TIME: 10 minutes

Application: RO/SRO
K/A Number: 072A301 RO: 2.9 SRO: 3.1

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on 19253-C. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:

1. 19253-C, Response to Containment High Radiation Level

SIMULATOR SETUP:

1. IC-14 (MOL 100%) (IC # 138 for HL-14 NRC Exam pre-snapped)
2. Insert malfunction ES19A and ES19B, failure of CVI actuation
3. Override handswitches:
   HS40004, HS40005 HS40006 HS40009,
   HS40010, & HS40011 to the "NORMAL" position
4. Insert RC04A with a Final Value of 100%
5. Manually trip reactor and actuate SI
6. Insert RM06 for Hi Rad in Containment
7. Place HS-2548 & 2549, Piping Pen Units in "START"
8. Ack/Reset alarms
9. Freeze simulator when RE-002/ 003 are > 750 mR/hr

Setup time 10 minutes

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: Unit 1 was at 100% power when a LOCA occurred. After transition to 19010-C, Containment Area Rad Monitors RE-002 and RE-003 indicated radiation levels in Containment had reached 750 mR/hr.

ASSIGNED TASK: The SS has directed you to "Perform 19253-C, Response to High Containment Radiation Level."

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Isolate Containment Air Radiation monitor at QPCP

☐ ♦ Place HV-12975 in CLOSED position
☐ ♦ Place HV-12976 in CLOSED position
☐ ♦ Place HV-12977 in CLOSED position
☐ ♦ Place HV-12978 in CLOSED position

CUES:
©.. After HS placed in Close position, "The green light is lit and the red light is not lit."

STEP 2
SAT ☐ UNSAT ☐

Verify Containment Purge isolated at QHVC

☐ • Verify HV-2626A and B are CLOSED
☐ • Verify HV-2627A and B are CLOSED
☐ • Verify HV-2628A and B are CLOSED
☐ • Verify HV-2629A and B are CLOSED
☐ • Verify HV-2624A and B are CLOSED

CUES:
©.. "The green light is lit and the red light is not lit" after each damper is identified.

STEP 3
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Isolate Aux Building Ventilation System at QHVC

☐ ♦ Place HV-12604 in CLOSED position
☐ ♦ Place HV-12605 in CLOSED position
☐ ♦ Place HV-12606 in CLOSED position
☐ ♦ Place HV-12607 in CLOSED position

CUES:
©... After HS placed in the closed position, "The green light is lit and the red light is not lit."

STEP 4
CRITICAL (♦)
SAT ☐ UNSAT ☐

Isolate Recycle Holdup Tank Ventilation at QHVC

☐ ♦ Place HV-12596 in CLOSED position
☐ ♦ Place HV-12597 in CLOSED position

CUES:
©... After HS placed in the closed position, "The green light is lit and the red light is not lit."

STEP 5
SAT ☐ UNSAT ☐

Checks Piping Penetration Filtration and Exhaust Units – Both running

☐ • Checks Piping Penetration Unit Train A running
☐ • Checks Piping Penetration Unit Train B running

CUES:
©... After HS placed in the START position, "The green light is not lit and the red light is lit."

STEP 6
Non-critical (•)
SAT ☐ UNSAT ☐

Containment Preaccess Filter Units placed in service
Note: 19253 directs operator to start filter units per SOP 13125. If requested, ***inform the operator to start all available Preaccess Filter Units.***

☐ ♦ Place HS-2620 in start position ***(1)***
☐ ♦ Place HS-2621 in start position
☐ • Informs SS of need for TSC to recommend actions due to Containment radiation.

CUES:
(1) SS reports "Per chemistry request, place both Preaccess Filters Units in service."
©.. After each HS placed in start, "The red light is lit and the green light is not lit."

STEP 7
SAT ☐ UNSAT ☐

Report to SS
Note: The step prior to completion is to notify the TSC of the radiation level in Containment. Inform the operator that ***"The USS has notified the TSC of Containment radiation levels."***

☐ • 19253-C, Response to Containment High Radiation Level has been completed.

STOP TIME: _____

Field Notes

Facility: Vogtle
Examination Level: SRO

Date of Examination: July / August 2007
Operating Test Number: 2007-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	M	Title: Perform QPTR Calculation Description: Perform Quadrant Power Tilt Ration (QPTR) Calculation. SRO will also determine the appropriate Tech Spec Actions to be taken. K/A: G2.1.7 (3.7 / 4.0)
Conduct of Operations	D	Title: Perform Loss of Safety Function Determination Description: A Train "A" Safety Related component will be tagged out when a 120V AC 1E Vital Bus is required to be put on the regulated transformer (alternate source). The candidate will have to perform a LOSF Evaluation and determine that a loss of safety functions exists. K/A: G2.1.33 (3.4 / 4.0)
Equipment Control	N	Title: Perform Emergency Boration Flow Path Verification Description: The plant will be in Mode 4 with CVCS components tagged out. Failure of another component will require performance of a boric acid flow path verification. This verification will be UNSATISFACTORY and require notification of the Unit SS. K/A: G2.2.12 (3.0 / 3.4)
Radiation Control	N	Title: Perform Stay Time Calculation to Limit Dose to the Public During a Declared Emergency Description: The SRO will have to calculate the stay time to prevent exceeding Emergency Exposure Limits to limit dose to the public during isolation of a LOCA Outside Containment and venting of an RHR pump. Candidate will have to fill out 91301-C Authorization form. K/A: 2.3.1 (2.6 / 3.0)
Emergency Plan	N	Title: Make Emergency Classification, PAR Recommendations, Fill Out ENN form. Description: K/A: The candidate will be given conditions requiring classification of a General Emergency (or upgrade Site to a General). A General Emergency declaration requires that a PAR recommendation be made. G2.4.38 (2.2 / 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
(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)
(S)imulator

Facility: Vogtle
Examination Level: RO

Date of Examination: July / August 2007
Operating Test Number: 2007-301

Administrative Topic (see Note)	Type Code*	Describe activity to be performed
Conduct of Operations	N	Title: Perform QPTR Calculation Description: Perform Quadrant Power Tilt Ration (QPTR) Calculation (this could be done in class setting or simulator, if in simulator could be set up where Human Performance Factors come into play. K/A: G2.1.7 (3.7 / 4.0)
Conduct of Operations	N/A	Not applicable for this examination.
Equipment Control	N	Title: Perform Emergency Boration Flow Path Verification Description: The plant will be in Mode 4 with CVCS components tagged out. Failure of another component will require performance of a boric acid flow path verification. This verification will be Unsatisfactory and require notification of the Unit SS. K/A: G2.2.12 (3.0 / 3.4)
Radiation Control	M	Title: Perform Stay Time Calculation to Protect Valuable Equipment During a Declared Emergency Description: An RHR pump will require local manual operations to vent the pump during an emergency. Candidate will be given transit dose rates to and from area along with dose rates in pump room. Candidate will calculate stay time without exceeding 10R dose limits. K/A: 2.3.1 (2.6 / 3.0)
Emergency Plan	M	Title: Make Emergency Notifications with Total Failure of the ENN. Description: An ENN Notification is required and the candidate will experience the inability to reach multiple agencies requiring notification. This will require the candidate to use the backup conference bridge since two or more agencies cannot be reached with the ENN. K/A: G2.4.43 (2.8 / 3.5)

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 & RO retakes)
(N)ew or (M)odified from bank (≥ 1)
(P)revious 2 exams (≤ 1; randomly selected)
(S)imulator

Identify As RO/N:

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

NO ATTACHMENTS PROVIDED TO ALL VALIDATION

RQ-JP-14405-002

BORIC INJECTION FLOW PATH VERIFICATION
THIS IS A MODIFIED JPM FOR THE HL-14 NRC EXAM
(RO VERSION)

Revision 0

June 13, 2007

Written By : Thad N. Thompson Date: June 13, 2007

Approved By : R. Lee Mansfied Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	The plant is at 100% power. During an inspection of HV-8801A MCC breaker, a dropped tool resulted in a short in the breaker bucket. The SS has declared HV-8801A to be INOPERABLE and entered LCO 3.5.2 for ECCS.- Operating. Also, the crew has just entered AOP-18007-C section A for Total Loss of Charging Flow due to an apparent failure of FV-0121 to the closed position. Maintenance investigation estimates 8 hours for repair.
Assigned Task:	Perform 14405-1, "Boron Injection Flow Path Verification" and determine if the Acceptance Criteria are met.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Boron Injection Flow Path Verification

REVISION: 0 June 13, 2007

COMPLETION TIME: 10 minutes

Application: **RO / SRO**
K/A Number: G2.2.12 RO 3.0 SRO 3.4

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 14405-1. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS: 1. Procedure 14405-1, Boron Injection Flow Path Verification

SIMULATOR SETUP: Simulator not required for JPM performance

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: The plant is at 100% power. During an inspection of HV-8801A MCC breaker, a dropped tool resulted in a short in the breaker bucket. The SS has declared HV-8801A to be INOPERABLE and entered LCO 3.5.2 for ECCS – Operating.

Also, the crew has just entered AOP-18007-C section A for Total Loss of Charging Flow due to an apparent failure of FV-0121 to the closed position. Maintenance investigation estimates 8 hours for repair.

ASSIGNED TASK: Perform 14405-1, "Boron Injection Flow Path Verification" and determine if the Acceptance Criteria are met.

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ UNSAT ☐

Perform Boron Injection Flow Path Verification per 14405-1.

☐ • Obtains SS Approval and fills in Date, Time and Mode.

☐ • Verifies steps 5.1.a 14225-1 "Operations Surveillance Logs" is active. **(# 1)**

☐ • Verifies steps 5.1.b 14705-1 "Boron Injection Flow Rate Verification" is active. **(# 1)**

☐ • Verifies steps 5.1.c 14811-1 "BA Transfer Pump & Discharge Check Valves Inservice active. **(# 1)**

☐ • Verifies steps 5.1.d 14808-1 "CCP & Check Valves IST & Response Test is active. **(# 1)**

☐ • Verifies steps 5.1.e 14000-1 "Operations Shift & Daily Surveillance Logs" is active. **(# 1)**

☐ ♦ Identifies 2 acceptable Boron Injection Flow Paths per Figure 1 are **NOT** available. (NOTE: 2)

☐ ♦ Determines Acceptance Criteria NOT met.

☐ • Notifies SS that BA Flow Path Verification Acceptance Criteria are NOT met.

CUES:

(1) The surveillance is active.

NOTES

(2) Two paths must NOT share any "active components" on figure 1. All the flow paths would go through HV-8801B (an active component). Therefore, there are NOT two Boric Acid Flow Paths Available.

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-91002-003

MAKE EMERGENCY NOTIFICATIONS WITH COMPLETE FAILURE OF THE ENN (Faulted JPM)

Revision 1

June 13, 2007

Written By : Thad N. Thompson Date: 4/11/2005

Approved By : R. Lee Mansfield Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

THIS IS A TIME CRITICAL JPM

Initial Conditions:	An emergency has been declared and the Shift Manager has assumed the duties of the Emergency Director.
Assigned Task:	The Emergency Director has directed you to "Perform the duties of the ENN Communicator" and perform a recall for an Alert Emergency and a roll call in accordance with Checklist 2 and standby to transmit a message.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE:	Make Emergency Notifications with Complete Failure of the ENN
REVISION:	1 June 13, 2007
COMPLETION TIME:	**15 minutes** **TIME CRITICAL** ⊕
Application:	RO / SRO
K/A Number:	G2.4.43 RO: 2.8 SRO: 3.5

Evaluation Method	[ ] Performed	[ ] Simulated
Evaluation Location	[ ] Simulator	[ ] Control Room
Performance Time:	_____minutes	

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 91002-C. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:

1. Procedure 91002-C, Emergency Notifications, Checklist 2 & 4
2. VEGP Emergency Response Telephone Directory

SIMULATOR SETUP: Simulator not required for JPM performance

Notes to Examiner:

(1) Checklist 2, Sheet 4, Emergency Notification, should be completed with the exception of Steps 4, 5, and 6 prior to the start of this JPM. Step 1.A, THIS IS A DRILL, should always be recorded.

(2) Step 2 of the Emergency Notification form must be completed within 15 minutes of the time documented in Step 10.A. Once line 2 of the Notification Form (checklist 2) has been read, the time requirement is considered to be met.The start time of this JPM should be the time recorded in Step 10.A.

(3) Ensure the ENN telephone jack in the rear of the ENN telephone has the "Simulator" cord installed.

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

This is a TIME CRITICAL JPM

INITIAL CONDITIONS: An emergency has been declared and the Shift Superintendent has assumed the duties of the Emergency Director.

ASSIGNED TASK: The Emergency Director has directed you to "Perform the duties of the ENN Communicator" and perform a recall for an Alert Emergency and a roll call in accordance with Checklist 4 and standby to transmit a message.

JPM STEPS

START TIME FOR TIME CRITICAL: _____ **TIME CRITICAL** ◷

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Locate PRIMARY Recall System Remote Activation Instructions

Note: The Emergency Preparedness Primary Recall System Remote Activation Instructions should be located in the middle drawer(Labeled ENN Communicator) of the file drawer on the Shift Supervisor Area Of The Simulator .

☐ ♦ Envelope Located

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Call Emergency Recall System

Note: The requirement for using 9 prior to dialing the number will depend on which phone the Examinee uses. If the Plant Vogtle PBX System Phones are used a 9 will be required. If a Bell South Outside Line is used, dialing 9 prior to the to the number is NOT required.

☐ ♦ Dial 554-4316

STEP 3
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Scenario Activation Password

☐ ♦ Enter {934 987 509} followed by the # sign

STEP 4
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Scenario ID

☐ ♦ Enter {917 566 662} followed by the(pound sign) # sign

STEP 5
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Start Scenario
Note: The (pound sign) # should only be pressed AFTER the completion of the message "the scenario is building".

☐ ♦ Press {3}
☐ ♦ Press (pound sign) # and hang up

STEP 6
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Verify Recall System Working Properly

☐ ♦ Extension 3652 called by the recall system

STEP 7
NON-CRITICAL (•)
SAT ☐ **UNSAT** ☐

Initiate roll call
*Note: The Emergency Response Telephone Directory, or the dial code card, should be consulted as needed for required ENN dial codes. The dial code, **, should be used initially to ring ALL required agencies.*

☐ • Burke County notified ***(# 1)***
☐ • GEMA notified ***(# 1)***
☐ • Aiken County notified ***(# 1)***
☐ • SRS notifed ***(# 1)***
☐ • Allendale County notified ***(# 1)***
☐ • State of South Carolina notified ***(# 1)***
☐ • Barnwell County ***(# 1)***

CUES:

(# 1) **DO NOT** respond when ENN communicator performs a roll call. If requested, provide cue that **NONE** of the emergency centers hailed has responded.

STEP 8
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Establish Back-Up ENN Conference Bridge.

☐ ♦ Identity to use **# 4369** dialed if using plant extension or (**1-706-826-4369**) if using an outside line.
☐ ♦ Identify to use **# 4369** entered when asked for a **CONFERENCE CODE** ***(1) (2)***

CUES:

(1) ***When the candidate dials 4369, the booth instructor can answer and talk with the candidate in the instructor booth. (Exam security NOT to use the real bridges)***

(2) When proper number identified, provide the cue that there are "Beeping Tones" on the phone at this time if there is no one to answer in the Simbooth.

STEP 9
CRITICAL (♦)
SAT ☐ ***UNSAT*** ☐

Initiate roll call

☐ ♦ Burke County notified ***(# 1)***
☐ ♦ GEMA notified ***(# 1)***
☐ ♦ Aiken County notified ***(# 1)***
☐ ♦ SRS notifed ***(# 1)***
☐ ♦ Allendale County notified ***(# 1)***
☐ ♦ State of South Carolina notified ***(# 1)***
☐ ♦ Barnwell County ***(# 1)***

CUES:

(# 1) **When requested, provide cue that each Emergency center hailed has responded.**

STEP 10
SAT ☐ UNSAT ☐

Transmit fascimile

Note: On the Fax machine in the Simulator, the pushbutton labelled "NOTIFY(Training)" should be identified as the button to simulate "NOTIFY", A cue to the examinee should be provided NOT to depress any pushbuttons for Exam Security.

☐ • Place message face down in transmit tray
☐ • NOTIFY(Training) pushbutton SIMULATED depressed **(# 1)**

CUES:

(# 1) When proper button is identified, provide the cue that "Notification via the Fax has been performed" (DO NOT let Examinee depress any of the buttons).

JPM STEPS

STEP 11
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Communicate notification via ENN

Note: Examiner should arbitrarily pick a number between 1 and 100 and verify that the authentication codeword is correctly identified by examinee.

☐ ♦ Lines 1 & 2 transmitted
☐ ♦ Line 2, Notification time & date completed ***(1)***
☐ • Site data and Control Room confirmation phone number transmitted

---

CUES:

(# 1) After completion of Emergency Notification form line 2, provide the following cue, "The State of South Carolina request that you authenticate number 27 (Mustang)."

STOP TIME FOR TIME CRITICAL: _____

STEP 12
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Message authentication

Note: The authentication codes are located in the Emergency Response Telephone Directory. The codeword provided should match the number given in the cue of JPM Step 3.

☐ ♦ Authentication codeword correctly provided.

STEP 13
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Transmit classification data

☐ ♦ Emergency Classification
☐ • Emergency description
☐ ♦ Protective Action Recommendations
☐ ♦ Emergency Release Data – Not occurring

STEP 14
CRITICAL (♦)
SAT ☐ UNSAT ☐

Transmit current plant radiological / plant conditions

- ☐ • Release significance
- ☐ • Event prognosis
- ☐ ♦ Current meteorological data
- ☐ ♦ Declaration Time and Date
- ☐ • Affected Unit(s)
- ☐ • Unit Status
- ☐ • Remarks
- ☐ • Approved by Date and Time
- ☐ • Notified by Date and Time

STEP 15
SAT ☐ UNSAT ☐

Notify ED

- ☐ • Initial Emergency Notification completed

Field Notes:

SOUTHERN COMPANY

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JPM is NOT COMPLETE-Simulator Missing parts of JPM

PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-91301-001

STAY TIME CALCULATION FOR EMERGENCY EXPOSURE TO PROTECT VALUABLE PLANT EQUIPMENT

Revision 1

June 13, 2007

Written By : Thad N. Thompson Date: June 13, 2007

Approved By : R. Lee Mansfield Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: During a Loss of Emergency Coolant Recirculation event, it has been discovered that cooling water was valved out to RHR pump A during emergency maintenance. The pump has been restarted and motor winding temperatures are slowing rising. Cold Leg Recirculation has been established with RHR pump A.

An Alert Emergency has been declared for this event.

You have been authorized by the Emergency Director to receive an Emergency Exposure to protect RHR pump A motor from damage by opening 1-1202-U4-096 and 1-1202-U4-097 NSCW cooling water inlets/outlets.

You are to be briefed by Health Physics on the anticipated dose for the areas to traverse to RHR pump room A and inside the pump room.

Your current TEDE dose for this quarter is 500 m/r.

Assigned Task: Calculate your maximum stay time so as not to exceed your Emergency Exposure Limit.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: STAY TIME CALCULATION FOR EMERGENCY EXPOSURE TO PROTECT VALUABLE PLANT EQUIMPENT

REVISION: 1 June 13, 2007

COMPLETION TIME: 15 minutes

Application: **RO / SRO**
K/A Number: G2.3.1 RO: 2.6 SRO: 3.0

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 91301-C. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:

1. Procedure 91301-C, Emergency Exposure Guidelines.
2. Briefing sheet for Transit Dose Rates and RD-48 Dose Rates
3. Calculator

SIMULATOR SETUP: Simulator not required for JPM performance

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: During a Loss of Emergency Coolant Recirculation event, it has been discovered that cooling water was valved out to RHR pump A motor during Emergency Maintenance. The pump has been restarted and motor winding winding temperatures are slowing rising. Cold Leg Recirculation has been established with RHR pump A.

An Alert Emergency has been declared for this event.

You have been authorized by the Emergency Director to receive an Emergency Exposure to protect RHR pump A motor from damage by opening 1-1202-U4-096 and 1-1202-U4-097, NSCW cooling water inlets/outlets.

You are to be briefed by Health Physics on the anticipated dose for the areas to traverse to RHR pump room A and inside the pump room.

Your current TEDE dose for this quarter is 500 m/r.

ASSIGNED TASK: Calculate your maximum stay time so as not to exceed your Emergency Exposure Limit.

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ UNSAT ☐

Determine Maximum Stay Time to open NSCW cooling water valves to RHR pump A motor.

☐ ♦ Maximum stay time in RHR pump room A determined to be 3.8 minutes (3 minutes 48 seconds) (Acceptance critera + or – 5%).

NOTE: **(1) (2) (3) (4)**

NOTE:

(1) **Transit time from stairwell to and from pump room = 1 minute @ 30R/Hr = 0.5 R transit dose.**

(2) **Dose in pump room = 150 R/Hr or 2.5 R/minute.**

(3) **10R Exposure Limit – 0.5 R transit = 9.5 R in pump room. 9.5 R / 2.5 R minute = 3.8 minutes.**

(4) **Students are provided with Level D aux. building map and survey map of RHR A pump room with dose projections on each and estimated transit time.**

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

LO-JP-14915-002

CALCULATE QUADRANT POWER TILT RATIO
THIS IS A MODIFIED JPM FOR THE HL-14 NRC EXAM
(RO VERSION)

Revision 3

June 13, 2007

Written By	: Thad N. Thompson	Date:	06/13/2007
Approved By	: R. Lee Mansfield	Date:	June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	The unit is at 100% power.
Assigned Task:	The USS has directed you to "Perform a QPTR Calculation using 14915, Special Conditions Surveillance Logs."

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Calculate Quadrant Power Tilt Ratio

REVISION: 3 June 13, 2007

COMPLETION TIME: 30 minutes

This JPM is to be used for HL-14 NRC Exam Only

Application: RO/SRO
K/A Number: G2.1.7 RO: 3.7 SRO: 4.0

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 14915-1 . Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to examinee during performance of this JPM. This JPM provides data for two different conclusions (QPTR> or< 1.02).

REQUIRED ITEMS:
1. 14915, Special Conditions Surveillance Logs
2. Unit 1 Plant Technical Data Book (Tab 5.0)

SIMULATOR SETUP:
1. Not applicable

Setup time: Not applicable

This JPM is based on the Current Unit 1 Cycle. The Unit 1 PTDB Normalization Factors should be used to calculate the QPTR.

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: The unit is at 100% power.

ASSIGNED TASK: The USS has directed you to "Perform a QPTR Calculation using 14915, Special Conditions Surveillance Logs".

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Record provided detector data on OSP-14915-1.

☐ ♦ Upper detector currents recorded on OSP-14915-1.
☐ ♦ Lower detector currents recorded on OSP-14915-1.

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Determine QPTR

*Note: If this JPM is being PERFORMED, ensure the **Unit 1 PTDB Normalization Factors** are used. The attachment should be provided to the examinee for performance of this step.*

☐ • Upper detector currents normalized (see note above)
☐ • Average upper detector current calculated
☐ • Lower detector currents normalized (see note above)
☐ • Average lower detector current calculated
☐ ♦ QPTR determined to be > 1.02 (1.03 Upper and 1.04 Lower)

STEP 3
SAT ☐ UNSAT ☐

Report to USS

☐ • Upper and lower QPTR is > 1.02

STOP TIME: _____

Field Notes

PROVIDE DATA ON THIS PAGE TO STUDENTS FOR CALCULATION

NI Channel	Detector	Current
N41	A	424 mA
N42	A	380 mA
N43	A	450 mA
N44	A	415 mA
N41	B	450 mA
N42	B	395 mA
N43	B	460 mA
N44	B	425 mA

NORMALIZATION FACTORS FROM UNIT 1 PTDB

N41A (Top)	**1.130**
N42A (Top)	**1.152**
N43A (Top)	**1.048**
N44A (Top)	**1.145**

NORMALIZATION FACTORS FROM UNIT 1 PTDB

N41B (Bottom)	**1.052**
N42B (Bottom)	**1.087**
N43B (Bottom)	**1.000**
N44B (Bottom)	**1.072**

Calculation of QPTR (do not provide to students)

NORMALIZATION FACTORS FROM UNIT 1 PTDB

N41A (Top)	1.130 X 424 = 479.12
N42A (Top)	1.152 X 380 = 437.76
N43A (Top)	1.048 X 450 = 471.6
N44A (Top)	1.145 X 415 = 475.175
	Average = 465.914

QPTR = 479.12 / 465.914 = 1.03

NORMALIZATION FACTORS FROM UNIT 1 PTDB

N41B (Bottom)	1.052 X 450 = 473.4
N42B (Bottom)	1.087 X 395 = 429.365
N43B (Bottom)	1.000 X 460 = 460
N44B (Bottom)	1.072 X 425 = 455.6
	Average = 454.591

QPTR = 473.4 / 454.591 = 1.04

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-14405-002

BORIC INJECTION FLOW PATH VERIFICATION
THIS IS A MODIFIED JPM FOR THE HL-14 NRC EXAM
(SRO VERSION)

Revision 0

June 13, 2007

Written By : Thad N. Thompson Date: June 13, 2007

Approved By : R. Lee Mansfied Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	The plant is at 100% power. During an inspection of HV-8801A MCC breaker, a dropped tool resulted in a short in the breaker bucket. The SS has declared HV-8801A to be INOPERABLE and entered LCO 3.5.2 for ECCS.- Operating. Also, the crew has just entered AOP-18007-C section A for Total Loss of Charging Flow due to an apparent failure of FV-0121 to the closed position. Maintenance investigation estimates 8 hours for repair. The SS has directed for you to perform the following and advise him of any additional applicable Tech Spec or TRM LCOs (if any) and Conditions that would apply.
Assigned Task:	Perform 14405-1, "Boron Injection Flow Path Verification"

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Boron Injection Flow Path Verification

REVISION: 0 June 13, 2007

COMPLETION TIME: 10 minutes

Application: **RO / SRO**
K/A Number: G2.2.12 RO 3.0 SRO 3.4

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 14405-1. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS: 1. Procedure 14405-1, Boron Injection Flow Path Verification

SIMULATOR SETUP: Simulator not required for JPM performance

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: The plant is at 100% power. During an inspection of HV-8801A MCC breaker, a dropped tool resulted in a short in the breaker bucket. The SS has declared HV-8801A to be INOPERABLE and entered LCO 3.5.2 for ECCS – Operating.

Also, the crew has just entered AOP-18007-C section A for Total Loss of Charging Flow due to an apparent failure of FV-0121 to the closed position. Maintenance investigation estimates 8 hours for repair.

The SS has directed for you to perform the following and advise him of any applicable Tech Spec or TRM LCOs (if any) and Conditions that would apply.

ASSIGNED TASK: Perform 14405-1, Boron Injection Flow Path Verification.

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ UNSAT ☐

Perform Boron Injection Flow Path Verification per 14405-1.

☐ • Obtains SS Approval and fills in Date, Time and Mode.

☐ • Verifies steps 5.1.a 14225-1 "Operations Surveillance Logs" is active. **(# 1)**

☐ • Verifies steps 5.1.b 14705-1 "Boron Injection Flow Rate Verification" is active. **(# 1)**

☐ • Verifies steps 5.1.c 14811-1 "BA Transfer Pump & Discharge Check Valves Inservice active. **(# 1)**

☐ • Verifies steps 5.1.d 14808-1 "CCP & Check Valves IST & Response Test is active. **(# 1)**

☐ • Verifies steps 5.1.e 14000-1 "Operations Shift & Daily Surveillance Logs" is active. **(# 1)**

☐ ♦ Identifies 2 acceptable Boron Injection Flow Paths per Figure 1 are **NOT** available. (NOTE: 2)

☐ ♦ Determines Acceptance Criteria NOT met and refers to TR 13.1.3 for Boration Flow Paths – Operating

☐ ♦ Determines Condition A requires shutdown within 72 hours if flow paths not returned to OPERABLE.

CUES:

(1) The surveillance is active.

NOTES

(2) Two paths must NOT share any "active components" on figure 1. All the flow paths would go through HV-8801B (an active component). Therefore, there are NOT two Boric Acid Flow Paths Available. The TRM 13.1.3 is NOT met and Condition A should be entered.

STOP TIME: _____

Field Notes

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-91001-015

CLASSIFY AN EMERGENCY EVENT , FILL OUT NOTIFICATION FORMS AND MAKE PAR RECOMMMENDATIONS
THIS IS A NEW JPM FOR HL-14 NRC EXAM

Revision 0

June 13, 2007

Written By : Thad N. Thompson Date: 6/13/07

Approved By : R. Lee Mansfield Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: Unit 1 DBA SGTR in progress on SG # 4.

A Main Steam Safety is lifting for SG # 4 and will not reseat. Visual indication confirms steam blowing out of the safety valve. High radiation in the area will prevent maintenance gagging the valve within the next hour.

Chemistry reports RCS coolant activity is 411 micro Curies per gram Equivalent I-131.

PAGs dose at the site boundary is expected to be > 1.0 Rem TEDE.

Wind direction is from 94.26 degrees, there is no precipitation, wind speed is 4.0 mph with a stability class of D – Neutral.

Assigned Task: You have been directed to "Determine the HIGHEST emergency classification level based on events which are in progress and PARS if applicable, considering past events, and their impact on the current plant conditions" and take appropriate actions for notification of state and local authorities.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE:

REVISION: 0 June 13, 2007

COMPLETION TIME: 30 minutes (15 minutes to classify, 15 minutes to fill out notification form)

Application: **SRO ONLY**
K/A Number: G2.4.38 RO: 2.2 SRO: 4.0

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 91001-C and 91002-C and NMP-EP-109. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:

1. 91001-C, Emergency Classification and Implementing Instructions
2. 91002-C, Checklist 2, Emergency Notifications Form
3. NMP-EP-109, Protective Action Recommendations

SIMULATOR SETUP: None

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS:

Unit 1 DBA SGTR in progress on SG # 4.

A Main Steam Safety is lifting for SG # 4 and will not reseat. Visual indication confirms steam blowing out of the safety valve. High radiation in the area will prevent maintenance gagging the valve within the next hour.

Chemistry reports RCS coolant activity is 411 micro Curies per gram Equivalent I-131.

PAGs dose is expected to be > 1.0 REM TEDE.

Wind direction is from 94.26 degrees, there is no precipitation, wind speed is 4.0 mph with a stability class of D – Neutral.

ASSIGNED TASK:

You have been directed to "Determine the HIGHEST emergency classification level based on events which are in progress and PARS if applicable, considering past events, and their impact on the current plant conditions" and take appropriate actions for notification of state and local authorities.

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Classify the event

☐ • Plant conditions evaluated
☐ ♦ Emergency event classified as a General Emergency (Loss of 3 barriers) within 15 minutes.

JPM STEPS

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Fill out notification form. ***(NOTE 1)***

☐ • Line 1 block A for this is a drill checked, Message # left blank for ENN Communicator
☐ • Line 2 block A for INITIAL checked, Notification: Time and Date and Authentication left blank.
☐ • Line 3 Vogtle 1 filled in, Confirmation Phone # left blank.

☐ ♦ Line 4 block D for GENERAL EMERGENCY checked and event description filled in.

☐ ♦ Line 5 block B checked to EVACUATE 0 – 5 mile radius and downwind to 10 miles. ZONES affected should be listed as A, B5, C5, D5, E5, F5, I5, J5, K5, C10, D10, E10 (These are thePAR 3 recommendations)

☐ ♦ Line 5 block D checked to Advise Remainder of EPZ to monitor Local Radio / TV Stations / TARS for additional information and consider the use of KI) potassium iodide) in accordance with State plans and policy.

☐ ♦ Line 6 block B checked for EMERGENCY RELEASE "is occurring".

☐ ♦ Line 7 block C checked for RELEASE SIGNIFICANCE "above normal operating limits".

☐ • Line 8 for EVENT PROGNOSIS, candidate checks the block he feels is appropriate.

☐ ♦ Line 9 METEOROLOGICAL DATA filled in according to turnover.

☐ ♦ Line 10 block A checked for DECLARATION with proper time and date filled in.

☐ • Line 11 block 1 checked for AFFECTED UNIT(S)

☐ • Line 12 block 1 check and appropriate power and shutdown time, etc. filled in.

☐ • Line 13 REMARKS filled in.

☐ • Line 14 through Line 16 NOT REQUIRED ON AN INITIAL NOTIFICATION.

☐ ♦ Line 17 Approved by HL-14 candidate signature and time / date filled in within 15 minutes. ***(2)***

☐ • Line 17 Notified by left blank for the ENN Communicator.

NOTE:
(1) Evaluator will have markups of expectations for notification form attached with JPM with proper dates, etc. filled in at time of exam.
(2) When candidate bring forward notification form, this will stop his 15 minute notification clock.

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-91301-002

STAY TIME CALCULATION FOR EMERGENCY EXPOSURE TO LIMIT DOSE FOR PROTECTION OF LARGE POPULATION (SRO VERSION)

Revision 0

June 13, 2007

Written By : Thad N. Thompson Date: June 13, 2007

Approved By : R. Lee Mansfield Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions: During a LOCA Outside Containment event, it has been discovered that a release flow path from Train A RHR to the RWST exists. Power has been lost to the RHR Train A isolation valves.

A General Emergency has been declared for this event and wind direction is currently blowing toward heavily populated areas.

You are the Emergency Director and need to authorize an Emergency Radiation Exposure to perform actions to isolate the LOCA.

Two System Operators (SOs) have been selected (not volunteers) by the OSC to perform manual valve manipulations required to isolate the LOCA. The following is the yearly exposure for the SO's to be dispatched to perform the local isolations in the RHR pump rooms.

J. Smith	John Doe
300 mrem	400 mrem
SSN: 123-45-6789	SSN: 987-65-4321
TLD # 12345	TLD # 54321
No previous emergency exposure history.	No previous emergency exposure history.

HP has determined the dose rates to be received by the SO's in the RHR pump room to be 35 rem/hr.

Assigned Task: Calculate the maximum stay times for the SO's to remain on station and not exceed the emergency radiation exposure limits and complete Date Sheet 1 of 91301-C, "Permit for Emergency Radiation Exposure". Round the calculation for minutes to 1 decimal place.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: STAY TIME CALCULATION FOR EMERGENCY EXPOSURE FOR PROTECTION OF LARGE POPULATION

REVISION: 1 June 13, 2007

COMPLETION TIME: 15 minutes

Application: **RO / SRO**
K/A Number: G2.3.4 RO: 2.5 SRO: 3.1

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 91301-C. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:
1. Procedure 91301-C, Emergency Exposure Guidelines.
2. Calculator

SIMULATOR SETUP: Simulator not required for JPM performance

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: During a LOCA Outside Containment event, it has been discovered that a release flow path from Train A RHR to the RWST exists. Power has been lost to the RHR Train A isolation valves.

A General Emergency has been declared for this event and wind direction is currently blowing toward heavily populated areas.

You are the Emergency Director and need to authorize an Emergency Radiation Exposure to perform actions to isolate the LOCA.

Two System Operators (SOs) have been selected (not volunteers) by the OSC to perform manual valve manipulations required to isolate the LOCA. The following is the yearly exposure for the SO's to be dispatched to perform the local isolations in the RHR pump rooms.

J. Smith	John Doe
300 mrem	400 mrem
SSN: 123-45-6789	SSN: 987-65-4321
TLD # 12345	TLD # 54321
No previous emergencyexposure history	No previous emergency exposure history.

HP has determined the dose rates to be received by the SO's in the RHR pump room to be 35 rem/hr.

Assigned Task: Calculate the maximum stay times for the SO's to remain on station and not exceed the emergency radiation exposure limits and complete Data sheet 1 of 91301-C, "Permit for Emergency Radiation Exposure". Round the calculation for minutes to 1 decimal place.

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ UNSAT ☐

Determine Maximum Stay Time to isolate RHR LOCA Outside Containment to protect large public population area.

☐ ♦ Maximum stay time in RHR pump room A determined to be 42.9 minutes (42 minutes 54 seconds) for both operators. Previous exposure does not apply toward the Emergency Exposure Limit. (NOTE 1)

NOTE:
(1) Dose projection = 25 Rem / 35 Rem / Hr dose rate = 42.9 minutes (.9 X 60 = 54 seconds) Acceptance Criteria is + or – 5%.

STEP 2
CRITICAL (♦)
SAT ☐ UNSAT ☐

91301-C date sheet 1 properly completed for 1 System Operator.

☐ • Exposure # 1 entered.
☐ • Prepared by date / time / blocks completed.
☐ • Protection of large population circled.
☐ • Task description filled in.
☐ • Dose limit 25 Rem
☐ • Projected dose from step 1 of JPM (N/A)
☐ • Rescuer name / SSN / signature / TLD number all left blank or N/A on the form.
☐ • Health Physics Supervisor signature.
☐ ♦ ED approval or signature or initials of person receiving verbal authorization to exceed 10CFR20 exposure limits.

NOTE:
(1) Dose projection = 25 Rem / 35 Rem / Hr dose rate = 42.9 minutes (.9 X 60 = 54 seconds)

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

V-LO-JP-10008-001

LOSF EVALUATION
THIS IS A BANK JPM FOR THE HL-14 NRC EXAM

Revision 0

June 13, 2007

Written By: **Thad N. Thompson** Date: 6/13/2007

Approved By: **R. Lee Mansfield** Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	With DG '1A' out of service for corrective maintenance, a loss of 1BY2B occurs due to a fault on inverter 1BD1I12. 1BY2B is subsequently reenergized via the regulated transformer power source.
Assigned Task:	The SS has directed you to use 10008-C and determine what LCO conditions are required to be entered and if a LOSF exists. Using a highlighter, also trace the flowpath utilized on the 10008-C Figure 5 "LOSF Evaluation Flowchart". Identify any LCO conditions and determine whether an LOSF exists.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE:	LOSF Evaluation			
REVISION:	0	6/13/2007		
COMPLETION TIME:	15 minutes			
Application:	RO/SRO			
K/A Number:	G2.1.33	RO: 3.4	SRO: 4.0	

Evaluation Method	[ ] Performed	[ ] Simulated		
Evaluation Location	[ ] Simulator	[ ] Control Room	[ ] Unit 1	[ ] Unit 2
Performance Time:	_____minutes			

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 10008-1. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:
1. 10008-1, "Recording Limiting Conditions For Operation"
2. Technical Specifications

SIMULATOR SETUP: Performance of this JPM does not require the simulator.

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: With DG 'A' out of service for corrective maintenance, a loss of 1BY2B occurs due to a fault on inverter 1BD1I12. 1BY2B is subsequently reenergized via the regulated transformer power source.

ASSIGNED TASK: The SS has directed you to use 10008-C and determine what LCO conditions are required to be entered and if a LOSF exists. Using a highlighter, also trace the flowpath utilized on the 10008-C Figure 5 "LOSF Evaluation Flowpath". Identify any LCO conditions and determine whether an LOSF exists.

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

LCO Conditions Identified

Note: The previously in effect LCO Conditions may be identified but are not required for satisfactory performance.

☐ • TS LCO 3.8.1 Condition B (previously in effect)
☐ • TS LCO 3.8.9 Condition B (may be identified as temporarily being entered prior to bus reenegization)
☐ ♦ TS LCO 3.8.7 Condition A

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

LOSF Evaluation

Note: LOSF exists via inoperability of both DG's (DG 'A' initially OOS and declaration of DB 'B' via 1BD1I12 support inoperability to the 'B' sequencer).

☐ ♦ Determines **YES** to "are required SUPPORT or SUPPORTED systems INOPERABLE on redundant Safety Related Trains ?"
☐ • Performs LOSF Evaluation (Step 3.5.6) of 10008-C
☐ ♦ Determines **YES** to LOSF present

STEP 3
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

LCO Conditions Identified

☐ ♦ **TS LCO 3.8.1 Condition F** identified to be entered due to the LOSF exists determination
☐ • TS LCO 3.8.1 Condition G and B (specifically note the offsite source verification) identified to be entered

STEP 4
SAT ☐ UNSAT ☐

Report to USS

☐ • LCO conditions identified and LOSF exists determination made

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

LO-JP-14915-002

CALCULATE QUADRANT POWER TILT RATIO
THIS IS A MODIFIED JPM FOR THE HL-14 NRC EXAM
(SRO VERSION)

Revision 3

June 13, 2007

Written By : Thad N. Thompson Date: 06/13/2007

Approved By : R. Lee Mansfield Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

Initial Conditions:	The unit is at 100% power.
Assigned Task:	The USS has directed you to "Perform a QPTR Calculation using 14915, Special Conditions Surveillance Logs." Determine appropriate LCO Entry, Conditions, and Required Actions (if any)

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Calculate Quadrant Power Tilt Ratio

REVISION: 3 June 13, 2007

COMPLETION TIME: 30 minutes
This JPM is to be used for HL-14 NRC Exam Only

Application: RO/SRO
K/A Number: G2.1.7 RO: 3.7 SRO: 4.0

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 14915-1 . Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to examinee during performance of this JPM. This JPM provides data for two different conclusions (QPTR> or< 1.02).

REQUIRED ITEMS:

1. 14915, Special Conditions Surveillance Logs
2. Unit 1 Plant Technical Data Book (Tab 5.0)

SIMULATOR SETUP:

1. Not applicable

Setup time: Not applicable

This JPM is based on the Current Unit 1 Cycle. The Unit 1 PTDB Normalization Factors should be used to calculate the QPTR.

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

INITIAL CONDITIONS: The unit is at 100% power.

ASSIGNED TASK: The USS has directed you to "Perform a QPTR Calculation using 14915, Special Conditions Surveillance Logs". Determine appropriate LCO Entry, Conditions, and Required Actions (if any)

JPM STEPS

START TIME: _____

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Record provided detector data on OSP-14915-1.

☐ ♦ Upper detector currents recorded on OSP-14915-1.
☐ ♦ Lower detector currents recorded on OSP-14915-1.

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Determine QPTR

*Note: If this JPM is being PERFORMED, ensure the **Unit 1 PTDB Normalization Factors** are used. The attachment should be provided to the examinee for performance of this step.*

☐ • Upper detector currents normalized (see note above)
☐ • Average upper detector current calculated
☐ • Lower detector currents normalized (see note above)
☐ • Average lower detector current calculated
☐ ♦ QPTR determined to be > 1.02 (1.03 Upper and 1.04 Lower)

STEP 3
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Determine LCO entry and Conditions and Required Actions

☐ ♦ LCO 3.2.4 for Quadrant Power Tilt Ratio must be entered Condition A
☐ ♦ Reduce THERMAL POWER to < 88% within 2 hours (A.1) AND
☐ ♦ Perform a QPTR calculation (SR3.2.4.1) (A2.1) every 12 hours AND
☐ ♦ Limit THERMAL POWER to < 88% (A.2.2) AND
☐ • Perform SR 3.2.1.1 and SR 3.2.2.1 (A.3) within 24 hours of stabilizing power < 88% and once per 7 days after.
☐ • Perform a Safety Analysis (A.4) AND Calibrate Excore Detectors (A.5) to show QPtR < 1.00 prior to increasing THERMAL POWER to > 88%.
☐ • Perform SR 3.2.1.1 and SR 3.2.2.1 within 24 hours of reaching RTP (A.6) OR 48 hours of increasing THERMAL POWER > 88% (A.6)

STEP 3
SAT ☐ UNSAT ☐

Report to SS

☐ • Upper and lower QPTR is > 1.02

STOP TIME: _____

Field Notes

PROVIDE DATA ON THIS PAGE TO STUDENTS FOR CALCULATION

NI Channel	Detector	Current
N41	A	424 mA
N42	A	380 mA
N43	A	450 mA
N44	A	415 mA
N41	B	450 mA
N42	B	395 mA
N43	B	460 mA
N44	B	425 mA

NORMALIZATION FACTORS FROM UNIT 1 PTDB

N41A (Top)	**1.130**
N42A (Top)	**1.152**
N43A (Top)	**1.048**
N44A (Top)	**1.145**

NORMALIZATION FACTORS FROM UNIT 1 PTDB

N41B (Bottom)	**1.052**
N42B (Bottom)	**1.087**
N43B (Bottom)	**1.000**
N44B (Bottom)	**1.072**

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-13431-001

SHUTDOWN 120V AC 1E VITAL INVERTER DURING LOSS OF ALL AC
THIS IS A NEW JPM FOR THE HL-14 NRC EXAM
(THIS JPM REQUIRES AN RCA ENTRY)

Revision 0

June 12, 2007

Written By	: Thad N. Thompson	Date:	6/12/2007
Approved By	: R. Lee Mansfield	Date:	June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

REMEMBER: All steps required for this task are to be simulated.
Plant equipment is not to be operated.

Initial Conditions: Unit____ control room has experienced a prolonged Loss of All AC Power. 125V 1E DC Bus ____BD1 voltage has lowered to less than 105V DC.

Assigned Task: You have been directed by the SS to shutdown 120V AC 1E Vital Inverter ____BD1I12 per SOP-13431, "120V AC 1E Vital Instrument Distribution System" 4.3.2 for 1BD1I12 Inverter Shutdown. Once the inverter is shutdown, open the associated battery breaker for ____BD1.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Shutdown 120V AC 1E Vital Inverter During A Loss of All AC Power

REVISION: 0 June 12, 2007

COMPLETION TIME: 20 minutes

Application: RO/SRO
K/A Number: 062A2.08 RO: 2.7 SRO: 3.0

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 13432-1/2. Verify this JPM is in accord with the latest procedural revision prior to use. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:
1. 13431-1/2, 120V AC 1E Vital Instrument Distribution System
2. EDRD Dosimetry

COMPONENT LOCATION: Unit 1/2 Train B: Level B Control Building (Battery Breaker & Switchgear)
Unit 1/2 Train B: Level 1 Auxiliary Building (Inverter) – RWP required.

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

REMEMBER: All steps required for this task are to be simulated.
Plant equipment is not to be operated.

INITIAL CONDITIONS: Unit____ control room has experienced a prolonged Loss of All AC Power. 125V DC 1E Bus ____BD1 voltage has lowered to less than 105V DC.

ASSIGNED TASK: You have been directed by the SS to shutdown 120V AC 1E Vital Inverter ____BD1I12 per SOP-13431, "120V AC 1E Vital Instrument Distribution System" section 4.3.2 for 1BD1I12 Inverter Shutdown. Once the inverter is shutdown, open the associated battery breaker for ____BD1.

START TIME: _____

STEP 1
SAT ☐ UNSAT ☐

This is located in Control Builing Level B.

Procedure 13431, section 4.3.2 selected.

☐ • Verifies closed the applicable Battery Breaker BD1-01. (#)

CUE:
(#) The breaker red light is illuminated OR the breaker position indicator flag is red and reads CLOSED.

STEP 2
CRITICAL (♦)
SAT ☐ UNSAT ☐

NOTE: This is located in the Auxiliary Building Level 1 and will require an RWP for entry.

Opens the INVERTER OUTPUT Breaker

☐ ♦ Inverter BD1I12 Output Breaker OPEN. **(#)**

CUE:
(#) Give indication the toggle switch is showing open.

STEP 3
CRITICAL (♦)
SAT ☐ UNSAT ☐

Opens the Inverter DC INPUT Breaker

☐ ♦ Inverter BD1I12 DC INPUT Breaker OPEN. (#)

CUE:
(#) Give indication the toggle switch is showing open.

STEP 4
SAT ☐ UNSAT ☐

Verifies Inverter completely shutdown.

☐ • Observes zero volts showing on the Inverter AC OUTPUT Voltmeter. (#)

CUES:
(#) Indicate the AC output voltmeter is ZERO V DC.

STEP 5
CRITICAL
SAT ☐ **UNSAT** ☐

NOTE: This is located in Control Building Level B.

Opens Inverter DC Supply Breaker at 125V DC Switchgear BD1.

☐ ♦ Inverter DC Supply Breaker BD1-04 handswitch taken to Open or Trip push button depressed.

CUES:

(#) Indicate the DC supply breaker BD1-04 open by hand switch green light lit, red extinguished OR by breaker flag showing green and reading OPEN.

STEP 6
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Opens BD1 Battery Breaker

☐ ♦ Panel BD1 Battery Breaker BD1-01 hand switch taken to Open or Trip push button depressed.

CUES:

(#) Indicate the DC supply breaker BD1-04 open by hand switch green light lit, red extinguished OR by breaker flag showing green and reading OPEN.

STEP 7
SAT ☐ UNSAT ☐

Report to USS

☐ • Inverter BD1I12 has been shutdown and BD1 Battery Breaker has been opened.

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

Energy to Serve Your World℠

PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-19030-005

MINIMIZE ENVIRONMENTAL AND SECONDARY SYSTEM CONTAMINATION FOLLOWING SGTR

Revision 14

June 12, 2007

Written By : Thad N. Thompson Date: 6/12/2007

Approved By : R. Lee Mansfield Date: June 15, 2007

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

REMEMBER: All steps required for this task are to be simulated.
Plant equipment is not to be operated.

Initial Conditions: A steam generator tube rupture occurred on Unit___ .

Assigned Task: The USS has directed you to:

- Align the Unit ___ SJAE and SPE exhaust to HEPA filters by initiating 13310-__ ; and
- Manually close the condensate dump valve's(LV-4415A) manual isolation valve __ -1305-U4-042 (TB-A-TH___); and
- Align the turbine building sump effluent to the Turbine Building Drain Tanks by placing __-HS-0877 in the RECIRC position.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Minimize Environmental and Secondary System Contamination Following SGTR

REVISION: 14 June 12, 2007

COMPLETION TIME: 10 minutes

Application: RO/SRO
K/A Number: 055A3.03 RO: 2.5 SRO: 2.7

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on 19030-C. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS:

1. 13310-1/2, Turbine Building HVAC System (copy @ PTHV)
2. Hearing Protection

COMPONENT LOCATION:

Unit 1: 1-1305-U4-042 (TB-A-TH15)
Unit 2: 2-1305-U4-042 (TB-A-TH6)

Unit 1: 1HS-0877 located at EAST side of Turbine Building on Level "A" by Turbine Building Drain Tanks @ Turbine Building Drain System Panel

Unit 2: 2HS-0877 located at WEST side of Turbine Building on Level "A" by Turbine Building Drain Tanks @ Turbine Building Drain System Panel

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

REMEMBER: All steps required for this task are to be simulated. Plant equipment is not to be operated.

INITIAL CONDITIONS: A steam generator tube rupture occurred on Unit __.

ASSIGNED TASK: The USS has directed you to:

- Align the Unit __ SJAE and SPE exhaust to HEPA filters by initiating 13310-__ ; and
- Manually close the condensate dump valve's(LV-4415A) manual isolation valve __-1305-U4-042(TB-A-TH___); and
- Align the turbine building sump effluent to the Turbine Building Drain Tanks by placing __ -HS-0877 in the RECIRC position.

JPM STEPS

START TIME: _____

Note: Cues should be provided as to damper indications when referenced. Red light illuminated when full open. Green light illuminated when full closed. Dual indication when intermediate position.

STEP 1
CRITICAL (♦)
SAT ☐ UNSAT ☐

Transfer Steam Jet Air Ejector discharge to HEPA filter
Note: Damper positions can be verified locally at the dampers or remotely at the HVAC panel.

☐ • Selects section 4.4.4 of SOP-13310-1/2 for SJAE Filter Mode Control.
☐ ♦ Place SJAE Filter Unit HS-2875 in FILTER.
☐ • Install Caution Tag per 10000-C. **(#)**
☐ • Verify Inlet Damper HV-2875B and Outlet Damper HV-2875C OPEN.
☐ • Verify Bypass Damper HV-2875A CLOSED.

CUE:
(#) The SS will have another operator install a Caution Tag.

STEP 2
CRITICAL (♦)
SAT ☐ UNSAT ☐

Transfer Steam Packing Exhauster discharge to HEPA filter
Note: Damper positions can be verified locally at the dampers or remotely at the HVAC panel.

☐ • Selects section 4.4.3 of SOP-13310-1/2 Steam Packing Exhauster Filter Mode Control
☐ ♦ Place SPE Filter Unit HS-2876 in FILTER.
☐ • Install Caution Tag per 10000-C **(#)**
☐ • Verify SPE Fan starts (Red light above HS-2876)
☐ • Verify Inlet Damper HV-2876B and Outlet Damper HV-2876C OPEN.
☐ • Verify Bypass Damper HV-2876A CLOSED.

CUE:
(#) The SS will have another operator install a Caution Tag.

STEP 3
CRITICAL (♦)
SAT ☐ UNSAT ☐

Close condensate dump valve manual isolation valve.

☐ • Condensate dump isolation 1305-U4-042 located.
☐ ♦ 1305-U4-042 CLOSED.

JPM STEPS

STEP 4
CRITICAL (♦)
SAT ☐ UNSAT ☐

Place Turbine Building Sumps on Recriculation.

☐ ♦ Place HS-0877 in the RECIRC position.
☐ • Verify proper valve lineup for Turbine Building Sump Effluent

STEP 5
SAT ☐ UNSAT ☐

Report to USS

☐ • SJAE and SPE aligned to Filter Mode per 13310
☐ • Condensate Dump Valve 1305-U4-042 isolated.
☐ • Turbine Building Sumps in Recirculation Mode.

STOP TIME: _____

Field Notes

SOUTHERN COMPANY

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PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-19211-007

LOCALLY TRIP THE REACTOR
(FAULTED PATH)
THIS IS A MODIFIED JPM FOR THE HL-14 NRC EXAM

Revision 0

June 12, 2007

Written By : Thad N. Thompson Date: 06/12/2007

Approved By : R. Lee Mansfield Date: June 15, 2007

JPM INFORMATION

This information describes the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the task before beginning. You will be allowed access to any item normally used to perform this task.

THIS IS A TIME CRITICAL JPM

REMEMBER: All steps required for this task are to be simulated. Plant equipment is not to be operated.

Initial Conditions: An ATWT is in progress on Unit_____ .

Assigned Task: The USS has directed you to "Locally open the Unit_____ reactor trip breakers, RTA and RTB." If the trip breakers will NOT open, then trip the Control Rod Drive MG Set output breakers at the Reactor Trip Switchgear.

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Locally Trip the Reactor

REVISION: 0 June 12, 2007

COMPLETION TIME: **8 minutes** **TIME CRITICAL**
Note: Performance of this task must be initiated from the Clearance and tagging Office.

Application: RO/SRO
K/A Number: 029EA1.12 RO: 4.1 SRO: 4.0

Evaluation Method [ ] Performed [ ] Simulated

Evaluation Location [ ] Simulator [ ] Control Room [ ] Unit 1 [ ] Unit 2

Performance Time: _____minutes

OVERALL JPM EVALUATION **[ ] SATISFACTORY** **[ ] UNSATISFACTORY**

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on the latest rev of 19211-C. Verify this JPM is in accord with the latest procedural revision prior to use. Cues preceded by a "©..." are provided to enhance simulation of this JPM and should only be used when the simulator is unavailable. Cues designated by (#) are to be provided to the examinee during the performance of this JPM.

REQUIRED ITEMS: 1. Hearing protection

COMPONENT LOCATION: RTB Switchgear Rooms

DIRECTIONS TO OPERATOR

You will be given information describing the Initial Conditions, Assigned Task, and the Task Standard. Please ensure you understand the assigned task before beginning. You will be allowed access to any item normally used to perform this task.

REMEMBER: All steps required for this task are to be simulated.
Plant equipment is not to be operated.

This is a TIME CRITICAL JPM

INITIAL CONDITIONS: An ATWT is in progress on Unit_____ .

ASSIGNED TASK: The USS has directed you to "Locally open the Unit_____ reactor trip breakers, RTA and RTB." If the trip breakers will NOT open, then trip the Control Rod Drive MG Set output breakers at the Reactor Trip Switchgear.

JPM STEPS

START TIME: _____ **TIME CRITICAL** ⏲

STEP 1
CRITICAL (♦)
SAT ☐ *UNSAT* ☐ **(# 1) (WARNING: DO NOT OPEN THE DOORS OR TOUCH ANY EQUIPMENT!)**

Locally trip reactor trip breakers

Note: The silver trip pushbuttons on the switchgear's exterior are for the bypass breakers. In addition, RTB operation should be simulated using attached photographs.

☐ ♦ RTA and RTB located.
☐ ♦ Trip pushbutton for each breaker depressed. **(#)**

WARNING: DO NOT TOUCH ANY EQUIPMENT OR OPEN THE DOORS !

CUE:
(#) The trip breaker does **NOT** open.

STEP 2
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Locally trips the Control Rod Drive MG Set output breakers.

Note: The candidate coud trip the output breakers by either depressing the TRIP button on the actual breakers (located under the MG Set Hand Switch Panel. However, these doors should NOT be opened. A description of the candidates actions would be sufficient for credit.

The other method **(Prefered)** *to open the MG Set output breakers would be to use the local handswitches and turn to the TRIP position.*

☐ ♦ Control Rod Drive MG Set output breakers OR hand switches located.

☐ ♦ MG Set Output Breaker Handswitch taken to TRIP for both breakers. **(# 1)**

OR

☐ ♦ Trip pushbutton for both breakers depressed. **(# 2) (WARNING: DO NOT OPEN THE DOORS !)**

CUE:
(# 1) The breakers have opened. There is a page announcement of a Unit Reactor Trip.

(# 2) The breakers have opened. There is a page announcement of a Unit Reactor Trip.

JPM STEPS

STEP 3
SAT ☐ UNSAT ☐

Report to USS

☐ • The Control Rod Drive MG Set output breakers have been opened.
☐ • The Reactor Trip Breakers would NOT open.

STOP TIME: _____

Field Notes