Final Submittal

VOGTLE MAY 2005 EXAM
50-424, 425/2005-301

MAY 17 - 25, 2005
MAY 27, 2005 (WRITTEN)

In-Plant JPMs

SOUTHERN COMPANY

Energy to Serve Your World℠

PLANT VOGTLE

CONTROL ROOM OPERATOR

JOB PERFORMANCE MEASURE

RQ-JP-13405-001

PLACE A 1E 125VDC BATTERY CHARGER IN SERVICE
(HL-13 NRC EXAMINATION SPECIFIC)

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 loss of 125VDC Bus 2AD1 has occurred due to a fault on the battery bank, 2AD1B. The plant has been stabilized in MODE 3, and the crew is responding per AOP 18034-2. The battery bank has been removed from service and the crew is preparing to re-energize the bus from a battery charger.

ASSIGNED TASK: The SS has directed you to " Place battery charger 2AD1CB in service by initiating 13405-2, "125V DC 1E Electrical Distribution System".

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE:	Place a 1E 125VDC Battery Charger in Service
REVISION:	0 May 9, 2005
COMPLETION TIME:	13 minutes

Application:	RO/SRO				
Task Number:	LO-TA-60040				
K/A Number:	058AA1.03	RO:	3.1	SRO:	3.3
10CFR55 Ref.	41.7 /45.5,6				

Evaluation Method [ ] Simulated

Evaluation Location [ ] Unit 2 Control Building B Level

Performance Time: _____minutes

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

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based on 13405-1. 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: 13405-2, "125V DC 1E Electrical Distribution System"

COMPONENT LOCATION: Locations are not given in the procedure.

Note to Examiner: ***Review the note accompanying Step 6 prior to administering this JPM.***

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 loss of 125VDC Bus 2AD1 has occurred due to a fault on the battery bank, 2AD1B. The plant has been stabilized in MODE 3, and the crew is responding per AOP 18034-2. The battery bank has been removed from service and the crew is preparing to re-energize the bus from a battery charger.

ASSIGNED TASK: The SS has directed you to " Place battery charger 2AD1CB in service by initiating 13405-2, "125V DC 1E Electrical Distribution System".

TASK STANDARD: Battery charger in service, supplying 125VDC Swgr.

START TIME: _____

STEP 1
SAT ☐ UNSAT ☐

Select proper procedure and section

☐ • 13405-2, section 4.1.3 "Placing Train A Battery Charger 2AD1CA or **2AD1CB** In Service" selected.

STEP 2
SAT ☐ UNSAT ☐

Verify Initial Prestart Conditions

Note: *(1) For local breaker indication, the mechanical flag indicators must be used, light indication is not available at this time.*
(2) There is a note regarding placing both battery chargers in service simultaneously prior to step 4.1.3.1..

☐ • Step 4.1.3.1, **2AD1-01** verified **OPEN** ***(Cue 1)***
☐ • Step 4.1.3.2, **AC input breaker** on Battery Charger **2AD1CB** verified **OPEN** ***(Cue 2)***
☐ • Step 4.1.3.2, **DC output breaker** on Battery Charger **2AD1CB** verified **OPEN** ***(Cue 2)***

CUES:

(1) Once identified, provide indication that 2AD1-01 is open (green light would **NOT** be illuminated if hand switch for 2AD1-01is referenced but green flag for **OPEN** on breaker would be showing). If examinee attempts to close the battery breaker, if requested, provide the information that the breaker did not close at this time.

(2) Once identified, provide indication that breaker is open (toggle switch would be pointing down).

STEP 3
SAT ☐ UNSAT ☐

Verify associated 480VAC MCC is Energized and Supply Breaker Closed

☐ • Step 4.1.3.3, **MCC 2ABE-38** 480V supply breaker for **2AD1CB** selected and verified closed. ***(1)***

CUES:

(1) Once operator identifies correct MCC breaker, "Control room operators report **MCC breaker 2ABE-38** is closed and energized."

STEP 4
SAT ☐ UNSAT ☐

Place Battery Charger in FLOAT mode of Operation

Note: *There is a note regarding the Equalize Timer & Float Mode in the procedure prior to step 4.1.3.4*

☐ • Step 4.1.3.4, Battery Charger **Normal/Equalize** switch placed in **Normal** and **Equalize Timer** set to zero ***(1)***

CUES:

(1) If candidate asks, inform him the Battery Charger **Normal / Equalize Switch** is in the **Normal** position and the **Equalize Timer** is set to **ZERO**.

STEP 5
SAT ☐ UNSAT ☐

Verify Associated Bus Voltage is ≤ 135 VDC

Note: There is a CAUTION statement prior to step 4.1.3.5 that warns a charger will trip if overvoltage is sensed on the output of the charger being placed in service.

☐ • Step 4.1.3.5 is **N/A** since another charger is **NOT** is service at this time.
☐ • Step 4.1.3.6, Ensure DC bus voltage verified ≤ 135 VDC ***(1)***

CUES:

(1) Provide indication that bus voltage is 0 VDC or that bus potential lights are dark.

STEP 6
CRITICAL
SAT ☐ **UNSAT** ☐

Place Battery Charger in Operation

Note: *If the B/C DC switchgear breaker is not closed in an expiditious manner after closure of the B/C DC output breaker an overvoltage trip of the B/C AC input breaker will occur in ≈ 5 - 10 seconds. Cue 2 should be provided to the operator promptly if step is performed correctly. If operator fails to demonstrate the need to close the B/C DC switchgear breaker quickly, provide audible indication or indicate 0 VDC on B/C volt meter for Cue 3. This step may still be performed satisfactorily if the step is repeated in its entirity. If step not repeated then performance is to be considered UNSAT.*

The following actions must be performed in sequence

- ☐ • Step 4.1.3.7, Battery Charger 125 VDC switchgear breaker **2AD1-07** to battery charger **OPEN** ***(1)***
- ☐ ♦ Step 4.1.3.8, Battery Charger **2AD1CB DC output breaker CLOSED** ***(2)***
- ☐ ♦ Step 4.1.3.9, Battery Charger **2AD1CB AC input breaker CLOSED** ***(2)***
- ☐ • Step 4.1.3.10 Verify Battery Charger **2AD1CB** operation by observing **> 130V** DC on voltmeter. ***(3)***
- ☐ ♦ Steo 4.1.3.11, Battery Charger **2AD1CB** 125 VDC switchgear breaker **2AD1-07 CLOSED** ***(4)***
- ☐ • Step 4.1.3.12, Should be **N/A** if previous steps performed correctly in timely manner. See **NOTE** above.
- ☐ • Step 4.1.3.13, Verify proper Battery Charger operation by observing > 130V on charger voltmeter. ***(5)***
- ☐ • Step 4.1.3.14, Verify DC bus voltage > 130V DC on switchgear 2AD1 voltmeter ***(6)***

CUES:

(1) If requested, provide indication that the breaker is open (mechanical flag is only indication).
(2) If requested, indicate toggle switches now pointing up after candidate indicates upward motion.
(3) If performed correctly, provide indication that B/C voltage is ≥ 130 VDC & charging spring motor for B/C 125 VDC switchgear breaker stopped.
(4) If performed correctly, provide indication that the red light is illuminated.
(5) Provide indication that voltage is ≈ 135 VDC and if requested,
(6) Provide indication that voltage is greater than 130V DC and if requested, "The Control Building Operator (CBO) will perform the IV."

STOP TIME: _____

Field Notes:

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JOB PERFORMANCE MEASURE

RQ-JP-17213-002

MANUALLY ISOLATE A LIQUID WASTE RELEASE
(HL-13 NRC EXAMINATION SPECIFIC)

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: During the release of WMT #10 on UNIT 1, a high alarm was received on 1RE-0018, but 1RV-0018 failed to automatically isolate.

Assigned Task: The SS has directed you to "Locally isolate the release by closing WMT discharge isolation valves **1-1901-U4-175 and A-1901-U4-239".**

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ____ / ____ / ____

JPM TITLE: Manually Isolate a Liquid Waste Release

REVISION: 0 May 9, 2005

COMPLETION TIME: **10 minutes** **TIME CRITICAL** ⏲
Performance of this task must be initiated from Room # 117, Unit 2 Control Room access point.

Application:	RO/SRO
Task Number:	47002
K/A Number:	068000A204 RO: 3.3 SRO: 3.3
Safety Function:	9 – Radioactivity Release
10CFR55.45 Ref.:	6, 8, 12

Evaluation Method [ ] Simulated

Evaluation Location [ ] Unit 1, Auxiliary Building Level D

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 17213 & 17100. Verify this JPM is in accordance 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. RWP and associated dosimetry

COMPONENT LOCATION: Unit 1 Aux Bldg, Level D *(NOTE: Valve locations are not given in the procedure)*

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: During the release of WMT #10 on UNIT 1, a high alarm was received on 1RE-0018, but 1RV-0018 failed to automatically isolate.

ASSIGNED TASK: The SS has directed you to "Locally isolate the release by closing WMT discharge isolation valves **1-1901-U4-175 and A-1901-U4-239**".

TASK STANDARD: Liquid waste release locally isolated.

JPM STEPS

START TIME: _____ **TIME CRITICAL** ◷

STEP 1
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Manually isolate liquid release

Note: During a release 1-1901-U4-175 or A-1901-U4-239 would be unlocked and open. The operator should not be required to obtain a key to close the valve(s).

☐ ♦ 1-1901-U4-175 located
☐ ♦ 1-1901-U4-175 closed
☐ ♦ A-1901-U4-239 located
☐ ♦ A-1901-U4-239 closed

STEP 2
SAT ☐ UNSAT ☐

Report to USS

☐ • Liquid release isolated

STOP TIME: _____

Field Notes:

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JOB PERFORMANCE MEASURE

RQ-JP-19030-006

LOCALLY OPERATE STEAM GENERATOR ARV
(HL-13 NRC EXAMINATION SPECIFIC)

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: Complications from an electrical fault have resulted in a reactor trip and main steamline isolation on Unit 2. The crew has subsequently diagnosed a steam generator tube rupture. Due to the electrical fault, the crew has determined that local ARV operation will be required and has dispatched the ABO to open the breakers for the ARV hydraulic pumps.

Assigned Task: The SS has directed you to "Locally open SG # 2 ARV, 2-PV-3010 (N. MSVR) using 13601-2."

JPM INFORMATION

OPERATOR'S NAME: _____

EVALUATION DATE: ___ / ___ / ___

JPM TITLE: Locally Operate Steam Generator ARV

REVISION: 0 May 9, 2005

COMPLETION TIME: **13 minutes** **TIME CRITICAL** ⏲

Note: Performance of this task should begin at Control Building Room 117, Unit 2 Control Room Access Point.

This time is based on FSAR Chapter 15, table 15.6.3-1, as ammended by REA 97-VAA600

Application:	RO/SRO
Task Number:	21007
K/A Number:	EPE038EA1.16 RO: 4.4 SRO: 4.3
10CFR55.45 Ref.:	6, 12,

Evaluation Method [ ] Simulated

Evaluation Location [ ] Unit 2 North Main Steam Valve Room

Performance Time: _____minutes

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

Examiner Comments:

Examiner's Signature: _____

INSTRUCTIONS TO EXAMINER

This JPM is based 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. 13601-2, Steam Generator and Main Steam System Operation

COMPONENT LOCATION: **N. MSVR (North Main Steam Valve Room):** PV-3010

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: Complications from an electrical fault have resulted in a reactor trip and main steamline isolation on Unit 2. The crew has subsequently diagnosed a steam generator tube rupture. Due to the electrical fault, the crew has determined that local ARV operation will be required and has dispatched the ABO to open the breakers for the ARV hydraulic pumps.

ASSIGNED TASK: The SS has directed you to "Locally open SG # 2 ARV, 2-PV-3010 (North Main Steam Valve Room) using 13601-2."

TASK STANDARD: Steam Generator ARV locally opened.

START TIME: _____ **TIME CRITICAL** ⏲

STEP 1
SAT ☐ UNSAT ☐

Establish communications with Control Room

Note: Communications may be established using the sound powered phone system, plant P/A, telephone, or radio. The breaker for SG # 2 ARV is :2-PV-3010 - 2BBB-25

☐ • Verify the hydraulic pump breaker is open ***(1)***
☐ • ARV Local Hand Pump station located
☐ • Communications established with Control Room ***(2)***

CUES:
(1) If requested, "The ABO reports that 2-BBB-25 is open." *(see note above)*
(2) Once demonstrated or discussed: "Communications have been established."

STEP 2
SAT ☐ UNSAT ☐

Align and verify proper operation of hand pump

☐ • Level verified in hydraulic fluid reservoir sightglass
☐ • Selector Valve 2 in NEUTRAL
☐ • Hand pump bleed off valve CLOSED
☐ • Hand pump stroked freely

STEP 3
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Depressurize ARV accumulator

☐ ♦ Reservoir inlet valve 11A CLOSED.
☐ ♦ Accumulator Dump Pilot Supply valve 11B OPEN.
☐ ♦ Hand pump stroked to maintain fluid pressure ≥ 2000 psig for 1 minute.
☐ • Verify accumulator was fully dumped by observing reservoir oil level at top of scale or greater ***(1)***
☐ ♦ Reservoir inlet valve 11A OPEN.
☐ • Fluid pressure dropped to 0 psig.
☐ ♦ Accumulator dump pilot supply valve 11B CLOSED.
☐ • Reservoir inlet valve 11A CLOSED.

CUES:
(1) If the ARV oil reservoir is checked, state: "The ARV main oil reservoir level is at the top of scale."

STEP 4
CRITICAL (♦)
SAT ☐ **UNSAT** ☐

Open the ARV

☐ ♦ Selector Valve 2 in OPEN
☐ ♦ Hand pump stroked to OPEN selected ARV *(1)*
☐ • Selector Valve 2 in NEUTRAL

CUES:
(1) If requested: "The Control Room desires that the ARV be fully opened."

STOP TIME: _____

STEP 5
SAT ☐ UNSAT ☐

Report to SS

☐ • ARV is open.

Field Notes