

**NRC REGION III**  
**INITIAL LICENSE EXAM**  
**JOB PERFORMANCE MEASURE**

**JPM: RO SYSTEM e**

**TITLE: PERFORM A DIESEL GENERATOR (D/G)  
VOLTAGE TEST ON 1-1 D/G**

CANDIDATE: \_\_\_\_\_

EXAMINER: \_\_\_\_\_

JOB PERFORMANCE MEASURE  
DATA PAGE

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Task: Perform Diesel Generator Surveillance MO-7A-1 and MO-7A-2

Alternate Path: NO

Facility JPM #: PL-OPS-EDG-005J

K/A: 064A4.06 Importance: RO: 3.9 SRO: 3.9

K/A Statement: Manual start, loading, and stopping of the ED/G

Task Standard: 1-1 D/G Auto Voltage Regulator High and Low Limits verified.

Preferred Evaluation Location: Simulator  In Plant

Preferred Evaluation Method: Perform  Simulate

References: MO-7A-1, Emergency Diesel Generator 1-1

Validation Time: 10 minutes Time Critical: NO

Candidate: \_\_\_\_\_

Time Start: \_\_\_\_\_ Time Finish: \_\_\_\_\_

Performance Time: \_\_\_\_\_ minutes

Performance Rating: SAT \_\_\_\_\_ UNSAT \_\_\_\_\_

Comments:

Examiner: \_\_\_\_\_  
Signature

Date: \_\_\_\_\_

**EXAMINER COPY ONLY**

Tools/Equipment/Procedures Needed:

- MO-7A-1, Emergency Diesel Generator 1-1, Sections 5.5 and 5.6, Rev. 68

Also see **Simulator Operator Instructions** (last page of this document).

READ TO CANDIDATE

DIRECTION TO CANDIDATE:

I will explain the initial conditions, and state the task to be performed. All control room steps shall be performed for this JPM, including any required communications. I will provide initiating cues and reports on other actions when directed by you. Ensure you indicate to me when you understand your assigned task. To indicate that you have completed your assigned task return the handout sheet I provided you.

INITIAL CONDITIONS:

- Diesel Generator 1-1 running unloaded at 60 Hz.
- MO-7A-1, "Emergency Diesel Generator 1-1" is in progress; all steps up to 5.6 are completed.
- Month is **January**.
- Plant is in Mode 1
- Auxiliary Operator is stationed at EC-22, Diesel Generator 1-1 Local Panel

INITIATING CUES:

- During performance of MO-7A-1, the Control Room Supervisor directs you to perform Section 5.6 "Voltage Regulator Test."

Proc. Step	TASK ELEMENT 1	STANDARD	Grade
n/a	Operator obtains a copy of MO-7A-1, Section 5.6	MO-7A-1, Section 5.6 obtained	S U
<p><b>Comment:</b>            NOTE: <i>Evaluator provides the operator a working copy of MO-7A-1, Section 5.6.</i></p>			

Proc. Step	TASK ELEMENT 2	STANDARD	Grade
5.6.1	<p><b>DETERMINE</b> the Voltage Regulator Mode Select switch position from the table for the month ..... <b>AND PERFORM</b> the following:            Voltage Regulator Mode Select Switch Position is "AUTO" for month of January</p>	Operator determines that the Voltage Regulator Mode Select switch position is "AUTO".	S U
<p><b>Comment:</b>            NOTE: The Voltage Regulator Mode Select switch position is determined by the Month of the test.            NOTE: <b>EVALUATOR CUE: If asked as System Engineer what switch position to use, CUE that the procedure, MO-7A-1 is to be followed.</b></p>			

Proc. Step	TASK ELEMENT 3	STANDARD	Grade
5.6.1a	<p><u>IF</u> position is AUTO, <u>THEN ENSURE</u> Voltage Regulator Mode Select switch is in the AUTO position (location C-04 panel).</p>	Voltage Regulator Mode Select switch is verified in AUTO position.	S U
<p><b>Comment:</b></p>			

Proc. Step	TASK ELEMENT 4	STANDARD	Grade
5.6.1b.1	IF position is MANUAL, THEN PERFORM the following: ...	Operator determines that this step is not applicable.	S U
Comment:			

Proc. Step	TASK ELEMENT 5	STANDARD	Grade
5.6.1b.2	IF the plant is in Mode 1, 2, 3, or 4, THEN PERFORM off-site source checks.	Operator determines that this step is not applicable.	S U
Comment:			

Proc. Step	TASK ELEMENT 6	STANDARD	Grade
5.6.2	DETERMINE the switch from the table for the performance month .... AND PERFORM the Following:	Operator determines that the Field Rheostat switch on C-04 is to be used.	S U
<p>Comment:</p> <p>NOTE: The Field Rheostat switch on C-04 is determined by the Month of the test.</p> <p>NOTE: <b>EVALUATOR CUE: If asked as System Engineer what switch to use, CUE The procedure, MO-7A-1 is to be followed.</b></p> <p><b>CRITICAL STEP</b></p>			

Proc. Step	TASK ELEMENT 7	STANDARD	Grade
5.6.2a	Slowly raise generator voltage to between 2575 VAC and 2625 VAC on EVI-1213L, Local Volt Meter or as directed by the System Engineer.	Operator adjusts generator voltage between 2575 VAC and 2625 VAC on EVI-1213L with the Field Rheostat switch on C-04.	S U
<p>Comment:</p> <p>NOTE: <b>EVALUATOR CUE: If asked as System Engineer what generator voltage limits to use, CUE that the procedure, MO-7A-1 is to be followed.</b></p> <p>NOTE: <b>EVALUATOR CUE: If asked as AO to report local generator voltage, USE voltage indication on C-04 for the local voltage reading.</b></p> <p>:</p> <p><b>CRITICAL STEP</b></p>			

Proc. Step	TASK ELEMENT 8	STANDARD	Grade
5.6.2b	<p><b>RECORD</b> generator voltage and field voltage (location EC-26 panel)</p> <ul style="list-style-type: none"> <li>▪ Local Volt Meter (EVI-1213L0 Volts: _____</li> <li>▪ Field Voltage (EVI-1213DC)n Volts: _____</li> </ul>	<p>Recorded generator and field voltages (from EC-26 panel:</p> <p>Local Volt Meter (EVI-1213L) Volts: <u>2575 to 2625</u></p> <p>Field Voltage (EVI-1213DC) Volts: <u>80V</u></p>	S U
<p>Comment:</p> <p>NOTE: <b>EVALUATOR CUE If asked as AO to report local generator voltage, USE voltage indication on C-04 for the local voltage reading.</b></p> <p>NOTE: <b>EVALUATOR CUE: If asked as AO to report field voltage, <u>REPORT</u>: field voltage reads 80 V on EVI-1213DC.</b></p>			

Proc. Step	TASK ELEMENT 9	STANDARD	Grade
5.6.2c	Slowly lower generator voltage to between 2275 VAC and 2325 VAC on EVI-1213L, Local Volt Meter or as directed by the System Engineer.	Operator adjusts generator voltage between 2275 VAC and 2325 VAC on EVI-1213L with the Field Rheostat switch on C-04.	S U
<p>Comment:</p> <p>NOTE: <b>EVALUATOR CUE: If asked as System Engineer what generator voltage limits to use, CUE that the procedure, MO-7A-1 is to be followed.</b></p> <p>NOTE: <b>EVALUATOR CUE: If asked as AO to report local generator voltage, USE voltage indication on C-04 for the local voltage reading.</b></p> <p><b>CRITICAL STEP</b></p>			

Proc. Step	TASK ELEMENT 10	STANDARD	Grade
5.6.2d	<p><b>RECORD</b> generator voltage and field voltage (location EC-26 panel)</p> <ul style="list-style-type: none"> <li>▪ Local Volt Meter (EVI-1213L) Volts: _____</li> <li>▪ Field Voltage (EVI-1213DC) Volts: _____</li> </ul>	<p>Recorded generator and field voltages (from EC-26 panel):</p> <p>Local Volt Meter (EVI-1213L) Volts: <u>2275 to 2325</u></p> <p>Field Voltage (EVI-1213DC) Volts: <u>70V</u></p>	S U
<p>Comment:</p> <p>NOTE: <b>EVALUATOR CUE If asked as AO to report local generator voltage, USE voltage indication on C-04 for the local voltage reading.</b></p> <p>NOTE: <b>EVALUATOR CUE: If asked as AO to report field voltage, REPORT: field voltage reads 70 V on EVI-1213DC.</b></p>			

Proc. Step	TASK ELEMENT 11	STANDARD	Grade
5.6.2e	<b>RAISE</b> generator voltage to 2400 VAC (2390 VAC – 2410 VAC) on EVI-1107L, Local Volt Meter.	Generator voltage raised to between 2390 VAC and 2410 VAC on EVI-1107L with the Field Rheostat switch on C-04.	S U
<p>Comment:</p> <p>NOTE: <b>EVALUATOR CUE</b> If asked as AO to report local generator voltage, <b>USE voltage indication on C-04 for the local voltage reading.</b></p> <p><b>CRITICAL STEP</b></p>			

Proc. Step	TASK ELEMENT 12	STANDARD	Grade
5.6.3	<b>ENSURE</b> Voltage Regulator Mode Select switch is in AUTO position (location C-04 panel). Performed By: Signed, Time and Dated Verified By: Signed, Time and Dated	Voltage Regulator Mode Select switch verified in the AUTO position Performed By: N/A Verified By: Signed, Time and Dated	S U
<p>Comment:</p> <p>NOTE: <b>EVALUATOR: Operator will not sign the Performed By line, the Verified By line will be signed (Voltage Selector switch in proper position and not manipulated)</b></p>			

Proc. Step	TASK ELEMENT 13	STANDARD	Grade
n/a	Notify CRS that 1-1 D/G Voltage Regulator Test has been completed per Section 5.6 of MO-7A-2, for 1-2 D/G.	CRS notified that Section 5.6 of MO-7A-2 for Voltage Regulator Test Complete.	S U
<p>Comment:</p>			

**END OF TASK**

## CANDIDATE CUE SHEET

(TO BE RETURNED TO EXAMINER TO UPON COMPLETION OF TASK)

### INITIAL CONDITIONS:

- Diesel Generator 1-1 running unloaded at 60 Hz.
- MO-7A-1, "Emergency Diesel Generator 1-1" is in progress; all steps up to 5.6 are completed.
- Month is **January**.
- Plant is in Mode 1
- Auxiliary Operator is stationed at EC-22, Diesel Generator 1-1 Local Panel

### INITIATING CUES:

- During performance of MO-7A-1, the Control Room Supervisor directs you to perform Section 5.6 "Voltage Regulator Test."

## **SIMULATOR OPERATOR INSTRUCTIONS**

- Any at power IC can be used.
- Start EDG 1-1 in UNIT.
- Clear Local Alarm guage board on PIDE08, using ED27.