

CLINTON POWER STATION

Job Performance Measure

Parallel DG 1B With Off Site Power

JPM Number: 3506.0105

Revision Number: 02

Date: 07/31/2003

Developed By:	<u>T. Pickley</u>	<u>7/31/03</u>
	Instructor	Date
Validated By:	<u>M. Griffin</u>	<u>10/17/03</u>
	SME or Instructor	Date
Review By:	<u>P. Ryan</u>	<u>8/18/03</u>
	Operations Representative	Date

JOB PERFORMANCE MEASURE VALIDATION CHECKLIST

NOTE: All steps of this checklist should be performed upon initial validation.
Prior to JPM usage, revalidate JPM using steps 8 through 11 below.

- _____ 1. Task description and number, JPM description and number are identified.
- _____ 2. Knowledge and Abilities (K/A) references are included.
- _____ 3. Performance location specified. (in-plant, control room, or simulator)
- _____ 4. Initial setup conditions are identified.
- _____ 5. Initiating and terminating cues are properly identified.
- _____ 6. Task standards identified and verified by SME review.
- _____ 7. Critical steps meet the criteria for critical steps and are identified with an asterisk (*).
- _____ 8. Verify the procedure referenced by this JPM matches the most current revision of that procedure:
Procedure Rev. _____ Date _____
- _____ 9. Pilot test the JPM:
 - a. verify cues both verbal and visual are free of conflict, and
 - b. ensure performance time is accurate.
- _____ 10. If the JPM cannot be performed as written with proper responses, then revise the JPM.
- _____ 11. When JPM is revalidated, SME or Instructor sign and date JPM cover page.

SME/Instructor _____
Date

SME/Instructor _____
Date

SME/Instructor _____
Date

CLINTON POWER STATION
SYSTEM JPM

JPM NUMBER: 3506.0105

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Revision Record (Summary)

1. **Revision 00,** This is a new JPM
2. **Revision 01,** Incorporating NRC validation comments
3. **Revision 02,** New procedure revision

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Operator's Name: _____

Job Title: RO SRO

JPM Title: Parallel DG 1B With Off Site Power

JPM Number: 3506.0105

Task Number and Title: 350601.05, Complete Control Room Actions to Perform
Diesel Generator – Offsite Power Parallel Operation

K/A Number 264000.A4.01 Importance 3.3 / 3.4

Suggested Testing Environment: Simulator

Actual Testing Environment: Simulator Plant Control Room

Testing Method: Simulate **Alternate Path /Faulted:** Yes
 Perform

Time Critical: Yes No

Estimated Time to Complete: 30 minutes **Actual Time Used:** _____ minutes

References: CPS 9080.02, DIESEL GENERATOR 1B OPERABILITY - MANUAL
 AND QUICK START OPERABILITY, Revision 46a, Section 8.2.15
 CPS 3506.01C002, DIESEL GENERATOR START LOG

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EVALUATION SUMMARY:

Were all the Critical Elements performed satisfactorily? Yes No

The operator's performance was evaluated against the standards contained in this JPM,
and has been determined to be: Satisfactory Unsatisfactory

Comments: _____

Evaluator's Name: _____

Evaluator's Signature: _____ Date: _____

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READ TO THE OPERATOR

I will explain the initial conditions, which step(s) to simulate or discuss, and provide the initiating cues. When you complete the task successfully, the objective of this Job Performance Measure will be satisfied.

SIMULATOR SET-UP CONDITIONS:

Initialize to the Temporary IC established for this JPM, OR,
Initialize to any suitable IC with DG in standby, and:

- Start Diesel Generator 1B
- Load lesson plan to fail the voltage regulator switch to raise, but work in the lower direction, when the output breaker is shut.
- Synch Switch is off with key removed
- Mark up a copy of CPS 9080.01 to Step 8.2.13 for use by the examinee in performing this JPM.
- Fill out a CPS 3506.01C002, DIESEL GENERATOR START LOG
- Turn on recorder power to allow the SVC Voltmeter

TASK STANDARDS:

Diesel Generator 1B output breaker has been reopened.

TOOLS, EQUIPMENT, OTHER SPECIAL REQUIREMENTS:

None

PROCEDURAL/REFERENCES:

CPS No. 9080.02, DIESEL GENERATOR 1B OPERABILITY - MANUAL AND QUICK
START OPERABILITY, Revision 46a, Section 8.2.15
CPS 3506.01C002, DIESEL GENERATOR START LOG

EVALUATOR INSTRUCTIONS:

Amplifying cues are provided within the JPM steps.

INITIAL CONDITIONS AND INITIATING CUE:

Parallel Diesel Generator 1B with off-site power for a one hour run.
DG 1B was started per CPS 9080.02; Section 8.2 and steps are completed through Step 8.2.14.
Begin at Step 8.2.15.
Report when task is completed.

START TIME: _____

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PERFORMANCE INFORMATION

Critical steps are denoted with an asterisk (*) to the left of the step number and appear in **BOLDED** letters. Failure to meet the standards for a critical step constitutes failure of the Job Performance Measure. The sequence of steps is assumed unless denoted in the comments section of the JPM.

PERFORMANCE STEPS

***8.2.15.1** **Place DG 1B Output BKR SYNC switch to ON position.**

Standard Inserts a key and turns the Output BKR SYNC switch to ON

CUE

Comments

SAT UNSAT Comment Number

8.2.15.2 Adjust DG 1B voltage so that INCOMING voltage is matched with
RUNNING voltage.

Standard Examinee adjusts DG 1B voltage regulator so that INCOMING voltage is
matched with RUNNING voltage.

CUE

Comments

SAT UNSAT Comment Number

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- 8.2.15.3 Adjust DG 1A(1B) speed such that DG frequency is slightly greater than bus frequency as indicated by the following:
- 1) CLOCKWISE rotation of the synchroscope at a speed of approximately one revolution every 60-120 sec (i.e., 1/2 – 1 RPM) or slower.
 - 2) Both synchroscope lights are extinguished at the 12 o'clock position.
 - 3) Both synchroscope lights are brightly lit at the 6 o'clock position.

Standard Examinee adjusts DG 1B governor control switch so DG frequency is slightly greater than bus frequency by observing:

- Slow rotation in the clockwise direction
- Both synchroscope lights are extinguished at the 12 o'clock
- Both synchroscope lights are brightly lit at the 6 o'clock

CUE

Comments

SAT UNSAT Comment Number

8.2.15.4 Start GETARS recording.

Standard Examinee requests that GETARS be started.

CUE GETARS is running/recording.

Comments

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***8.2.15.5.1** **WHEN the synchroscope's pointer nears the vertical (12 o'clock) position and the synchronizing lamps go dark, THEN**

Close DG 1B Output Bkr, 1AP09EH.

Standard **When synchroscope pointer nears 12 o'clock, operator takes handswitch for DG 1B output breaker to CLOSE and observes RED light ON.**

CUE

Comments

SAT UNSAT Comment Number

8.2.15.5.2 Promptly load DG 1B to at least 100 - 200 KW.

Standard Examinee immediately loads diesel to at least >100 KW by taking governor control switch to RAISE.

CUE

Comments

SAT UNSAT Comment Number

***8.2.15.5.3** **Verify VARs between -500 and +500 KVAR; adjust as necessary.**

Standard Examinee identifies VARs are too high.
Tries to adjust and determines there is a problem with the voltage regulation.

CUE

Comments

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CAUTIONS

1. *To ensure that DGs are not overloaded and to maintain DG operability, DG load **should not** be allowed to exceed **3875 KW**, except for short periods of time. (Refer to 6.2.11).*
2. *DG Reactive (KVAR) loading shall be maintained within the limits of Appendix A, DG 1A/1B REACTIVE LOAD CAPABILITY CURVE.*

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Notify SRO of voltage regulator problem

Standard Examinee notifies SRO of voltage regulator problem.

CUE Ask Examinee for suggested action.
If ann. 5007-5m 4Kv Bus volts Hi alarm activates, then announce it as the ACRO.

Comments Examinee may suggest opening the DG output breaker or tripping the DG.

SAT UNSAT Comment Number

8.2.16.2 Lower DG 1B load to 100 - 200 KW

Standard Examinee takes handswitch for DG 1B governor control switch to LOWER

CUE

Comments If the examinee opens the DG output breaker or Trips the DG steps 8.2.16.2 and 8.2.16.3 are N/A.

SAT UNSAT Comment Number

8.2.16.3 Adjust DG 1A(1B) VARs to ≈ 0 KVAR

Standard Examinee takes handswitch for DG 1B voltage regulator to LOWER

CUE

Comments

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INITIATING CUE

Parallel Diesel Generator 1B with off-site power for a one hour run.
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Begin at Step 8.2.15.
Report when task is completed.