WEEKLY ELECTRICAL BUS SURVEILLANCE - Both Units in Modes 1 thru 4

CONTINUOUS USE

OBJECTIVE

To verify Operability of the offsite transmission network, onsite Class 1E distribution system (except the diesel generators), and the onsite DC systems as required by the Technical Specification Surveillance requirements: SR 3.8.1.1, SR 3.8.7.1, SR 3.8.9.1.

UNIT 2 MODE 5 UNIT 3 MODE 1 DATE 1-11-08

PERF. BY INITIALS

1.0 PREREQUISITES

(b)(6)

1.1 VERIFY this document is current by checking a controlled copy or by using the method described in SO123-VI-0.9.

1.2 Determine performance requirements of this surveillance:

☐ Scheduled Surveillance

☐ Post Maintenance: WAR # _____

☐ Partial Scheduled Surveillance.

☑ Other (e.g. Defueled, SDC secured, etc.): Prior to unit 2 mode 4 entry

TEST COMPONENT(S) All ~~associated with unit 2~~

☑ PERFORM ☐ MARK N/A STEPS All

CIRCLE N/A FOR UNUSED STEPS *(unused pages may be discarded)*

END OF SECTION 1.0

2.0 ACCEPTANCE CRITERIA

NOTE

If desired, then Attachment 3 may be used as an aid in performance of this attachment.

2.1 If any Step is answered NO, then IMMEDIATELY INFORM the SRO Ops. Supervisor, INITIATE a LCOAR or EDMR per applicable Tech. Specs., and document in the COMMENTS section. If only One qualified circuit between the offsite transmission network and the onsite Class 1E AC Electrical Power Distribution System is OPERABLE, then PERFORM SO23-3-3.23, Attachment for A.C. Sources Verification.

2.2 **Sync Circuit Check**
[SR 3.8.1.1]

■ Perform a Sync Circuit check per SO23-6-2, Section for Checking Sync Circuit Operation, and verify that ALL of the following breakers are SAT: (Circle N/A for any out of service breaker.)

2A0418, Res. Aux. Trans. 2XR1 Supply BKR.	(SAT) / UNSAT / NA
2A0417, Switchgear A04 Bus X-tie BKR.	(SAT) / UNSAT / NA
3A0418, Res. Aux. Trans. 3XR1 Supply BKR.	(SAT) / UNSAT / NA
3A0416, Switchgear A04 Bus X-tie BKR.	(SAT) / UNSAT / NA
2A0618, Res. Aux. Trans. 2XR2 Sup. BKR.	(SAT) / UNSAT / NA
2A0619, Switchgear A06 Bus X-tie BKR.	(SAT) / UNSAT / NA
3A0618, Res. Aux. Trans. 3XR2 Sup. BKR.	(SAT) / UNSAT / NA
3A0603, Switchgear A06 Bus X-tie BKR.	(SAT) / UNSAT / NA

If any Sync Circuit check is UNSAT, then REFER to Tech Spec. LCO 3.8.1 for the affected Unit and Declare the associated Train EDG INOPERABLE. The INOPERABLE EDG should not be placed in Maintenance Lockout as this would make the EDG unavailable for a real accident. The EDG is considered INOPERABLE because it may not fulfill its function to sync to the 1E bus for EDG Surveillance Runs or during recovery from Loss of Offsite Power event. (ARs 020501290, 031000894-2)

STEP PERFORMED BY (INITIALS): (b)(6)

2.0 ACCEPTANCE CRITERIA (Continued)

2.3 **230 kV Electrical Distribution:**
[SR 3.8.1.1]

YES/NO/NA	☑ At least two (2) offsite transmission lines connected to the offsite transmission network (switchyard) with at least one CB Closed on each OPERABLE 230 kV line (for independence, one line shall be from SCE and one line from SDG&E). AND ☑ **Unit 2:** At least two (2) physically independent transmission circuits between the offsite transmission network (switchyard) and the onsite Class 1E distribution system are OPERABLE. AND ☑ **Unit 3:** At least two (2) physically independent transmission circuits between the offsite transmission network (switchyard) and the onsite Class 1E distribution system are OPERABLE.
If NO, then REFER to Tech Spec. LCO 3.8.1 for both Units, and PERFORM the requirements of S023-3-3.23, Attachment for A.C. Sources Verification.	
STEP PERFORMED BY (INITIALS):	(b)(6)

CONTINUED ON NEXT PAGE

2.0 ACCEPTANCE CRITERIA (Continued)

2.4 **4160 V Electrical Distribution:**
[SR 3.8.1.1, 3.8.9.1]

YES/NO/NA	☐ All 4160 V Bus Tie Breakers (2A0417, 2A0619, 3A0603 and 3A0416) are Open, OPERABLE, and in AUTO. AND ■ **UNIT 2:** Both 2A04 and 2A06 are OPERABLE and energized from: ☐ Reserve Auxiliary Transformers 2XR1 through breaker 2A0418 and 2XR2 through breaker 2A0618. ✓ AND ☑ 2A04 and 2A06 Indicated voltage is > 4145 V to ≤ 4575 V. AND ■ **UNIT 3:** Both 3A04 and 3A06 are OPERABLE and energized from: ☑ Reserve Auxiliary Transformers 3XR1 through breaker 3A0418 and 3XR2 through breaker 3A0618. AND ☑ 3A04 and 3A06 Indicated voltage is > 4145 V to ≤ 4575 V.
If NO, then REFER to Tech Spec. LCO 3.8.9 for both Units.	
STEP PERFORMED BY (INITIALS)	(b)(6)

2.5 **480 V Electrical Distribution:**
[SR 3.8.9.1]

YES/NO/NA	☑ All 1E 480 V Load Centers (2B04, 2B06, 3B04 and 3B06) are OPERABLE and energized with indicated voltage between 445 V and 521 V with breakers properly aligned. 503/510
If NO, then REFER to Tech Spec LCO 3.8.9.	
STEP PERFORMED BY (INITIALS):	(b)(6)

END OF SECTION 2.5

2.0 ACCEPTANCE CRITERIA (Continued)

2.6 **Vital AC Buses:**

YES/NA SR 3.8.7.1	NOTE: Electrical Test Personnel are authorized to adjust Inverter Output Voltages after the "As-Found" Inverter Output Voltages have been recorded. ■ RECORD the "As-Found" Inverter Output Voltages obtained from Inverters and/or Electrical Test using a Fluke 187 V.O.M. or equivalent: (Enter N/A for voltage associated with any Out-Of-Service Inverter.) 121.8 Volts 2Y001 — 122.3 Volts 2Y002 — 121.5 Volts 2Y003 — 121.9 Volts 2Y004 122.0 Volts 3Y001 — 121.8 Volts 3Y002 — 121.4 Volts 3Y003 — 121.1 Volts 3Y004 ■ If any voltages are obtained from Electrical Test, then enter the name of the Technician: Name of Electrical Test Tech — DATE / TIME
YES/NO/NA [1] SR 3.8.9.1	☑ **UNIT 2:** All vital buses (2Y01, 2Y02, 2Y03 and 2Y04) are OPERABLE and energized by their associated inverters, with the inverters powered from their respective DC buses and the Inverter Output Voltages are between 119.5 V and 125.0 V. AND ☑ **UNIT 3:** All Vital buses (3Y01, 3Y02, 3Y03 and 3Y04) are OPERABLE and energized by their associated inverters, with the inverters powered from their respective DC buses and the Inverter Output Voltages are between 119.5 V and 125.0 V.

BZ36

[1] If NO, then Refer to Tech. Spec. LCO 3.8.7 and LCO 3.8.9.

If Inverter Output Voltage(s) are not between 119.5 V and 125.0 V, then:

a) Initiate a LCOAR.

b) Notify Electrical Test to adjust Inverter Output Voltages to obtain an "As-Left" voltage of between 121.0 V and 123.0 V.

c) Write an AR against the associated Inverter(s).

d) Document the LCOAR Number, AR Number, "As-Found", and "As-Left" Inverter Voltages in the Comments Section.

e) If the "As-Left" Inverter Voltage(s) are between 121.0 V and 123.0 V, then CLOSE Out the associated LCOAR.

STEP PERFORMED BY (INITIALS): (b)(6)

2.0 ACCEPTANCE CRITERIA (Continued)

2.7 **Vital DC Buses:**

YES/NO/NA [2], [3] SR 3.8.4.1 SR 3.8.9.1	☑ **UNIT 2:** All DC buses (2D1, 2D2, 2D3 and 2D4) are OPERABLE and energized (indicated bus voltage ≥ 129 VDC) by their respective battery banks and full capacity chargers and the associated breakers are properly aligned. AND ☑ **UNIT 3:** All DC buses (3D1, 3D2, 3D3 and 3D4) are OPERABLE and energized (indicated bus voltage ≥ 129 VDC) by their respective battery banks and full capacity chargers and the associated breakers are properly aligned.

[2] BOOX satisfies the battery requirements for bus 2(3)D1 through 2(3)D4 **ONLY** when it is connected to that 125 VDC bus. (ECP 001000280-30)

[3] If NO, then REFER to Tech. Spec. LCO 3.8.4 and LCO 3.8.9. If 2(3)D1, or 2(3)D2 bus voltages are < 129 VDC, then also REFER to Tech. Spec. LCO 3.8.1 for both Units (provides control power for the 4kv Bus Tie breakers).

(b)(6)

STEP PERFORMED BY (INITIALS)

COMMENTS: _____

Surveillance completed 1-11-08 / 14:30 (TIME) and log entry made.

(b)(6)

PERFORMED BY:

REVIEWED BY: _____ SRO Ops. Supv. 1/11/08 (DATE) , 1439 (TIME)

FILE DISPOSITION: File per SO123-0-A3.

REVIEWED BY

JAN 21 2008

(b)(6)