

NOTIFICATION OF A FAILED OR OPERABLE EQUIPMENT OR PAST DUE SURVEILLANCE

I MAINTENANCE NOTIFICATION TO OPERATIONS (Complete top half)

UNIT 2 EQUIPMENT ID 521806 EBC09

EQUIPMENT DESCRIPTION: \_\_\_\_\_

PROCEDURE TITLE AND NUMBER: SO123-I-2.2

TECHNICAL SPECIFICATION: \_\_\_\_\_

M.O# 08031473000 WAR# N/A

REMARKS (Provide Explanation): BATTERY FAILED ACCEPTANCE CRITERIA

OF 129.17 Vdc WITH A READING OF 121.29 ON STEP 6.2.1

PREPARED BY	(b)(6)		3/25/08	1135
		COGNIZANT SUPERVISOR (signature)	DATE	TIME
RECEIVED BY:	(b)(6)		3/25/08	1143
		SHIFT SUPERVISOR (signature)	DATE	TIME

II OPERATIONS RESPONSIBILITIES

Operations responsibilities are stated in SO123-0-A5.

C-24

QUALITY FIRST

ORIGINAL

UNIT 2

SONGS MAINTENANCE ORDER NO: 08031473000



83/mcc/999

CATEGORY: 70 - Work in Progress

REPETITIVE MAINT. NO. - 10002002000

INTERVAL 01

FREQUENCY - M

RESPONSIBLE ORG: ELECTRICAL UNIT 2

MAINTENANCE TYPE: SV

EQUIPMENT ID: S21806EB007

PC: CB

CONST. CODE: N/A

PRIORITY: DD

SU SYSTEM: PKA ACCOUNTING DISTRIBUTION: 0101 1001

QC WITNESS HOLD REQD: N

PMO DESC: 125VDC STATION BATTERY 2D1

LOCATION: AREA: CB ROOM: 306E ELEVATION: 150 COLUMN: 18.5N1

QUAL CLASS: 2

\*\*\*\* NOTE: WORKLIST ATTACHED \*\*\*\*

DESCRIPTION:

WEEKLY IE BATTERIES INSP.- UNIT 2

RCM-CRITICAL TS RCM PMO AR040201231-97

3-25-08

REMARKS:

New Add BBOX.

REQUESTOR DATA:

CREW CODE: EWO

DCP:

ENVIRN QUAL: N

PROJECT CODE:

SEIS: 1

REQUESTING DEPT: ELL

REQUESTOR NAME: (b)(6)

PAX: (b)(6)

REQUIREMENTS:

WORK AUTH REQD? N

FIRE PROT. ADMIN. REQD? Y

WORK AUTH TYPE? N

SECURITY REQD? N

ASME CODE WORK? N NO. N/A

SSR REQD?

MO TO DISP WORK? N NO. N/A

ENGINEERING REQD? N

TEMPORARY MOD.? N NO. N/A

FME REQUIREMENTS? N

R.E.P. EVAL. REQD? N

FCN REQD? NO.

CREACUS BREACH? N

ECP REQD? NO.

SCHEDULING:

R.M. DUE DATE 3 25 2008 00:00

RTTS: DUE DATE 3 25 2008 07:00

VIOLATION DATE 3-27-2008 01:00

SCHEDULED START DATE 3 25 2008 00:30

SCHEDULED COMP DATE 3 25 2008 18:00

cat 8/4-4 (b)(6)

MO OBJECTIVE:

Perform weekly inspection of IE batterys.

POOR QUALITY DOCUMENT BEST AVAILABLE COPY	
SIGNED	(b)(6)
	ATE

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**FIRE PROTECTION/SECURITY REQUIREMENTS:**

DOOR TO BE OPEN.

DOOR MAYBE KEPT OPEN FOR UP TO 45 MINUTES WITHOUT AN IFFRA AND A 50.59 EVALUATION AS LONG AS SOMEONE IS PRESENT TO CLOSE THE DOOR IF NECESSARY. OTHERWISE, OBTAIN AN IFFRA AND A 50.59 (IF NECESSARY) PRIOR START OF WORK. CONTACT IFFRA COORDINATOR AT PAX 86641 FOR INITIATION.

IF AN IFFRA IS REQUIRED, THE IFFRA MUST BE REQUEST FOR ACTIVATION PRIOR TO START OF WORK. CONTACT IFFRA COORDINATOR TO ACTIVATE IFFRA.

IF THE IFFRA COORDINATOR IS UNAVAILABLE, THEN CONTACT FIRE PROTECTION SERVICES AT PAX 86655 TO ACTIVATE THE IFFRA.

NOTE: AT LEAST 24-HOURS ADVANCE NOTIFICATION IS REQUESTED PRIOR TO ACTIVATION.

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**PRECAUTIONS:**

APN ARTICLES 111 AND 102 APPLY TO THIS MO.

A TAILBOARD WILL BE CONDUCTED PRIOR TO START OF WORK WITH FOREMAN OR HIGHER LEVEL OF SUPERVISION TO ENSURE A COMPLETE UNDERSTANDING OF THE TASK.

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**POSITIVE COMPONENT VERIFICATION:****REQUIRED OBSERVABLE BEHAVIOR STEPS**

As requested in the draft surveys, in order to increase compliance and effectiveness in conducting positive component verifications (PCV's), the below required observable behavior steps have been included in the MO CMO as an aide. These steps should be performed PRIOR to performing work on equipment, components, or terminations. See SO123-I-1.43 "Maintenance Human Performance Application" for complete PCV program requirements and labeling exceptions.

**A. PRIOR TO LOCATING EQUIPMENT IN FIELD (TYPICALLY DONE DURING PRE-JOB BRIEF):**

Step 1: 'IDENTIFY TARGET ID' - Write down the 'Target ID' on the PCV Tracking Record (Attachment 3 of SO123-I-1.43) or MO/CMO.

Step 2: 'VERIFY CORRECT ID' - Compare written 'Target ID' with the "MO/CMO Equipment ID" to validate that the "Target ID" was written correctly.

**B. AT JOB SITE:**

Step 3: 'LOCATE EQUIPMENT' - With the MO CMO in hand, compare the "Target ID" to the component identifying label using verbalization (point-shout-shoot).

Step 4: 'WRITE EQUIPMENT ID' - Write down the component-identifying label 'Equipment ID' next previously written "Target ID".

Step 5: 'INITIAL & DATE' - Compare the written down component-identifying label 'Equipment ID' with the "Target ID" and initial and date if the ID's match exactly (See SO123-I-1.43 for approved labeling exceptions). If the ID's do not match exactly, STOP and contact the work supervisor to resolve in accordance with Procedure SO123-I-1.43.

**C. SECOND COGNIZANT EMPLOYEE:**

Step 6: 'SECOND-PERSON SELF CHECK' - A second person should repeat Step 3 and initial signifying agreement that the intended component has been positively identified. (Note: The responsible supervisor may waive the second-person self-check based on a SAFER evaluation.)

WORK PLAN DETAIL:

The correct equipment/component must be positively identified prior to performing any work.

\*\*\* THIS M.O. IS ON EQUIPMENT WHICH REQUIRES RECORDING OF M&TE USE AS \*\*\*  
 \*\*\* DESCRIBED IN SO123-XV-1 'CALIBRATION AND CONTROL OF MEASURE AND \*\*\*  
 \*\*\* TEST EQUIPMENT'. \*\*\*

DWGS REFS:

EQ REFS: None

POSITIVE COMPONENT VERIFICATION

The spec for steps of performing Positive Component Verification should be repeated for each task:

- When conducted by different worker.
- After an extended break from work.
- When the level of distraction is high.
- When working in Skill-Base or Rule-Base performance modes.
- or As directed by the work supervisor.

Equip ID's	Initial Date	End Ver.	Equip ID's Field	Initial Date	End Ver.
S21806EB007	(b) 3/25/08 (6)	(b) 3-25-08	28007	(b) 3/25/08 (6)	(b) 3-25-08
S21806EB008	(b) 3/25/08 (6)	(b) 3-25-08	28008	(b) 3/25/08 (6)	(b) 3-25-08
S21806EB009	(b) 3/25/08 (6)	(b) 3-25-08	28009	(b) 3/25/08 (6)	(b) 3-25-08
S21806EB010	(b) 3/25/08 (6)	(b) 3-25-08	28010	(b) 3/25/08 (6)	(b) 3-25-08
000X	(b) 3/25/08 (6)	(b) 3-25-08	000X	(b) 3/25/08 (6)	(b) 3-25-08
S21806EB009	(b) 3/25/08 (6)	(b) 3/25/08	28008	(b) 3/25/08 (6)	(b) 3/25/08

1. PERFORM TECH SPEC SURVEILLANCE IAW THE LATEST REV AND TCM OF SO123 I-0.1

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## (WORK PLAN DETAIL CONTINUED)

WITH THE EXCEPTION OF SECTION 6.9, ON ALL WORK LISTED COMPONENTS.

1. THOROUGHLY INSPECT THE GENERAL APPEARANCE AND CLEANLINESS OF EACH BATTERY AND BATTERY AREA AS FOLLOWS:

- AS NECESSARY, WIPE THE CELL JARS, BATTERY BACKS, AND FLOOR WITH A SOLUTION OF BICARBONATE SODA AND COLD, DISTILLED OR DI WATER.
- WIPE AGAIN USING CLEAM DISTILLED OR DI WATER.
- VERIFY NON-ESSENTIAL EQUIPMENT AND DEBRIS HAS BEEN REMOVED FROM EACH BATTERY ROOM.

**PLANNING APPROVALS:**

	BY	DATE	TIME
FIRE PROTECTION REVIEW	CAVANAUGH, EDWARD D	02 12 96	14:14:00
WORK PLANNED	CAVANAUGH, EDWARD D	02 12 96	14:13:00
WORK PLANNED REVIEW	HOPHERSON, ROBERT J	02 12 96	14:14:45
WORK SCHEDULED	SANDERS, EILEEN M	02 20 96	07:45:11

**PROCEDURE LIST:**

PROCEDURE ID      PER ION

1. SO123-I-2.2      127 000  
Desc: 125 VDC PILOT CELL BATTERY INSPECTION

**CRAFT INFORMATION:**

CRAFT CODE	CRAFT DESCRIPTION	QTY	ESTIMATED HOURS	ACTUAL HOURS
1 - EI	ELECTRICIAN	1.0	6.0	<u>20</u>
2 - SP	FIRST LINE SUPERVISOR	1.0	2.0	<u>---</u>

**WORK DONE:**

Work Started: Date - 3 / 25 / 08 Time - 04:00
3-25-08 (1) PERFORMED TECH SPEC SURVEILLANCE IAW
SO123-I-2.2 WITH EXCEPTION OF SECT. 6.9. BANK 20000
WAS UNSAT ON OVERALL VOLTAGE 121.29 VDC NOTIFIED SUPERVISOR

08031473-0

(WORK DONE CONTINUED)

JERON LEE ALL OTHER WORKLISTED BANKS SAT.

② VISUALLY INSPECTED AND CLEANED BATTERIES AS  
NECESSARY. 2 EY/4 HRS (b)(6) (8)3-25-08 Performed Tech spec. Surveillance IAW SO123-1-2.2  
on 2D2/2B008 with Exception of section 6.9. 2D2  
Voltage Readings were sat. 2 ELX 6 hrs (b)(6) (12)

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**FINAL APPROVALS:**

Work tools management is "clean as you go" expectations IAW SOLIB-WV-23.1. Areas where individuals performed work are left in a better condition than it was before the work was performed. Tools, equipment, and materials removed, and the area cleaned.

VERIFIED BY:

(b)(6)

3 25 08 22.00

PRINT NAME:

STEP ENTRY REVIEWED BY:

(b)(6)

3 25 08 22.00

COMPLETED BY:

3 26 08 22.00

PRINT NAME:

1ST LINE SUPER:

3 25 08 22.40

PRINT NAME:

2ND LINE SUPER:

3 25 08 22.40

PRINT NAME:

FLANNER REVIEW:

3 25 08 23.10

PRINT NAME:

**EQUIPMENT WORK LIST:**

NAME	EQUIPMENT ID	PC	SYSTEM	O-CLASS	EQ AREA	ROOM	ELEV	COLUMN	INITIAL	DATE
001816EB017	PKA	2	N	CB	306E	550	18.5N1	(b)(6)	<u>3 25 08</u>	
100VDC STATION BATTERY 2D1										
DO EQUIPMENT ID										
001816EB018	CB	PKA	2	N	CB		50		<u>3 25 08</u>	
BANK BATTERY										
001816EB019	PKA	2	N	CB	306E	550	18.5L1		<u>3 25 08</u>	
100VDC STATION BATTERY 1D1										
001816EB019	PKA	2	N	CB	306D	500	18.8M5		<u>3 25 08</u>	
100VDC STATION BATTERY 1D3										

08031924  
23  
22



08031473000

ORIGINAL ? Category 70

(EQUIPMENT WORK LIST CONTINUED)

4 8118.683010  
11500 STATION BATTERY 104

PKA 2 0 0B 3060 50' 18.5MO

(b)  
(6)

3 25 08

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## 1.0 OBJECTIVES

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- 1.1 This procedure provides guidance for performing the Weekly 125 volt Battery Bank and Charger operability verification checks.
- 1.2 This procedure satisfies the surveillance requirements specified in the Unit 2 and Unit 3 Technical Specifications, LCO - SR, Sections 3.8.4.1, 3.8.5.1, 3.8.6.1, and Table 3.8.6-1 Category "A" Limits.
- 1.3 This procedure performed at least monthly, satisfies the requirements stated in IEEE Std. 450-1980.
- 1.4 This procedure is applicable to the 125 VDC Station Battery Banks.

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## 2.0 REFERENCES

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- 2.1 Refer to Attachment 1 for the Procedure Resource List.

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## 3.0 PREREQUISITES

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- 3.1 Before starting work, the user **SHALL** verify this procedure is current by referring to NDMS or one of the other methods listed in SO123-I-1.3.
- 3.2 Enter the following data:  
  
MO# 08031473000 Unit 2 Equip Id: 52180650007
- 3.3 This procedure **MAY** be performed while Equalize Charging the Battery Bank unless one of the conditions listed in Section 3.4 is true.

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**NOTE:** IF the intent of performing this procedure is for information only, THEN a 72 hour Float Charge is **NOT** required.

- 3.4 When performing an "EQUALIZE CHARGE" for one of the following conditions, this procedure **SHALL NOT** be performed until verifying the Battery Bank has been on "FLOAT CHARGE" for 72 hours.

**NOTE:** Rapid Recharge is the exception to the following step, because when completed successfully, the Rapid Recharge ensures that the Battery Bank Charging Current is less than 2 amps. Technical Specification Table 3.8.6-1, Footnote (b) states that a Level Correction is **NOT** required when the Battery Charging current is less than 2 amps.

- 3.4.1 Battery Bank is on "EQUALIZE CHARGE" for quick recovery following any Battery Bank Discharge. .
- 3.4.2 Battery Bank is on "EQUALIZE CHARGE" following a water addition from below the "LOW LEVEL MARK" to one or more Battery Cells.
- 3.4.3 If the Battery Bank was on "EQUALIZE CHARGE" for one of the conditions listed above, the Supervisor **SHALL** verify the battery bank has been on "FLOAT" charge for 72 hours before performing this procedure.

N/A

\_\_\_\_\_  
VERIFIED BY Supervisor      Date

- 3.5 The battery room ventilation system is in operation.
- 3.6 An operable OSHA approved, eye wash facility is available near the battery bank.
- 3.7 The above Prerequisites have been verified.

(b)(6)

3-25-08

\_\_\_\_\_  
VERIFIED BY      Date

#### 4.0 PRECAUTIONS

- 4.1 For the tasks listed below, use the following minimum Personnel Protective Equipment ( PPE ) to prevent Acid / Caustic burns.

**NOTE:** The listed Physical Inspection PPE assumes that the corrosion material is mixed in with the grease on the Intercell Connections and there is no potential for airborne contamination.

- 4.1.1 **Physical Inspection / Cleaning:**  
Safety Glasses, and Long Sleeve Shirt ( Non-Synthetic )
- 4.1.2 **Battery Voltage Readings / Test Connections:**  
Safety Glasses, and Long Sleeve Shirt ( Non-Synthetic )
- 4.1.3 **Specific Gravity Readings:**  
Safety Glasses, Long Sleeve Shirt ( Non-Synthetic ), and Acid Resistant Gloves.
- 4.1.4 **Electrolyte Recirculation / Acid Additions:**  
Goggles, Face Shield, Rubber Apron, Acid Resistant Gloves, and Long Sleeve Shirt ( Non-Synthetic )

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6.1.4 When using this procedure to verify the battery bank meets the Required Action stated in LCO 3.8.4C.1 ( *Table 3.8.6-1, Category "A" Limits* ) perform the following, and record data in Attachment 12:

- .1 Step 6.2.1 ( *Battery Bank Voltage* ), LCO SR 3.8.4.1,
- .2 Step 6.3.1 ( *Cell Voltage* ), Category "A" Limit,
- .3 Step 6.5.2 ( *Electrolyte Level* ), Category "A" Limit,
- .4 Section 6.6 ( *Specific Gravity Measurement* ), and
- .5 Section 6.8 ( *Calculation of Corrected Specific Gravity* ), Category "A" Limit.

6.1.5 As necessary, refer to the information below when using the listed test equipment:

- .1 DMA-35N Digital Hydrometer, Attachment 5,
- .2 DC Clamp-On Ammeter, Attachment 6.

6.1.6 Craft who initial a step in this procedure **SHOULD** print their name and initial below.

(b)(6)

_____	_____	_____	_____
<i>print name</i>	<i>initial</i>	<i>print name</i>	<i>initial</i>

END OF SECTION

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**NOTE:** When taking Battery Bank Terminal Voltage, use a **Fluke 187** (equivalent or better) set on the **500V** range. If necessary, reference Design Calc E4C-017.

## 6.2 Battery Bank Voltage

### T/S REQUIREMENT

6.2.1 Measure Battery Bank Terminal voltage. Record readings below.

#### ACCEPTANCE CRITERIA

All 125 VDC Battery Banks:  $\geq 129.17$  VDC

131.75 VDC

SAT	<input checked="" type="checkbox"/>	Go to Step 6.2.2.	UNSAT	<input type="checkbox"/>	Perform Corrective Actions as Follows.
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- 1 Immediately notify your Supervisor of the "UNSAT" condition.
- 2 This Supervisor **SHALL** report a failed Surveillance according to Procedure SO123-I-1.3.
- 3 Notify the Engineer, and generate an AR.

(b)(6)

☐ CHK CPL

☐ CHK CPL

☐ CHK CPL

SECTION CONTINUES ON NEXT PAGE →

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