Inspection of Emergency Lights For General Purpose Facilities

Central Operations and Maintenance Services Procedure

USQ # GCX-2

CHANGE HISTORY (≤ LAST 5 REV-MODS)

<table>
<thead>
<tr>
<th>Rev-Mod</th>
<th>Release Date</th>
<th>Justification</th>
<th>Summary of Changes</th>
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<tbody>
<tr>
<td>B-0</td>
<td>04/04/2016</td>
<td>Periodic Review</td>
<td>No Changes</td>
</tr>
<tr>
<td>A-1</td>
<td>11/18/2014</td>
<td>CHAMPS Removal</td>
<td>Removed reference to CHAMPS, updated records statements and removed next periodic review date.</td>
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<tr>
<td>A-0</td>
<td>04/30/2014</td>
<td>New procedure</td>
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1.0 PURPOSE AND SCOPE

1.1 Purpose

This procedure provides a method to check, test, and repair or replace the emergency lights for non-radiological General Purpose Facilities and document these activities on the applicable data sheet(s).

1.2 Scope

This procedure involves the monthly and annual maintenance on General Purpose Facility emergency lights.

2.0 INFORMATION

NONE

3.0 PRECAUTIONS AND LIMITATIONS

3.1 Radiation and Contamination Control

Work will be performed in non-radiological areas.

3.2 Environmental Compliance

If any hazardous waste is generated during performance of this procedure, consult Facility/Plant/Area Hazardous Waste Coordinator for specific instructions to ensure compliance with all environmental standards for disposal.
4.0 PREREQUISITES

4.1 Special Tools, Equipment, and Supplies

The following tools may be needed to perform this procedure:
- Multi-meter,
- Other tools, equipment and supplies as identified by Shift Manager/OE/FWS.

4.2 Performance Documents

The following documents may be needed to perform this procedure:
- Site form A-6004-227, Radiological Evaluation For Release
- Site form A-6005-189, Certification Of Scrap Metal For Recycling
- TFC-ESHQ-S_SAF-C-02, Job Hazards Analysis
- DOE-0336, Hanford Site Lockout/Tagout Procedure
- TO-100-052, Perform Waste Generation, Segregation, Accumulation and Clean-up.

4.3 Field Preparation

4.3.1 **OBTAINT** release from Operations Management prior to beginning performance of this procedure.

4.3.2 **SPECIFY** only qualified electrical personnel work on batteries.

4.3.3 **CHECK** personnel working on batteries have current hazardous waste generator training.
5.0 **PROCEDURE**

**NOTE** - Sections 5.1, 5.2, and 5.3 may be worked independently.

5.1 **Perform Inspection and Testing of Emergency Lights**

**NOTE** - Steps 5.1.1 through 5.1.5 may be performed in any logical order.

- Steps 5.1.1 through 5.1.5 are to be performed for both annual and monthly inspections.

**Monthly and Annual Inspection**

5.1.1 **CHECK** electrical cords and cord caps for cracking and damage.

5.1.2 **CHECK** that lamps are not cracked or damaged.

5.1.3 **CHECK** that unit is securely mounted.

5.1.4 **CHECK** that lamps are properly positioned to provide illumination for the required areas.

5.1.5 **IF** equipped with indicating meters, **CHECK** for normal charge indication.

5.1.6 **IF** performing annual inspection **GO TO** Step 5.1.11.

**Monthly Inspection**

**NOTE** - The lamps should illuminate within ten seconds after unit is de-energized or the test button is depressed.

5.1.7 **CHECK** operation of light by performing one of the following steps for a minimum of 30 seconds:

5.1.7.1 **PRESS** test button,

**OR**

**UNPLUG** power cord,

**OR**

**POSITION** electrical circuit in OFF/OPEN position.

5.1.8 **RECORD** PASS/FAIL condition on Monthly Emergency Light Inspection Data Sheet.
5.1 Perform Inspection and Testing of Emergency Lights (Cont.)

5.1.9 IF the unit fails inspection or testing, PERFORM the following:

5.1.9.1 NOTIFY FWS.

5.1.9.2 OBTAIN approval from Shift Manager/OE, when use of authorized worker lockout/tagout in accordance with DOE-0336, Hanford Site Lockout/Tagout Procedure is necessary.

5.1.9.3 INITIATE immediate actions to repair or replace.

5.1.9.4 IF unable to repair/replace within 24 hours, CONTACT jurisdictional authority for recommended path forward until the permanent fixture(s) can be repaired or replaced.

5.1.10 DOCUMENT action in the comment section of the Data Sheet for equipment history records AND

GO TO Section 5.4.
5.1 Perform Inspection and Testing of Emergency Lights (Cont.)

Annual Inspection

5.1.11 TEST operation of units for 90 MINUTES.

5.1.11.1 PRESS test button,

OR

UNPLUG power cord,

OR

POSITION electrical circuit in OFF/OPEN position.

5.1.12 RECORD PASS/FAIL status on Annual Emergency Light Inspection Data Sheet.

5.1.13 REPORT all exceptions on the Work Package Craft Usage Log AND INCLUDE any additional work required, or safety concerns.

5.1.14 IF the unit fails inspection or testing, PERFORM the following:

5.1.14.1 NOTIFY FWS.

5.1.14.2 OBTAIN approval from the Shift Manager/OE, when use of Authorized Worker Lockout/Tagout in accordance with DOE-0336, Hanford Site Lockout/Tagout Procedure is necessary.

5.1.14.3 INITIATE immediate actions to repair or replace.

5.1.14.4 RETEST per manufacturers recommendations.

5.1.14.5 IF unable to repair/replace within 24 hours, CONTACT jurisdictional authority for recommended path forward until the permanent fixture(s) can be repaired or replaced.

5.1.15 DOCUMENT action in the comment section of the Data Sheet for equipment history records AND

GO TO Section 5.4.
5.2 Perform Inspection and Testing of Exit Signs

5.2.1 IF performing an Annual Inspection, GO TO Step 5.2.9.

Monthly Inspection of Powered Exit Signs

5.2.2 VISUALLY INSPECT exit signs for damage.

5.2.3 CHECK that unit is securely mounted.

NOTE - The test button only simulates the interrupted power condition, but can be used if the exit sign is connected to the normal lighting source.

5.2.4 ENSURE test button/switch or circuit breaker that controls normal lighting for the area in which the exit sign is located, is in the OPEN/OFF position.

5.2.5 TEST operation of units for 30 Seconds.

5.2.6 RECORD PASS/FAIL condition on Monthly Exit Sign Inspection Data Sheet.

5.2.7 IF dirty, CLEAN the EXIT sign to the extent possible.

5.2.8 GO TO Step 5.2.14.

Annual Inspection of Powered Exit Signs

5.2.9 VISUALLY INSPECT exit signs for damage.

5.2.10 CHECK that unit is securely mounted.

NOTE - The test button only simulates the interrupted power condition, but can be used if the exit sign is connected to the normal lighting source.

5.2.11 ENSURE test button/switch or circuit breaker that controls normal lighting for the area in which the exit sign is located, is in the OPEN/OFF position.

5.2.12 TEST operation of units for 90 minutes.

5.2.13 RECORD PASS/FAIL status on Annual Emergency Sign Inspection Data Sheet.

5.2.14 REPORT all exceptions on the Work Package Craft Usage Log AND INCLUDE any additional work required, or safety concerns.
5.2 Perform Inspection and Testing of Exit Signs (Cont.)

5.2.15 IF the unit fails inspection or testing, PERFORM the following:

5.2.15.1 NOTIFY FWS.

5.2.15.2 OBTAIN approval from the Shift Manager/OE, when use of Authorized Worker Lockout/Tagout in accordance with DOE-0336, Hanford Site Lockout/Tagout Procedure is necessary.

5.2.15.3 INITIATE immediate actions to repair or replace.

5.2.15.4 RETEST per manufacturers recommendations.

5.2.16 DOCUMENT actions in the comment section of the Data Sheet for equipment history records.
5.3 Annual Inspection of Tritium or Self Illuminating Exit Signs

5.3.1 VISUALLY INSPECT exit signs for damage.

5.3.2 CHECK that unit is securely mounted.

5.3.3 CHECK expiration date.

5.3.4 RECORD PASS/FAIL status on Annual Emergency Sign Inspection Data Sheet.

5.3.5 REPORT all exceptions on the Work Package Craft Usage Log AND INCLUDE any additional work required, or safety concerns.

5.3.6 REPLACE the following:
   • EXIT signs that are damaged
   • EXIT signs with expiration dates that will terminate before the next inspection cycle.

5.3.7 DOCUMENT actions in the comment section of the Data Sheet for equipment history records.
5.4 Restoration

5.4.1 IF restoring from inspection of emergency lights, **PERFORM** the following:

5.4.1.1 **CONFIRM** actions listed on Data Sheet(s) have been performed.

5.4.1.2 **ENSURE** unit(s) are energized with AC power.

a. **IF** unit has a charge indicator, **CHECK** charge indication is functioning.

5.4.1.3 **DISPOSE** of any batteries that failed inspections as follows:

a. **COMPLETE** site forms A-6004-227.

b. **COMPLETE** site form A-6005-189 for any scrap metal destined for recycling.

c. **CONTACT** Waste Operations at 372-1208 **AND** **MAKE** arrangements to turn failed batteries over to them.

5.4.2 IF restoring from inspection of Exit Signs, **PERFORM** the following:

5.4.2.1 **ENSURE** system is returned to normal operation.

5.4.2.2 **IF** circuit breaker was opened or turned off, **ENSURE** it is in the CLOSED/ON position.

5.5 Acceptance Criteria

5.5.1 **REPAIR OR REPLACE** emergency light(s) and/or exit signs found deficient within 24 hours

   **OR**

   **FOR** emergency light(s) only, **CONTACT** jurisdictional authority for recommended path forward until the permanent fixture(s) can be repaired or replaced.

5.5.2 **FOR** Annual Inspections, **CONFIRM** emergency lights and powered exit signs are operational at the end of the 90 minute test.

5.5.3 **FOR** tritium or self-illuminating exit signs, **CONFIRM** expiration date is greater than one (1) year from inspection date.
5.6 Review

5.6.1 INFORM FWS test is complete.

5.6.2 FWS REVIEW AND CONFIRM the following:

- Completed Data Sheets meet the acceptance criteria.
- Comments sections are filled out appropriately.
- Work requests needed as a result of this procedure are identified and generated.
- Work request number(s) of any work documents generated as a result of this procedure, are recorded in the Comments/Remarks section of the Data Sheet.

5.7 Records

The performance of this procedure generates no records. However, PM Data Sheets associated with the procedure, are records and are maintained in the work package as record material.

The record custodian identified in the Company Level Records Inventory and Disposition Schedule (RIDS) is responsible for record retention in accordance with TFC BSM IRM_DC C 02.