
Commercial Building Emergency Exit Lighting Monthly Battery Test

1.0 Objective & Intent

The objective of this SOP is to establish a standardized procedure for monthly battery testing of emergency exit lighting systems in commercial buildings. This test ensures that all exit signs and emergency egress lighting units are functional, adequately illuminated, and capable of providing at least 30 minutes of emergency lighting during a power outage, as required by WorkSafeBC regulations (OHS Regulation Part 4 – General Conditions, Section 4.5). The intent is to mitigate the risk of occupant injury or panic during an emergency evacuation caused by inadequate or failed emergency lighting, thereby maintaining a safe means of egress.

2.0 Operational Scope

This procedure applies to all maintenance personnel, facility managers, and safety officers responsible for the inspection and testing of emergency exit lighting within commercial buildings under the jurisdiction of WorkSafeBC. It covers all permanently installed emergency exit signs, egress lighting units (including battery-backed LED and fluorescent fixtures), and remote emergency lighting heads located in corridors, stairwells, exit doors, and other designated egress paths. This SOP does not cover annual full-duration discharge testing or generator-backed emergency lighting systems, which are addressed in separate procedures.

3.0 Hazard Identification & Mandatory PPE

- Electrical Shock: Contact with live electrical components during testing or maintenance of emergency lighting fixtures.
- Fall from Height: Using ladders or step stools to reach ceiling-mounted fixtures.
- Slip/Trip Hazards: Cords, tools, or debris in walkways during testing.
- Burns: Contact with hot lamps or battery terminals.
- Chemical Exposure: Leaking or damaged batteries (lead-acid or Ni-Cd) may release corrosive or toxic substances.
- CSA-Approved Steel Toed Boots
- Safety Glasses with side shields
- Class 0 Rubber Insulating Gloves (when handling live electrical parts)
- Hard Hat (if working in areas with overhead hazards or low clearance)
- High-Visibility Vest (if testing in areas with vehicle traffic or low light)

4.0 Required Safety Equipment & Tools

- Lockout/Tagout (LOTO) Kit with personal lock and hasp (if required for isolating circuits)
- Non-Contact Voltage Tester (NCVT) rated for the circuit voltage
- Multimeter (capable of measuring AC/DC voltage and resistance)
- Insulated Screwdrivers (set, various sizes)
- Step Ladder or Platform Ladder (CSA-approved, rated for the user's weight)
- Flashlight or Headlamp (for inspecting dark areas after test initiation)
- Spill Kit (for battery acid or electrolyte leaks)
- Disposable Gloves (nitrile or rubber, for handling batteries)

- Inspection Log or Digital Device (for recording test results per SafeDesk)

5.0 Step-by-Step Safety Procedure

1. Notify all building occupants and facility management of the scheduled monthly emergency lighting test via intercom, email, or posted notice. Ensure no critical operations (e.g., surgeries, data center maintenance) are in progress that require uninterrupted lighting.
2. Visually inspect each emergency exit light fixture for physical damage, corrosion, loose connections, or signs of battery leakage. Verify that the fixture is securely mounted and that the lens is clean and unobstructed. Do not proceed if the fixture shows signs of damage or battery leakage; tag it out and report for repair.
3. Using a non-contact voltage tester, verify that the fixture is receiving normal AC power (typically 120V or 277V) before initiating the test. If no voltage is detected, check the circuit breaker and ensure it is in the ON position. Do not proceed until power is restored to the fixture.
4. Locate the test button or switch on the fixture (usually a small push button or toggle). For fixtures without a test button, proceed to the next step to simulate a power failure by turning off the dedicated circuit breaker for that fixture. Ensure the breaker is clearly labeled and that LOTO is applied if multiple personnel are involved.
5. Press and hold the test button (or turn off the circuit breaker) to simulate a power failure. The fixture should immediately switch to battery power, and the exit sign or emergency light should illuminate. Note the exact time the test begins.
6. Observe the fixture for the duration of the test (minimum 30 seconds for a monthly test, but the fixture must be capable of 30 minutes). Verify that the illumination level is adequate (at least 10.8 lux at floor level along the egress path, or as specified by the manufacturer). Check that all lamps/LEDs are functioning and that there is no flickering or dimming.
7. After the test period (30 seconds minimum), release the test button or turn the circuit breaker back to the ON position. The fixture should revert to normal AC power and the battery should begin recharging. Verify that the indicator light (usually green or red) shows normal charging status. If the indicator light is off or shows a fault, tag the fixture for repair.
8. Record the test results in the inspection log or SafeDesk digital system. Document the fixture ID, location, date, time, test duration, pass/fail status, and any observations (e.g., dim lighting, flickering, battery leakage). If a fixture fails, initiate a corrective work order immediately and ensure the area is provided with temporary emergency lighting (e.g., portable battery-powered lights) until the fixture is repaired.
9. Repeat steps 2 through 8 for every emergency exit light fixture in the building. Ensure that all fixtures are tested within the same calendar month to maintain compliance with WorkSafeBC requirements.
10. Upon completion of all tests, review the log for any recurring failures or patterns. Submit the completed log to the facility manager or safety officer. Ensure that all temporary lighting is removed and that the building is returned to normal operation. Dispose of any failed batteries or damaged fixtures according to local hazardous waste regulations.

Regulatory Disclaimer: This document is a generic safety template provided for educational and informational purposes only. It does not constitute professional engineering, legal, or regulatory compliance advice. The end-user assumes all liability for validating all safety protocols against specific machinery manufacturer manuals and local occupational health and safety regulations (e.g., WorkSafeBC, CSA standards) before deployment.