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INSPECTION SECTION

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GENERATOR REMOTE STOP SWITCH REQUIREMENTS

Question; **where is the correct location for the emergency remote manual stop location?**

Code Quote;

NFPA 110 (1999 edition).

3-5.5.6 All Level 1 and Level 2 installations shall have a remote manual stop station of a type similar to a break-glass station located outside the room housing the prime mover, where so installed, or located elsewhere on the premises where the prime mover is located outside the building.

Appendix A-3-5.5.6 For Level 1 and Level 2 systems located outdoors, the manual shutdown should be located external to the weatherproof enclosure and should be appropriately identified.

NFPA 110 (2010 edition).

5.6.5.6* All installations shall have a remote manual stop station of a type to prevent inadvertent or unintentional operation located outside the room housing the prime mover, where so installed, or elsewhere on the premises where the prime mover is located outside the building.

5.6.5.6.1 The remote manual stop station shall be labeled.

Appendix A.5.6.5.6 For systems located outdoors, the manual shutdown should be located external to the weatherproof enclosure and should be appropriately identified.

Response to code citation

- A.** A break glass station is not defined in the 1999 edition of the NFPA 110, but, based on the information contained in the 2010 edition, is interpreted to be a switch that requires two actions to reduce the chance of accidental and unauthorized operation.
- B.** Remote location means that it shall be located remote from the generator, so it is protected from the impact of adverse generator conditions. The owner and designer determine the location. For example:
 - 1. For generators located within a building, the remote stop station must be located in a different room than the generator and be separated by a wall and door.
 - 2. For generators located outside, the remote stop station must be located anywhere outside of the generator enclosure.
- C.** The code does not limit the quantity of remote stop stations to one. Multiple remote stop stations may be provided, but at least one must satisfy the minimum requirements of the code.
- D.** If there are multiple generators, the designer may consider one remote stop station that affects all generators simultaneously.

Factors to consider:

These are not code requirements.

The manual remote stop station may be located at the door to enter the room housing the prime mover, including a corridor accessible to the public, or in an adjacent room.

If the location is accessible to facility staff, only the remote stop would not need to be a “break glass” type.

If generator synchronizing switchgear is part of the system, the remote stop station may be located on the switchgear as a dedicated stop station.

When the remote stop station is not located immediately outside the emergency generator room, a placard should be installed to indicate where the remote stop station is located.

Owners should require that their staff know the location of the remote stop station(s).

Definitions; LEVEL 1 SYSTEMS
LEVEL 2 SYSTEMS

<p>A.4.4.1 Typically, Level 1 systems are intended to automatically supply illumination or power, or both, to critical areas and equipment in the event of failure of the primary supply or in the event of danger to elements of a system intended to supply, distribute, and control power and illumination essential for safety to human life. Other NFPA codes and standards, such as NFPA 20, <i>Standard for the Installation of Stationary Pumps for Fire Protection</i>, NFPA 99, <i>Health Care Facilities Code</i>, and NFPA 101, <i>Life Safety Code</i>, provide specific requirements on where Level 1 systems are required. Essential electrical systems can provide power for the following essential functions:</p> <ol style="list-style-type: none">(1) Life safety illumination(2) Fire detection and alarm systems(3) Elevators(4) Fire pumps(5) Public safety communications systems(6) Industrial processes where current interruption would produce serious life safety or health hazards(7) Essential ventilating and smoke removal systems	<p>A.4.4.2 Typically, Level 2 systems are intended to supply power automatically to selected loads (other than those classed as emergency systems) in the event of failure of the primary source. Level 2 systems typically are installed to serve loads, such as the following, that, when stopped due to any interruption of the primary electrical supply, could create hazards or hamper rescue or fire-fighting operations:</p> <ol style="list-style-type: none">(1) Heating and refrigeration systems(2) Communications systems(3) Ventilation and smoke removal systems(4) Sewage disposal(5) Lighting(6) Industrial processes
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5.6.5.6

The function of this device is to shut down the prime mover (engine) of the emergency power supply (EPS) without the need to enter the room. The standard does not specify the exact location for the emergency stop control for an outside generator installation, but it should be located external to the weatherproof enclosure and should be clearly identified for its purpose.

Ultimately, the location of the emergency shutdown switch is a design consideration, which often takes into account the concerns of emergency responders, and which is subject to the approval of the authority having jurisdiction (AHJ). The security of the remote stop station is a paramount consideration when selecting its location. While the remote annunciator panel is not required to be in a secure location, NFPA 110 also does not prohibit a remote stop station from being installed at the remote annunciator panel.