

**EMERGENCY ELECTRICAL
MAINTENANCE**

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Reviewed date:

Policy:

Ensure that emergency electrical systems provide sufficient power to maintain essential functions, and that the systems are designed, installed, maintained and inspected according to prevailing standards.

Prevailing Codes and Standards:

NEC, NFPA, TJC EC 02.05.03 and 02.05.07

PM Cross Reference:

Power Plant pm system and craft 4, task 1, 3, 5, 8, 9, 16

Location:

One 1100 KW generator located south of the Hospital. Power Plant and one 2000 KW generator located within the Medical School Power Plant. One 275 KW generator located within Women's & Children's Clinic Power Plant. One 500 KW generator located in parking lot southeast of Cancer Center building.

Procedure:

I. Generator Operation and Inspection

- A. Generators will be inspected and operated in accordance with NFPA 99.
 - 1. Generators will be tested under actual load conditions once per 20 to 40 days for a minimum of 30 minutes.
 - 2. Generators will be operated under no-load conditions for 30 minutes on weeks when not tested under actual load conditions.
 - 3. Generators will be operated under actual load for 4 continuous hours, every 36 months.
- B. All tests are to be documented and reviewed to assure maximum reliability.
- C. An adequate supply of diesel fuel shall be available to provide a minimum 24 hours of continuous operation. Documentation will be kept current as to total fuel availability.
- D. Weekly inspection of the systems mechanical and electrical components shall be conducted according to the power plant policy manual check list.
- E. There is a comprehensive preventive maintenance program scheduled and performed on a regular basis.

II. Emergency Power Distribution System

- A. Life Safety Branch of the emergency power system serves

the following:

1. Egress illumination and exit signs
 2. Alarm and alerting systems including:
 - a) Fire alarms
 - b) Alarms indicating the loss of medical gas
 - c) Hospital communication systems
 - d) Task illumination and selected receptacles at the generator set location and battery charger for battery powered lighting units
 - e) Sliding doors
 - f) Elevator cab lighting controls, communications & signal systems
- B. Critical Care Branch of the emergency power system serves the following:
1. Anesthetizing Locations - task illumination only
 2. Isolated power systems required in anesthetizing locations and in special environments, i.e. operating rooms and obstetrical delivery rooms
 3. Patient care areas - task illumination and selected receptacles:
 - a) Infant nurseries
 - b) Medical preparation areas
 - c) Pharmacy dispensing areas
 - d) Selected acute nursing areas
 - e) Psychiatric bed areas
 - f) Ward treatment rooms
 - g) Nurse's stations as needed
 4. Specialized patient care task illumination and receptacles
 5. Nurse call systems
 6. Blood, bone and tissue banks
 7. Task illumination, receptacles and power circuits:
 - a) Acute care beds
 - b) Angiographic labs
 - c) Cardiac catheterization labs
 - d) Coronary care units
 - e) Hemodialysis rooms and areas
 - f) Emergency room treatment areas
 - g) Human physiology labs

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- h) Intensive care units
 - I) Postoperative recovery rooms
 8. Telephone equipment: Supported through battery power backup and emergency power source

C. Emergency Equipment Branch of the emergency power system serves the following:

 1. Medical Air
 2. Medical and Anesthesia Vacuum
 3. Control Air
 4. Elevators - Hospital S or S2 (selectable), K1 or K2 (selectable), K3 or K4 (selectable), Cancer Center

B.

5. Heating
6. Task illumination associated with these functions
7. Fire pumps
8. Air Handling for Critical Care (K-Wing) and Inpatient (K-Wing)
9. Autoclaving Equipment

III. Separation and Identification of Emergency Power Circuits

- A. Emergency power circuits shall be kept entirely independent of all other wiring and equipment and shall not enter the same raceways, boxes or cabinets with other wiring, except when authorized by National Fire Protection Association.
- B. Receptacles and/or cover plates for the emergency system shall have a distinctive color or marking which is readily identifiable.