

EPSS Monitoring for Total Compliance

A Lawyer's Playground

PRESENTED BY

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Learning Objectives

- What CMS surveyors are looking for during visits
- Why litigators don't care when your facility was built
- What are the most important points to monitor
- What litigators are looking for if a patient is compromised

How “lawsuit-proof” is your EPSS?

- In the words of an attorney who has spent many years representing plaintiffs:
- *“I would ask for their protocols and then I would depose everyone I could find looking for examples where the protocols were not followed. Then I’d hire an expert to pick apart their protocols for any deficiencies. I only need one point of failure if I’m the plaintiff’s attorney; either bad protocols or failure to follow those protocols are enough.”*

How “lawsuit-proof” is your EPSS?

- *Keep in mind that the equipment manufacturer can also be sued, so inevitably there will be cross-claims between the hospital and the equipment manufacturer. If the hospital’s protocols result in a use or maintenance schedule that goes against the manufacturer’s recommendations, then that’s another point of potential liability.”*

EPSS Testing Reports

- They do not have to be manually recorded.
- Recording equipment does not have to be hard wired.
- The report need only record specific data according to manufacturer's manuals, or the optional template at NFPA 110, Figure A.8.4.1 (a).

Hard-wired vs Wireless

- Most generator sets now utilize electronic control panels that provide accurate digital metering and monitoring of the engine and generator. The bulk of these newer controls are Modbus 'ready'. In that regard, the locally displayed data can be conveyed to other Modbus platforms. If the desire is to move away from manual/handwritten reporting, the two main choices to convey this information are between hardwired and wireless cellular systems. We advocate wireless cellular over "hard-wired" systems for a number of reasons:

Hard-wired vs Wireless

- An effective staff person / first responder is rarely present at the wired remote annunciator location when an event occurs. Some remote annunciators are located in PBX locations where tape has been placed over the audible alarm horn.

Hard-wired vs Wireless

- Excessive wire runs create control power voltage drops...and may corrupt data between the main control and annunciator.
- Exposure to transient voltages and/or electrical surges. Subsequently, blown fuses may disable parts or all of the main controller's function.

Hard-wired vs Wireless

- Exposure to RFI
- Loss of power to the remote annunciator (without notification)
- Cranking voltage drop causing loss of information to the remote annunciator
- Building automation systems (BAS) are not allowed to be used for remote annunciation except as a supplement. NFPA 99, 6.7.1.2.15.9

Wireless Cellular Monitoring

- Manual recording of all required testing and power outages is eliminated.
- When automated recording features are utilized, round-the-clock data collection is readily available and digitally accurate; allowing resource assignment to higher priority missions.

Wireless Cellular Monitoring

- Provides alarm notification to first responders (engineering staff and generator contractors) directly through a cellular network by text or email.
- Generators are pinged every few seconds to monitor potential problems through a trending program.
- Loss of communication with the generator; caused by corrupt data or control power, initiates fault notifications directly to first responders.
- All AHJ required reporting (NFPA 99 and 110) is automatically downloaded and stored on client's and cloud servers, thus reducing staff time and recording errors.

Wireless Cellular Monitoring

- Alerts staff anytime generator has been asked to start, including no-load tests and power outages. Records and archives all generator run events, not just testing for compliance testing.
- Automatic data collection during power outages may substitute for compliance testing if duration and load percentages meet the minimum standards. (NFPA 110, 8.4.1.1)
- Phraseology, nomenclatures, and additional data can be customized to meet specific site criteria.
- Remote starting capability

Wireless Cellular Monitoring

- Contractors can access the generator data to run diagnostics.
- Guaranteed compliance to all AHJ requirements.

Wireless Cellular Monitoring

- “Smart” systems as described are readily available for less than \$1500/generator equipped with Modbus platforms; plus reasonable annual reporting charges depending on level of services. Older generator sets with analog controls could (and should) be upgraded to digital Modbus ready control panel kits. Most of the analog panels still in the field have obsolete components that make effective troubleshooting and repair difficult.

Recent Articles on Wireless Monitoring and Third Party Ownership

- [High-Tech Healthcare: Wireless, Smart Generator Sets Monitoring](#)
- [Third-Party Generator Ownership: What You Need to Know](#)