

# COMPLIANCE *news*



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## CMS ISSUES CATEGORICAL WAIVER By David Stymiest, PE, CHFM, CHSP, FASHE

The Centers for Medicare & Medicaid Services (CMS) issued a categorical Life Safety Code waiver permitting new and existing ventilation systems supplying hospital and critical access hospital (CAH) anesthetizing locations to operate with a relative humidity (RH) of  $\geq 20\%$ , instead of  $\geq 35\%$ . CMS is also recommending that RH not exceed 60% in these locations.



CMS issued the new Survey & Certification memorandum # S&C: 13-25-LSC & ASC on April 19, 2013. In its S&C memo, CMS referenced the recent code changes that adopted the lower requirements. Many hospitals are expected to welcome this change, and it was supported by ASHE.

Organizations will not need to apply for this waiver or wait until they are cited by CMS or by state validation surveyors representing CMS. However if organizations choose to take advantage of this waiver, they are required to document their decision to do so (such as within Safety Committee meeting minutes) before they start using it. Organizations are also required to advise every Life Safety Code survey team at the beginning of any survey of their prior decision to use the CMS waiver. CMS stated that lack of documentation of the prior decision to use the waiver may result in citations that would otherwise have been unnecessary.

The CMS waiver does not overrule more stringent state or local laws or regulations nor does it apply if the reduction of the relative humidity would negatively affect ventilation system performance.

According to CMS, organizations must still monitor relative humidity levels in anesthetizing locations and must take action when needed to ensure that RH levels remain at or above 20%. Specifically, the CMS S&C memo stated "Facilities must monitor RH levels in anesthetizing locations and be able to provide evidence that the RH levels are maintained at or above 20%. When outdoor humidity and internal moisture are not sufficient to achieve the minimum humidity level, then humidification must be provided by means of the hospital's or CAH's ventilation systems. In addition, facilities must provide evidence that timely corrective actions are performed successfully in instances when internal monitoring determines RH levels are below the permitted range."

The categorical waiver contains 17 pages of details including updated State Operations Manual Appendices A, I, L and W. All organizations should obtain a copy of the letter and review it closely.

The URL for the CMS Survey and Certification Memo is: <http://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertificationGenInfo/Downloads/Survey-and-Cert-Letter-13-25.pdf>

### THIS MONTH'S TOPICS:

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# REDUCING EMERGENCY POWER VULNERABILITIES

By David Stymiest, PE, CHFM, CHSP, FASHE



Healthcare facility emergency power systems are held to a very high standard. They are expected to deliver power to what they must, when they must, for as long as they must. A review of some

medical journals will find references to clinical expectations for “uninterrupted power supply” and similar phrases. In fact uninterrupted power is not guaranteed despite the misconceptions of some clinical personnel. Hospital power systems are not as robust as large data center power systems, and even data center power systems sometimes fail. But healthcare facilities can take steps to reduce the probability of emergency power failures.

Firstly it is helpful to understand the differences between reliability, availability and dependability. Reliability can be considered the probability that a system operates and gives the same result on successive trials. Availability on the other hand can be considered the probability that a system will function at any instant required, including the next instant, and for as long as required from that point. And finally dependability can be considered as the metric that measures availability, reliability & maintenance support.

The Joint Commission’s (TJC’s) Sentinel Event Alert Issue 37 (SEA-37), entitled “Preventing adverse events caused by emergency electrical power system failures” was published in 2006. TJC addressed that topic again in EOC News in 2007. Power system failures during recent natural disasters indicate that we should consider addressing the SEA-37 power system vulnerability analysis again. This time we should also make sure to address potential **common-mode failures**, which are failures of two or more systems or components due to a single event or cause.

One way to reduce vulnerabilities is to find and then eliminate the potential for common-mode failures. A safety engineering concept considers that once a failure mode is identified, it usually can be mitigated by adding extra or redundant equipment to the system. However you cannot correct what you have not yet identified, and the existence of an uncorrected common mode failure potential removes the advantage of such redundancies.

It is helpful to take another look at existing conditions from a fresh perspective. There are many examples of potential common-mode failures, including single power sources to redundant equipment, common wiring, common feeder or equipment locations, susceptibility to the same internal or external hazards, and lack of maintenance. Many organizations consider external flooding, but what about the rupture of a chilled water line or domestic water line in a mechanical room adjacent to an emergency power equipment room? One major lesson learned from the past few years’ emergency power failures is that we really should sweat the small stuff. Things break, and details are critical. When failures do occur, power failure procedures that have been thoroughly considered before an incident are likely to be more effective than those developed afterwards.

An effective approach to resolving potential vulnerabilities is to:

- Consider each component that must operate successfully
- Use the “what if” analysis technique to determine all scenarios that can cause it to fail
- Determine whether any of these scenarios will also cause redundant components to fail
- Address the resulting potential common-mode failures

Having dependable emergency power systems requires regular maintenance of all components. Maintenance will reduce operational vulnerabilities related to normal wear and tear. All emergency power supply system equipment and systems need to be maintained in full accordance with all applicable requirements as stated in NFPA 110:

*8.1.1 The routine maintenance and operational testing program shall be based on all of the following:*

1. *Manufacturer’s recommendations*
2. *Instruction manuals*
3. *Minimum requirements of this chapter [Ch. 8 - Routine Maintenance and Operational Testing]*
4. *The authority having jurisdiction*

The requirement for maintenance includes automatic transfer switches, themselves a potential source of common-mode failure. Many hospitals are not presently performing required maintenance on automatic transfer switches because of equipment and operational restrictions, thereby increasing potential vulnerabilities. Although they are not required by codes and standards, isolation-bypass transfer switches represent a best practice that permits required maintenance without taking that branch out of service.

*This article is based upon the author’s more comprehensive article entitled “After the Storm – Expanding the concept of*

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## REDUCING EP VULNERABILITIES (CONTINUED)

*emergency power reliability” that was originally published in the January 2013 issue of Health Facilities Management magazine, Vol. 26, No. 1. ©2013 by Health Forum Inc. Contact the author at [dstymiest@ssr-inc.com](mailto:dstymiest@ssr-inc.com) for a digital copy of that HFM article.*

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## UPCOMING SEMINARS

June 7

Texas Children’s Hospital Presents: The Clinical Workflow & Technology Integration Summit, Houston, TX

June 10-13

National Fire Protection Association (NFPA) 2013 Conference, Chicago, IL, “Emergency Power Standards for Health Care Under the 2013 Codes”

July 21-24

American Society for Healthcare Engineers (ASHE) 2013 Annual Conference, Atlanta, GA, “Managing Electrical Systems for Reliability” and “Just Ask ASHE” Plenary

October 23-25

Decision Health 17th Annual EC Summit in Las Vegas, NV “After the Storms-A New Paradigm in Emergency Power Reliability”

## TJC REVISITS EC PLANS

By David Stymiest, PE, CHFM, CHSP, FASHE

A recent article placed in both the EC News and TJC Perspectives clarified TJC requirements for management plans. Written for the June 2013 issues by TJC Department of Engineering Director George Mills for the Clarifications and Expectations segment of both publications, the article clarified some issues that have been resulting in TJC requirements for improvement (RFIs) during survey.

Mr. Mills reiterated previous guidance that management plans should not necessarily state how things are done, but could refer to policies or procedures for more specificity. The article provided background and explanatory material on the following major points:

- Don’t cite the standards (although it can be helpful to have a copy of each plan annotated with standards and element of performance numbers to facilitate responding to survey questions.)
- Determine overall management plan format – 6 separate EC plans vs. 1 master plan covering multiple areas vs. other approaches
- Keeping management plan structures consistent
- Listing supporting material such as policies and procedures
- Indicating where the organization is complying with not only TJC’s requirements but also with stricter requirements of another authority having jurisdiction (AHJ) and naming that AHJ
- Identifying other related requirements (from other chapters of the TJC Hospital Accreditation Standards) that affect a management plan
- Making sure to distribute management plans to every accredited site, and conversely making sure that accredited sites have management plans reflecting the activities occurring in those locations

SSR recommends that TJC accredited organizations take the time to review this article and revisit their existing management plans.

