Life Safety Code K144 and Natural Gas Reliability Letter

In the past few months, ten Illinois facilities with natural gas generators have been cited under the Life Safety Code K144 for lacking either an on-site backup power source or a letter from the local natural gas power company demonstrating the reliability of the off-site fuel source. CMS estimates that nearly one-third of all nursing homes in the Midwest use natural gas generators, the largest concentration of nursing home users in the country.

Prior to May 29, 2009 this letter of reliability had no provision for allowing temporary interruption of service for unusual reasons. Understandably the legal departments of the natural gas vendors were reluctant to sign a reliability letter that guaranteed that there would never be an interruption of service. Because of the difficulty of obtaining this letter and the extreme cost of either converting away from natural gas or the addition of a backup, on-site fuel source (a large propane gas tank on your front lawn – even if local ordinances allowed it), Region V of CMS issued a letter on May 29, 2009 about the Natural Gas Reliability Letter requirement providing five criteria for an acceptable Letter that was more detailed but less absolute in its standard of reliability, allowing an indication of “low probability” of fuel source interruption rather than a 100% eternal guarantee.

Even with the May 29, 2009 CMS Region V program letter, facilities were still having difficulty convincing their local natural gas vendor to write the Letter of Reliability. Upon request of the long term care associations in the Midwest, CMS Region V has recently issued another program letter dated October 28, 2009 that provides some examples of statements that can be used by the natural gas vendors when writing a Letter of Reliability that complies with the requirements of K144.

If your facility is powered by natural gas, the Centers for Medicare and Medicaid Services (CMS) requires you to have a Letter of Reliability from your natural gas vendor. It is better to obtain the Letter prior to a Life Safety Code inspection rather than after you are cited for K144, placing your facility in an open cycle of violations. If your natural gas vendor is confused by the requirements of the Letter, you may share with them the following examples provided by CMS Region V of acceptable statements of reliability. If the natural gas vendor is still uncertain as to what they are agreeing to, you can recommend that they talk to Dan Kristola at CMS Region V at 312-886-5215 or at Daniel.Kristola@hhs.cms.gov. Following is the October 28, 2009 CMS examples for the natural gas Letters of Reliability:

Examples of Acceptable Language for Natural Gas Generator Backup Fuel Source Letter

Centers for Medicare and Medicaid Services
Region V Midwest Consortium Division of Survey and Certification
October 28, 2009

On May 29, 2009 CMS Regional Office V released information regarding Natural Gas Generator Backup Fuel Source Letter Requirements which stated:
Natural Gas Generator Backup Fuel Source Letter Requirements

We want to pass on to you some clarifications related to the backup fuel source for natural gas generators. These clarifications resulted from discussions between Midwest Consortium staff and Jim Merrill and Cindy Graunke of the CMS Central Office.

All nursing homes are required to have an on-site backup power source. If a facility uses a natural gas generator to provide backup power to LSC required systems (i.e., emergency lights, exit lights, fire alarm system, etc.), the facility may obtain a letter from its natural gas vendor to demonstrate the fuel source is reliable and to meet the requirements for an on-site backup power source. A facility with a natural gas generator may use other means to meet the requirements for an on-site backup power source that do not require a letter from its natural gas vendor.

The letter of reliability from the vendor regarding the fuel supply must contain all of the following:

1. A statement of reasonable reliability of the natural gas delivery
2. A brief description that supports the statement regarding the reliability
3. A statement that there is a low probability of interruption of the natural gas
4. A brief description that supports the statement regarding the low probability of interruption
5. The signature of technical personnel from the natural gas vendor.

Examples of acceptable language for each criterion include, but are not limited to:

**Criterion 1: A statement of reasonable reliability of the natural gas delivery**

Example 1: The natural gas service we provide has been, and continues to be reliable in the areas we serve.
Example 2: The gas system has been and should continue to be very reliable.
Example 3: This supply and regulation assists the vendor’s natural gas distribution system to operate in a reliable, safe and economical manner.
Example 4: The vendor’s delivery of natural gas is consistent with the reasonable reliability required by your facility.

**Criterion 2: A brief description that supports the statement regarding the reliability**

Example 1: On an annual basis, natural gas service has historically been maintained 99.9 percent of the time to our customers.
Example 2: Over the past five years, the vendor has annually experienced an average of four unscheduled gas system disturbances affecting 100 or more customers. Each outage affected an average of 252 customers. This means, on average during each of the past five years, 99.64% of the vendor’s gas customers were not affected by a reportable unplanned gas system outage.
Example 3: In 2008, the vendor provided uninterrupted service to 99.64% of our over 1.2 million customers.
Example 4: The vendor’s natural gas system is served from two different sources. Each source is capable of serving the entire system. After checking our records and local knowledge for the last 25 years, we have found no information indicating that the system was ever shut down or that it lacked the capacity to serve the system.
Example 5: Our system has been designed to operate continuously, even in the coldest of temperatures, when the demand for natural gas is at “peak day demand.” In addition, our system has been designed to operate during major widespread power outages such as the one that occurred on August 14, 2003 that interrupted electrical power to most of our service area while not impacting gas deliveries to our customers.
Example 6: From an engineering and operational perspective, the vendor has a very sophisticated pipeline system model that is used to proactively identify areas where system reliability could be a concern. Once areas of potential reliability concern are determined, construction and operations plans are developed and implemented to address the concerns.
Example 7: The vendor’s natural gas system has been designed and sized to accommodate your natural gas needs using the equipment at your facility including your natural gas emergency back-up generator to ensure the reliability of the system when it is required under full fuel load under all circumstances.

**Criterion 3: A statement that there is a low probability of interruption of the natural gas**

Example 1: Occasionally, construction dig-ins or other situations occur and can affect small portions of our distribution system for a limited time. If we need to schedule required maintenance that may affect your natural gas service, we notify you in advance and try to make arrangements to accommodate your specific needs.

Example 2: We do have “dig-ins” on occasion which can affect small portions of the system for a limited amount of time. We also periodically do system upgrades that can require outages. These are planned and coordinated with affected customers.

Example 3: We do experience system disturbances on occasion including “dig-ins,” meaning excavators sometimes damage our underground distribution system while digging. This can affect portions of a local distribution system for a period of time while repairs are made.

Example 4: The vendor periodically performs system upgrades that can require outages for a limited amount of time. These outages are planned and coordinated with affected customers.

**Criterion 4: A brief description that supports the statement regarding the low probability of interruption**

Example 1: Our natural gas system was installed in compliance with Federal and State Gas Safety Standards. Gas mains and services are installed below grade at approved depths specified in Federal and State Gas Safety Standards. This provides significant protection to our facilities from floods, storms and damage from freezing. In addition, the risk of damage to gas facilities by earthquakes in this state is low.

Example 2: Our system has a very low probability of interruption as our lines are installed at a depth that is in compliance with company, local and national standards/codes. Furthermore any construction within the area requires a 72 hour notification of the dig safety network to insure all public utilities are properly marked, prior to digging, in an effort to avoid interruption of service.

Example 3: Of the 0.36 % that were interrupted, over 43% of those interruptions resulted from third-party construction damage, which are outside of the vendor’s control.

Example 4: Our distribution pipeline system is subject to two types of outages – planned and unplanned.

- With planned outages, the vendor notifies customers of the reason for the outage in advance so arrangements can be made by the customer if they are required during the scheduled outage. For interior equipment upgrades, an appointment is scheduled at the customer’s convenience. Company records indicate that the average length of time for a planned outage is between two and four hours.

- Unplanned outages occur due to circumstances beyond our company’s control; e.g., a contractor damages a distribution pipe during road repair work. The length of time before gas service is restored due to an unplanned outage is dictated by the magnitude of the damage; however, the vendor makes its best effort to minimize the outage time in these cases. While we cannot anticipate such unplanned outages, we track our response time performance on a monthly basis for these emergencies. In July 2009, for instance, we arrived within 60 minutes at the sites of unplanned outages 98% of the time and in 2008, we arrived within 60 minutes 97.3% of the time.

**Criterion 5: The signature of technical personnel from the natural gas vendor.**

Example 1: P.E., Supervising Engineer, Gas Operations Planning, Gas Distribution Asset Management

Example 2: Manager – Gas Distribution Design

Example 3: My technical job responsibilities have included the design, maintenance and management of gas distribution systems over the past 23 years.