

At a session of the Public Service Commission held at its office in Jefferson City on the 2nd day of February, 2006.

## ORDER ADOPTING STAFF'S RECOMMENDATIONS

Effective Date: February 12, 2006

### Background:

An incident occurred in Springfield, Missouri, at the Ozark Empire Fairgrounds on June 18, 2003, in which natural gas leaking from plastic pipe resulted in an explosion at the Frisco Building. An employee of the Ozark Empire Fair was fatally injured. The leak in the plastic pipe was the result of rock impingement that caused the pipe to fail, resulting in natural gas escaping into the lower level of the Frisco Building. Natural gas service is provided by City Utilities of Springfield. There was an additional natural gas ignition involving the same type of plastic pipe and method of failure at 3050 North Kentwood, Springfield, Missouri, on July 10, 2003. The incident at the Fairgrounds and the natural gas ignition at 3050 North Kentwood both involved brittle-like cracking of Aldyl® “A” plastic pipe.

Both failures were the result of high-localized stress concentration on the pipe wall due to rock impingement. In addition, records provided by City Utilities indicated other instances of brittle-like cracking failures on plastic pipe due to rock impingement.

On December 16, 2003, the Staff of the Commission filed a motion to open a case. Staff stated that City Utilities of Springfield is a municipal gas corporation subject to the jurisdiction of the Commission, and that the Commission has the authority to require every gas utility, including municipal gas systems, to operate its system in a manner that promotes and safeguards the public safety. Staff noted that it had filed its final investigation reports involving the two plastic pipe failures. Staff recommended a more in-depth examination and evaluation of City Utilities' plastic natural gas mains and service line piping failures, leak survey techniques over certain identified plastic natural gas mains and service lines, and examination and evaluation of the current program replacements. Specifically, Staff asked that the Commission direct that the case be opened to:

- (1) identify the plastic mains and service pipes that may be susceptible to brittle-like cracking because of rock impingements;
- (2) determine the criteria that should be used to identify plastic mains and service lines as potential risks for brittle-like failure due to rock impingement such as installation, operating and environmental conditions and piping failure characteristics;
- (3) evaluate the effectiveness and the need to increase or expand the leak surveys over the identified plastic mains and service lines (example: the need for bar hole surveys over piping under continuous pavement);
- (4) recommend replacement of plastic mains and service lines found in need of remedial action;
- (5) recommend and monitor completion of the replacement of all plastic service lines identified as having the potential for failure due to rock impingement or other factors.

On December 30, 2003, the Commission issued an order establishing this case to investigate the issues concerning plastic mains and service lines used by City Utilities of Springfield.

**Staff's Initial Report and City Utilities' Response:**

On June 16, 2004, the Commission's Staff filed its Response to the Commission's Order Establishing Case and Filing Report. Staff indicated that it has conducted an investigation and that based on the evidence gathered, believes that a long-term systematic replacement program is warranted. Staff proposed a long-term replacement program for certain identified plastic piping that is susceptible to brittle-like cracking because of rock impingement and piping that has already been identified as being in an environment conducive to brittle-like failure due to previous rock-impingement-caused leaks.

On August 17, 2004, City Utilities filed its response. City Utilities requested that the Commission adopt the recommendations of the Commission's Staff, subject to certain clarifications. The clarifications are noted in italicized text on Attachment A to this order.

**Staff's 2004 Status Report:**

On October 12, 2004, Staff filed a status report regarding the ongoing nature of the monitoring, evaluation, and replacement of plastic pipe in City Utilities' system. Staff indicated that its recommendations (contained in Staff's June 16, 2004 report) have been implemented into City Utilities' gas safety program and are the foundation of its continuing plastic pipe replacement program. Staff noted that it will continue to work with City Utilities to gather more data to clearly identify the plastic mains and service lines that require

immediate attention and those that must be part of a longer-term replacement program. Staff noted that it would file an updated report in June 2005.

**Staff's 2005 Status Report:**

On June 16, 2005, Staff filed another status report. Staff reported that City Utilities continues to comply with the Staff's June 2004 recommendations and set out the details of that compliance. Staff recommended that the Commission continue with the recommendations in its June 16, 2004 report. Staff also requested that the Commission leave the case open to receive additional information from City Utilities and additional reports from Staff.

**Commission Determination:**

The Commission has not formally ordered that Staff's June 2004 recommendations, as clarified by the company in August 2004, be implemented. Therefore, the Commission shall do so now. The Commission shall also direct City Utilities to continue implementing Staff's recommendations, as discussed in Staff's June 16, 2005 report. Furthermore, the Commission shall direct its Staff to file an additional status report as set out below.

**IT IS THEREFORE ORDERED:**

1. That the recommendations in Staff of the Public Service Commission's June 16, 2004 report, as clarified by the August 17, 2004 response of City Utilities of Springfield, are hereby adopted.
2. That City Utilities of Springfield shall comply with the recommendations set out in the Staff of the Public Service Commission's June 16, 2004 report, as clarified by the August 17, 2004 response of City Utilities of Springfield.

3. That Staff shall file its next status report no later than June 30, 2006.
4. That this order shall become effective on February 12, 2006.

**BY THE COMMISSION**

A handwritten signature in black ink, appearing to read 'Colleen M. Dale', written over a horizontal line.

Colleen M. Dale  
Secretary

( S E A L )

Davis, Chm., Murray, Clayton and Appling, CC., concur  
Gaw, C., dissents, opinion to follow

Dippell, Deputy Chief Regulatory Law Judge