

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of an Investigation into City)
Utilities of Springfield Plastic Pipe)
Failures and the Adequacy of its Leak) Case No. GS-2004-0257
Survey Procedures, Installation)
Procedures and Replacement Criteria)

STAFF'S REPLY

TO RESPONSE OF CITY UTILITIES OF SPRINGFIELD

COMES NOW the Staff of the Missouri Public Service Commission (Staff) by and through counsel, and for its Reply to City Utilities of Springfield's Response states:

1. On April 16, 2007 City Utilities of Springfield responded to Staff's March 30, 2007 Status Report in which Staff recommended changes to City Utilities plastic pipe replacement program.
2. City Utilities objected to Staff's recommendations, noting constraints on their ability to comply with Staff's recommendations, including availability of personnel.
3. Attached is Staff's Reply to the proposals in City Utilities' Response. Staff believes City Utilities should follow Staff's March 30, 2007 Recommendations with modifications, as noted in the CONCLUSIONS section of Attachment A.
4. Staff has been and will continue to monitor the effectiveness of City Utilities' plastic main and service line replacement program and leak surveys. If at any time, Staff determines that the program requirements should be enhanced, it will immediately bring its concerns and recommendations to the Commission.

WHEREFORE, Staff requests the Commission order City utilities to comply with Staff's recommendations concerning its pipe replacement program.

Respectfully submitted,

/s/ Lera L. Shemwell

Lera L. Shemwell
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Certificate of Service

I hereby certify that copies of the foregoing have been mailed, hand-delivered, or transmitted by facsimile or electronic mail to all counsel of record this 10th day of May 2007.

/s/ Lera L. Shemwell

MEMORANDUM

TO: Missouri Public Service Commission Official Case File
Case File No. GS-2004-0257, City Utilities of Springfield

FROM: Rick Fennel, Energy Department - Safety/Engineering

/s/ Rick Fennel 5/10/2007

Project Coordinator/Date

/s/ Lera Shemwell 05/10/2007

General Counsel's Office/Date

SUBJECT: Staff Reply to City Utilities of Springfield Response to Recommendations Contained
in Staff Status Report

DATE: May 10, 2007

BACKGROUND

On March 30, 2007, the Energy Department – Safety/Engineering Staff of the Missouri Public Service Commission (Staff) filed a *Staff Status Report* (Report) in Case No. GS-2004-0257. The Report detailed the current status of Staff's evaluation of City Utilities' of Springfield (City Utilities) plastic pipe monitoring, evaluation, and replacement program. The Report listed several recommendations to the current replacement program for plastic piping. On April 16, 2007, City Utilities voluntarily filed CITY UTILITIES OF SPRINGFIELD'S RESPONSE TO PSC STAFF RECOMMENDATIONS FILED MARCH 30, 2007 (RESPONSE). On April 18, 2007, the Commission issued an ORDER DIRECTING FILING for Staff to file a reply to City Utilities' RESPONSE no later than April 26, 2007. On April 26, 2007, Staff filed STAFF'S REPLY TO THE COMMISSION'S ORDER TO RESPOND TO CITY UTILITIES OF SPRINGFIELD RESPONSE TO PSC STAFF RECOMMENDATIONS (REPLY). Staff's REPLY requested additional time to discuss and formulate a reply to City Utilities' April 16, 2007 RESPONSE to address concerns with the progress of the program. On April 30, 2007, the Commission issued an ORDER GRANTING EXTENSION OF TIME for Staff to file its reply to City Utilities April 16, 2007 RESPONSE no later than May 10, 2007.

STAFF REPLY

Staff's concerns in this case are largely focused on "splits" on pre-1983 plastic pipe operating at high pressure where the pipe (both mains and service lines) is located in a rock/dirt mix backfill. The investigation of this vintage and type of pipe was initiated by the natural gas incident involving a fatality at the Ozark Empire Fairgrounds on June 18, 2003, and the natural gas leak and ignition at 3050 North Kentwood on July 10, 2003. Both leaks resulted from rock impingement on the plastic pipe, as documented in the Staff's Incident Report.

The Staff's goal in this investigation was to reduce the number of splits/leaks that occur on pre-1983 plastic pipe operating at high pressure. To achieve that goal, in its March 30, 2007 filing, the Staff recommended that City Utilities' program be modified to more aggressively address the problem. The program has been in place for over 2 ½ years and data indicates that the number of splits/leaks is not decreasing. There have been 24, 20, and 25 rock impingement leaks for the 2004, 2005, and 2006 calendar years, respectively. However, in the last 8 months (July 2006-February 2007) there have been 30 leaks on plastic piping. In light of this data, Staff believes that City Utilities' proposal "that no changes be made to the Commission's previous order at this time and the replacement program be reviewed in one year" (as well as asking for relief from replacements to be made by August 16, 2007) is not consistent with the original goals of this program, is not consistent with safe practice, and is therefore not an acceptable course of action.

Staff did not expect that splits/leaks would "drop dramatically", but did expect that they would decline or at the very least level off. Therefore, Staff believes (and recommended) that an accelerated, systematic, prioritized replacement program of pre-1983 plastic pipe in contact with rock must be initiated to successfully address the splits/leaks occurring on plastic pipe. Staff's proposal has outlined replacements for the next two years, but Staff further believes that the replacements should be on-going beyond that time. Segments of pre-1983 plastic pipe, operating at high pressure, which are known to be in clean backfill and not in contact with rock, can be addressed at the end of the program. If the type of backfill around the plastic pipe has not been determined, the piping should be replaced. Staff used the "Plastic Pipe Failure Master List" as a logical starting point to replace pipe that was known to be in contact with rock, most of which experienced a leak due to rock impingement.

From previous Commission orders in this case, City Utilities is currently required to replace 4.2 miles of plastic pipe by August 16, 2007. Staff had discussions with City Utilities in mid-March of this year, and at that time they had five months left to complete the replacements required by the Commission orders. Therefore, the engineering work and replacement schedules for those replacements should be in-place and progressing at this time, since City Utilities would need to be replacing, on average, 0.8 miles of plastic piping a month to comply with the Commission orders (4.2 miles of replacements from mid-March to mid-August).

In its RESPONSE, City Utilities stated that it is "extremely important that any increase in resources spent on replacements of pipe be done to maximize safety resources." However, after 2 ½ years, the data does not indicate that the level of desired "safety benefits" has been realized. Staff does not believe that waiting another year to review the current replacement program, as City Utilities proposed in their response, is a reasonable approach to take. While this replacement program has resulted in the replacement of piping that needed to be replaced, it has not, up to this point, resulted in a significant decrease in rock impingement leaks.

Replacement of pipe on the "Plastic Pipe Failure Master List" is a logical starting point for this effort, as long as adjacent pipe segments, which are probably in a rock/dirt mix backfill, are also replaced as has been done with previous replacements in this program. This has historically

resulted in a total replacement rate that is approximately 50% over the required replacement amount during a 2-year period, which would amount to approximately 14 miles of piping to be replaced in 2 years according to Staff's Recommendation.

City Utilities' response includes several requested modifications to Staff's recommendations. Staff's replies to each of these requested modifications are as follows:

1. a) City Utilities requested that Staff's recommendations be modified to allow them 3 years from the date of the Commission's order to replace the main segments currently on the "Plastic Pipe Failures Master List" that are not pre-1983 high pressure pipe.

The Staff believes this request does not compromise the program and is in agreement with City Utilities.

- b) City Utilities requested that Staff's recommendations contained in 1(a) and 1(b) be modified to allow them 2 years from the date of the Commission's order to complete the replacement of natural gas pipe described in those recommendations.

The Staff believes this request does not compromise the intent of the Staff's March 30, 2007 Recommendations and is in agreement with City Utilities.

2. City Utilities requested that Staff's recommendations be modified to include plastic piping that is discovered to have a rock-dirt mix backfill and no previous leaks; only pre-1983 high pressure pipe should be added to the "Plastic Pipe Failure Master List" for replacement. Secondly, City Utilities requested that they have 3 years (from the discovery date of a rock impingement leak or rock-dirt mix backfill) to replace this category of piping as included in Staff's original recommendations.

The Staff believes, in part, that this request compromises the program and is in disagreement with City Utilities. First, the Staff believes that when a rock-dirt mix backfill is found around plastic pipe, there is the potential for a rock impingement leak and that this piping should be systematically replaced in a timely manner. Secondly, the Staff believes this category of piping should be replaced within 2 years of discovery of a rock/dirt mix backfill around the pipe. However, the Staff would agree that, where post-1983 piping is found to have a rock-dirt mix backfill around the pipe, that this piping be replaced within 3 years of discovery of the rock-dirt mix backfill.

3. City Utilities requested that Staff's request for additional information concerning backfill conditions on pre-1983 plastic piping operating at high pressure and Staff's request for any other additional information to facilitate replacement prioritization not be implemented.

The Staff believes that the additional information request was clear to City Utilities. Staff wanted information involving plastic piping segments that, as a result of examination, were

found not to be in contact with a rock-dirt mix backfill. This information would help facilitate the replacement prioritization, and hopefully, help City Utilities' focus on replacement of piping most in need of prompt attention.

Finally, the Staff further recommends that City Utilities provide Staff with monthly updates concerning rock impingement leaks and replacement status.

CONCLUSION

Staff believes City Utilities should follow the recommendations contained in Staff's March 30, 2007 Status Report with the modifications noted in this filing, and specifically noted below. Staff recommends that the current requirement from previous Commission orders for City Utilities to replace 4.2 miles of piping by August 16, 2007, be waived if City utilities follows the recommendations (with modifications) shown below.

Staff's March 30, 2007 Recommendation 1

- 1. By March 31, 2009, replace the categories and amount of piping as listed below:*
- (a) 7.9 miles of pre-1983 piping operating at high pressure that is currently on the "Plastic Pipe Failures Master List".*
 - (b) 1.5 miles of pre-1983 piping operating at high pressure that was found to have a rock-dirt mix backfill around the pipe (1) during the "spot checks" and (2) during the exposed pipe inspections.*

The Staff expects City Utilities to continue their practice of replacing nearby or adjacent pipe segments that are beyond the specific piping in the same work order number because the piping was installed in the same time period and could likely have been installed using the same methods and in the same environment. Since the beginning of the program, this practice has resulted in replacing approximately 50% more piping than was specifically listed in the program.

Staff's Modification to the March 30, 2007 Recommendation 1

Staff recommends that City Utilities be allowed 2 years from the date of the Commission's order to complete the replacement of natural gas pipe described in 1(a) and 1(b) and be allowed 3 years from the date of the Commission's order to replace the main segments currently on the "Plastic Pipe Failures Master List" that are not pre-1983 high pressure pipe. As noted in Staff's March 30, 2007 filing and for the reasons stated in the first paragraph on page 3 of this filing, Staff fully expects that replacements would include adjacent segments at the approximate rate that have been occurring with previous replacements in this program (approximately 50%).

Staff's March 30, 2007 Recommendation 2

2. During 2007, all main segments where rock impingement leaks are found and where exposed pipe reports indicate the pipe is in a rock-dirt mix backfill shall be added to the "Plastic Pipe Failures Master List", and replaced by December 31, 2009.

Staff's Modification to the March 30, 2007 Recommendation 2

Staff recommends that, where post-1983 piping is found to have a rock-dirt mix backfill around the pipe, that this piping be replaced within 3 years of discovery of the rock-dirt mix backfill.

Staff's March 30, 2007 Recommendation 3

3. By May 1, 2007, provide the Staff with additional information concerning the backfill conditions on pre-1983 piping operating at high pressure that has been requested and any other information City Utilities believes would be helpful in the replacement prioritization of pre-1983 piping operating at high pressure.

Staff's Modification to the March 30, 2007 Recommendation 3

In discussions with City Utilities personnel prior to the March 30 filing, Staff indicated it wanted information involving plastic piping segments that, as a result of examination, were found not to be in contact with a rock-dirt mix backfill. This information would help facilitate the replacement prioritization. City Utilities should submit this information to Staff within 30 days of the Commission's order.

Additional Reporting

As discussed in the March 30, 2007 Status Report, City Utilities is currently conducting a leak survey over all pre-1983 piping operating at high pressure that is not included in the current annual leak surveys. Staff requests that the results of this survey be submitted to Staff as soon as the survey is completed and the results are compiled to determine if further enhancements need to be made to the program.

As recommended in the March 30, 2007 Status Report, Staff proposes that the next update report be filed during the first quarter of 2008 (March 31, 2008). The 2008 report would include a comprehensive status report detailing the results of the plastic pipe replacement program, pipe inspection reports, rock impingement leaks found, and results from leak surveys completed in calendar year 2007.

Staff further recommends that in addition to continuing the submission of semi-annual reports to Staff, City Utilities provide Staff with brief monthly updates indicating the number of rock impingement leaks found and replacements made during the month.

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OF THE STATE OF MISSOURI**

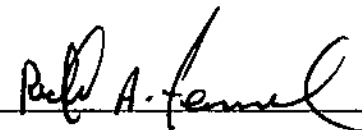
In the Matter of an Investigation into City Utilities of)
Springfield Plastic Pipe Failures and the Adequacy of)
its Leak Survey Procedures, Installation Procedures)
and Replacement Criteria.)

Case No. GS-2004-0257

VERIFICATION

STATE OF MISSOURI)
)
COUNTY OF COLE)

I, Richard A. Fennel, Utility Technical Specialist II in the Commission's Energy - Safety/Engineering Department, of lawful age, on oath state: that I participated in the preparation of Staff's Memorandum that is being filed in the above case on May 10, 2007, consisting of five (5) pages to be presented in this case; that information in the Staff's Memorandum was given by City Utilities of Springfield; that I have true knowledge of the matters set forth in such Memorandum; and that such matters are true to the best of my knowledge and belief.

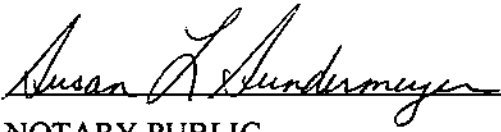


Richard A. Fennel

Subscribed and sworn to before me this 10th day of May, 2007.



SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942086



NOTARY PUBLIC