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April 10, 2000

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General Counsel

Mr. Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102

RE: Case No. GO-99-155

Dear Mr. Roberts:

Enclosed for filing in the above-captioned case are an original and fourteen (14) conformed copies of a **STAFF RECOMMENDATION IN SUPPORT OF UNANIMOUS STIPULATION AND AGREEMENT.**

This filing has been mailed or hand-delivered this date to all counsel of record.

Thank you for your attention to this matter.

Sincerely yours,

Lera L. Shemwell
Assistant General Counsel
(573) 751-7431
(573) 751-9285 (Fax)

LLS:sw
Enclosure
cc: Counsel of Record

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

FILED²
APR 10 2000

Missouri Public
Service Commission

In the Matter of the Adequacy of Laclede)
Gas Company's Service Line)
Replacement Program and Leak Survey)
Procedures.)

Case No. GO-99-155

**STAFF RECOMMENDATION IN SUPPORT OF
UNANIMOUS STIPULATION AND AGREEMENT**

COMES NOW the Staff of the Missouri Public Service Commission (Staff) and for its recommendation states:

1. In the attached Staff Memorandum in Support of the Unanimous Stipulation and Agreement, labeled Appendix A, the Staff recommends that the Missouri Public Service Commission (Commission) approve the February 18, 2000 Unanimous Stipulation and Agreement filed in this case
2. Under Section 386.310, RSMo Supp. 1999, the Commission has the jurisdiction and statutory authority to require a public utility to maintain and operate its line, plant, system, equipment, apparatus, and premises in such manner as to promote and safeguard the health and safety of its employees, customers, and the public, and to promote and safeguard the public safety.
3. Assuring the safety of Laclede employees, customers and the public is the goal of the Unanimous Stipulation and Agreement.

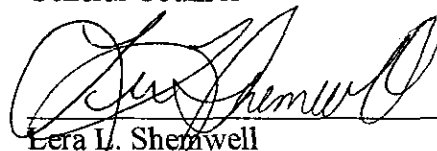
4. A joint pleading was filed on March 27, 2000, asking that the Commission dismiss the October 13, 1998 Complaint filed by Staff against Laclede Gas Company in Case No GC-99-151, and closing that case as well.

5. Should the Commission have questions or concerns regarding the Unanimous Stipulation and Agreement, the Memorandum in Support, or the Joint Motion to Dismiss and Close Case, please let the Parties know how the Commission would like to address those concerns or questions..

WHEREFORE, for the foregoing reasons, the Staff of the Missouri Public Service Commission, respectfully requests that the Commission issue an Order (a) approving the Unanimous Stipulation and Agreement in this case, (b) and closing this case.

Respectfully submitted,

DANA K. JOYCE
General Counsel

A handwritten signature in black ink, appearing to read "Lera L. Sheppard", is written over a horizontal line.

Lera L. Sheppard
Assistant General Counsel
Missouri Bar No. 43792

Attorney for the Staff of the
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Certificate of Service

I hereby certify that copies of the foregoing have been mailed or hand-delivered to all counsel of record as shown on the attached service list this 10 day of April, 2000..

A handwritten signature in black ink, appearing to read "L. D. Hall", is written over a horizontal line.

MEMORANDUM

TO: Missouri Public Service Commission Official Case File
Case No. GO-99-155, Laclede Gas Company

FROM: Michael J. Loethen, Gas Department – Gas Safety *encl*

Richard Matzinger 4/10/00 *Thomas R. Schumacher Jr.* 4/10/00
Project Coordinator / Date General Counsel's Office / Date

SUBJECT: Staff Memorandum in Support of Unanimous Stipulation and Agreement

DATE: April 10, 2000

On February 18, 2000, a Unanimous Stipulation and Agreement (Stipulation) was filed in Case No. GO-99-155. This Stipulation was entered into by Laclede Gas Company (Laclede or Company), the Office of the Public Counsel (OPC) and the Staff of the Missouri Public Service Commission (Staff) and represents a negotiated settlement for the purpose of disposing of all of the outstanding issues in the case.

Prior to Staff filing testimony on January 5, 2000, both Staff and Laclede realized that changes to the 1991 Ringer Road Agreement were needed. During this investigatory proceeding, many safety-related issues pertaining to the Company's copper service line relay and renewal program were discussed and agreed upon between Staff and Laclede. However, the renewal rate of copper services and criteria that would be used in determining whether relays or renewals would be required were not mutually agreed upon between Staff and Laclede prior to the Stipulation.

In accordance with Paragraph 10 of the Stipulation, Staff submits this Memorandum in support of its decision for entering into the Stipulation. In the following paragraphs, Staff will first describe the intent of the Stipulation and secondly, its rationale for entering into an agreement. Subparagraphs 7 (a) through 7 (o), and Paragraph 8 of the Stipulation represent the basic technical issues resolved in this case.

INTENT OF STIPULATION

The Parties involved agree that evidence to date supports efforts to leak survey, monitor, and remove those portions of direct-buried copper services within areas of active corrosion. This is the overall goal and intent of the Stipulation. Staff filed direct testimony (Testimony) in this case explaining the difficulty it perceived in identifying those areas of active corrosion and the need, therefore, for better monitoring practices and on-going studies. Staff was careful not to isolate from the Stipulation any direct-buried copper services that can not otherwise be excluded, except by factual supporting evidence. Staff described in Testimony how it believed too many parameters were initially established at the time of the 1991 Ringer Road Agreement, which ultimately exempted many copper services

from qualifying for inclusion in the Company's copper service line replacement program. The consequences of exempting certain copper service lines was illustrated in Staff Testimony in the form of an example of a corroded copper service line that, while exempt from the Ringer Road Agreement because it did not meet certain parameters, contributed to an incident (Case No. GS-98-423).

RATIONALE FOR ENTERING INTO THE STIPULATION *(Paraphrased Stipulation Issues Are Shown In Italics)*

Subparagraph 7 (a)

The parties agreed that Laclede shall confirm, by no later than March 1, 2000, the actual total number of direct-buried copper service lines within its copper service line renewal and relay program. These identified direct-buried copper service lines have not already had the portion of the service line in the right-of-way under the street and within twelve feet of the service tap relayed since 1991. Staff received Laclede's correspondence on March 1, 2000, which identified 76,966 direct-buried copper service lines.

The Staff's belief here is that direct-buried copper service lines not out of the area of active corrosion would be identified as potential candidates for the copper service line program and under a prioritization schedule to be relayed or renewed as described in 7 (b). Those direct-buried copper service lines partially replaced as a result of the Ringer Road Agreement, but which had not had all of the copper service line eliminated from the right-of-way would be considered as candidates. Staff does not expect these partial copper service lines will be used for purposes of this Stipulation to prioritize areas for relays and/or renewals. Staff believes Laclede should evaluate those service lines partially replaced since 1991 that are in an area identified for systematic relay and/or renewal, and assure that the copper portion of such lines is outside the area of active corrosion. For those service lines that do not meet this basic requirement, they should be relayed or renewed at the time the systematic work in the area is being performed, consistent with the terms and goals of this Stipulation. Staff understands that there are approximately 4,000 to 5,000 long-side and short-side service lines in addition to the 76,966 copper service lines noted earlier that possibly fit this description.

Subparagraph 7 (b)

This section describes the manner in which Laclede will relay those copper service lines identified in Subparagraph 7 (a). Long side services lines shall be relayed, at a minimum, from the tee connection to a point approximately twelve feet beyond the street pavement edge. Short side service lines shall be relayed, at a minimum, from the tee connection to a point twelve feet beyond the street pavement edge or tee, whichever is greater. In those limited instances where conditions in the customer's yard would make it impractical, excessively disruptive or costly to meet the minimum twelve foot requirement specified herein, Laclede may install a shorter relay subject to proper documentation of the circumstances necessitating such an action and provided that such action does not compromise the basic objective of eliminating that portion of the copper service line within the area of corrosion.

In Testimony, Staff stated its preference for Laclede to perform main-to-meter renewals of copper service lines. Staff's Testimony further stated that emphasis should be given to copper service lines in areas within the street right-of-ways, where potentially corrosive environments have been shown to

exist, as opposed to other areas along the copper service lines' paths (within the yards and at the riser locations). In response, Laclede agreed to address Staff's proposed annual program rate of 8,000 service lines, but under the guidelines as detailed in 7 (b). Staff agreed to these guidelines in order to address, in an expeditious and cost conscious manner, that portion of the copper service line located within the street right-of-way. Further, Laclede gave assurance that safety related issues pertaining to corrosion on copper service lines would be dealt with in an expeditious, yet cost conscious, manner without compromising safety.

Staff's overall rationale for agreeing to the terms of 7 (b), in lieu of main-to-meter renewals as proposed in Testimony, was based upon the simultaneous implementation of all other terms of the Stipulation that will enhance the relay/renewal of direct-buried copper services within areas of active corrosion, all in coordination with additional leak surveys, studies, and monitoring. Staff and Laclede agree that monitoring (discussed in more detail below) will continue and will be flexible in adapting to changes in data that has been and will be collected for the duration of the program specified in the Stipulation. This monitoring will be instrumental in assisting the prioritization of the annual copper service line relay/renewal rates.

Subparagraph 7 (c)

Laclede shall renew any direct-buried copper service lines found leaking at the riser and the tee during bar-hole surveys, as well as any direct-buried copper service lines found leaking at the riser as a result of the 90 psi air test conducted subsequent to the installation of a copper service relay.

Under these conditions a complete renewal (main-to-meter) would be required as opposed to a relay. Regardless of the future status of "bar-hole" surveys (described in 7 (d)), this renewal policy applies to any copper service line meeting the terms of the Stipulation and endures for the life of the direct-buried copper service line program.

Subparagraph 7 (d)

The relays/renewals, as specified in Subparagraphs 7 (b) and 7 (c) are to be performed at a rate of 8,000 service lines for each annual period commencing on March 1, 2000, and on each March 1st thereafter, unless, or until such time as, a new rate of relays and/or renewals is approved by the Commission. Priority will be given to all existing leaking direct-buried copper service lines.

The rate of 8,000 service lines for each annual period commencing in the first quarter of Year 2000, is consistent with the Staff's filed report dated August 31, 1999. In that report, Staff proposed an annual renewal rate of ten percent, or approximately 8,000 direct-buried copper service lines, for a given year. The Stipulation takes the August 1999 proposed renewal rate, and proposes the guidelines of 7 (b), which allows Laclede to relay or renew direct-buried copper service lines. The Staff agreed to this annual relay/renewal rate of 8,000 copper service lines for reasons stated above in 7 (b). Any direct-buried copper service lines that were partially replaced as a result of the Ringer Road Agreement (1991 through January 2000), that are relayed or renewed because they do not meet the intent of this Stipulation, will be counted toward the program's required relay/renewal rate of 8,000 service lines annually.

Subparagraph 7 (e)

Commencing in March 2000, and continuing for an additional two years thereafter, Laclede shall conduct bar-hole surveys, to be completed by July 1st of each year, incorporating a bar-hole at the riser, service tee connection and at the street pavement edge opposite the tee connection on all long side services for all direct-buried copper service lines, unless a superior method is identified. The bar-hole survey results and any other factors that the Parties may mutually deem to be appropriate will be used by the Company and Staff to review and prioritize future efforts. In addition, during all Service and Installation Department calls to any premises with direct-buried copper service lines, a bar-hole will be made at the riser, the tee, and at the street pavement edge or curb opposite the tee connection for long side service lines.

In Gas Incident Reports related to this case, Staff addressed several issues pertaining to leaks at tee connections going undetected during leak surveys. Investigations made during this case indicate that bar-holes, made over the tap connection, opposite street side (long-side services), and at the riser, were able to significantly enhance the identification of more leaks than were identified in prior walking and mobile leak surveys.

Because of the bar-hole surveys' significant results in identifying leaks, Staff agreed with Laclede's efforts to conduct bar-hole surveys and incorporating them into the Stipulation. The results of these bar-hole surveys will be instrumental in monitoring and prioritizing direct-buried copper service lines for relay and/or renewal. In addition, Laclede will incorporate the results of these bar-hole surveys into status reports (Subparagraph 7 (k)) that will be submitted to the Commission annually.

Subparagraph 7 (f)

Commencing on the effective date of the Commission Order approving this Stipulation, all direct-buried copper service lines in Pressure Region 1 that are identified as having Class 3 leaks during the annual bar-hole survey shall be relayed or renewed within six months of identification or prior to the end of that calendar year, whichever occurs first. All direct-buried copper service lines within Pressure Region 2 that are identified as having Class 3 leaks during the annual bar-hole survey shall be relayed or renewed within one year of identification.

The Staff agreed to these provisions because they address two significant issues; (1) the undetermined corrosion rate on copper services once a leak exists and; (2) prioritizing leaks on copper service lines that have higher operating pressures. Investigations conducted during this case have not determined the corrosion rate on Laclede's copper service lines. Investigations have also indicated a possible increase in the corrosion rate once a leak has initiated on a copper service line. Therefore, any actions to eliminate those leaks at a faster rate would lessen the potential for a hazardous situation to arise.

Relaying or renewing copper service lines with a Class 3 leak within six months or prior to the end of that calendar year exceeds the minimum pipeline safety standards and gives priority to those copper services known to be leaking. In addition, Pressure Region 1 contains direct-buried copper service lines that can operate above 35 psig, while Pressure Region 2 pressures operate below 35 psig. Eliminating the copper service lines with leaks in Pressure Region 1 reduces a greater risk of migration of natural gas because of the elevated operating pressures. Staff believes that when leaks are identified, emphasis should be given to pressure regions with greater migration potential, even though

the majority incident reports reviewed during this investigation involved direct-buried copper service lines that were operating at pressures below Pressure Region 1 pressures at the time of the incident.

Subparagraph 7 (g)

Commencing on the effective date of the Commission Order approving this Stipulation, all direct-buried copper service lines with Class 3 leaks reported and identified outside of the annual bar-hole survey shall be relayed or renewed within twelve months of discovery. Any direct-buried copper service lines found leaking at both the riser and the tee will be renewed. Priority will be given to any such leaks existing in Pressure Region 1.

For reasons stated for 7 (f) above, the Staff agreed to these actions. Normally, Laclede would have up to five years to repair a Class 3 leak in accordance with the minimum pipeline safety requirements.

Subparagraph 7 (h)

After the third year of this program, Laclede and the Gas Safety Staff will review the progress and results of the Company's Copper Service Safety Program to determine future relay/renewal plans, including the rate of such future actions, potential modifications to survey techniques and other related matters.

A review of the Copper Service Safety Program's progress and results after the third year was recommended by Staff in Testimony and its August 31, 1999, report in this case. This review serves the purpose of effectively reevaluating the short-term results of the program in a more thorough and timely manner, and if factual supporting data and engineering analysis warrant, opens to reconsideration any necessary changes to the program. This three-year review opportunity is a good practice, which will allow the Parties to critically review new data and adjust the program if necessary.

Subparagraph 7 (i)

The Parties recommend that Laclede be granted a modification to its waiver of compliance in Case No. GO-93-343 from the requirements of 4 CSR 240-40.030 (15)(C) relating to the renewal of low-pressure, unprotected steel service and yard lines, commencing with the effective date of the Commission Order approving this Stipulation.

Laclede provided statements in an "Attachment" to the Stipulation as supporting verification that a modified waiver would not jeopardize, but rather promote public safety by permitting the Company to devote additional resources to the copper service line program identified in the Stipulation. Staff has reviewed Laclede's records and other information and believes such a modification would be reasonable. Notably, these service and yard lines will continue to be leak surveyed on an annual basis in order to detect leaks at the earliest possible opportunity and to facilitate the prompt renewal of such lines. All of the unprotected steel service/yard lines operate at low pressure (less than ½ psig).

Subparagraph 7 (j)

The Parties agreed Laclede would continue to develop a method for identifying active corrosion on direct-buried copper service lines through data gathering and engineering analysis. This information as well as other relevant data shall be used by the Parties in recommending to the Commission the rate

at which service lines will be renewed or relayed and the priority of which service lines should be renewed and/or relayed.

At the time Staff entered into this Stipulation, it was not able to precisely identify which areas were more susceptible to corrosion or determine the rate of corrosion on the Company's copper service lines. Staff therefore believes it is important that efforts should continue to develop methods for identifying active corrosion on direct-buried copper service lines. Continuing to develop an effective profile of direct-buried copper service lines undergoing active corrosion would be an invaluable tool to use in eliminating those copper service lines with the potential for developing hazardous leaks.

Limited and inconclusive previous studies on copper service lines were conducted as discussed in Staff's Testimony. A need remains for examination and study of these facilities. Staff hopes that future studies, in conjunction with other actions to be taken in this Stipulation, will reach the common goal of eliminating incidents attributed to corrosion on copper service lines.

Subparagraph 7 (k)

Laclede agrees to submit annual status reports to the Commission detailing the direct-buried copper service line renewals and relays completed, and file additional reports confirming the achievement of other milestones under the agreements reached between the Company and Staff. Laclede, OPC, and Staff will cooperate in agreeing on the information to be reported.

Keeping all parties involved and informed concerning the program results is critical. With all parties agreeing to the information to be reported, it should facilitate the collection and review of information as well as assist in incorporating any adjustments to the relay/renewal rates and priorities.

Subparagraph 7 (l)

Laclede agrees to provide the location of the main and the service line connections to service personnel when performing service work, scheduled leak surveys, and investigations of call-in leak reports. In addition, Laclede agrees to continue to place the words, "Annual Copper" on SSI forms for all direct-buried copper service lines, when SSI Surveys are performed.

As stated above in 7 (e), certain leaks went undetected during routine walking and mobile leak surveys. Staff supports the actions of providing the location of the main and the service line connections to service personnel when performing service work, scheduled leak surveys, and investigations of call-in leak reports. By simply providing this information, Staff believes workers will be able to conduct more accurate and effective leak surveys by knowing the exact location of the services and placing their leak detection instruments over the pipelines. The intent of these actions is to sample the subsurface atmosphere directly above the buried facilities and any leaks occurring will be detected before they become hazardous.

Printing the words "Annual Copper" on the SSI inspection forms will alert the leak surveyor that a direct-buried copper service line is at a particular location. This will prompt the leak surveyor to conduct a leak survey over the entire length of a long-side copper service line including the portion under the road surface. This should better assure that segments of a direct-buried copper service line will be leak surveyed and a potentially hazardous leaks detected. Because these policies and

procedures provide for increased and more accurate leak surveys, the Staff views these actions as essential to a safe system.

Subparagraph 7 (m)

Laclede has purchased and agrees to provide cellular telephones or other equivalent mobile communication equipment to its personnel who conduct leak investigations and leak surveys.

Laclede has implemented procedures to log-in all outside leaks into the Company's computer-based leak control system at the time they are dispatched to a service technician in the case of odor complaints from the public, or at the time they are found by a service technician or other field personnel in the course of performing leak investigations. These procedural changes are currently in effect, and should help to prevent the inadvertent loss and ensure subsequent follow-up on reported Class 3 leaks.

In addition, providing cellular phones or other mobile communication equipment to personnel who conduct leak investigations and leak surveys will allow for the immediate entering of all leaks discovered in the field into the leak control system. Also, with the capability of having immediate communication, leak investigators and leak surveyors will not have to leave the site of a discovered Class 1 leak to summon help for immediate action. Prior to having cellular phones or other devices at their disposal, leak investigators may have had to leave the site of a Class 1 leak to find a pay phone to call dispatch for help to correct the leak. Leaving the site of a Class 1 leak unattended could be potentially hazardous. Staff believes it is important that all personnel conducting leak investigations have timely access to information and assistance to do their job effectively.

Subparagraph 7 (n)

Nothing in this Stipulation shall be construed as modifying the terms of any copper service line related practice or procedures previously agreed upon by the Parties, except as expressly provided for herein.

Laclede has already implemented the relay/renewal procedures contained within the Stipulation. Staff believes the Company's implementation of the terms of the Stipulation fully meets the intent of leak surveying, monitoring, and removing direct-buried copper service lines within areas of active corrosion. Staff notes that terms of the Stipulation will be subject to reconsideration, upon collection of additional factual supporting evidence, during the three-year reevaluation process stated above. Staff does not believe this Stipulation construes as modifying the terms of any copper service line related practice or procedures previously agreed upon by the Parties.

Subparagraph 7 (o)

Implementation of the terms of this Stipulation fully satisfies and supersedes the terms of the Ringer Road settlement approved by the Commission in Case No. GS-90-326. This Stipulation also supersedes the UNANIMOUS PARTIAL STIPULATION AND AGREEMENT, which was filed by Laclede, OPC, and Staff on January 3, 2000.

As indicated in 7 (n), Staff believes policies and procedures implemented or agreed to fully meet the intent of this Stipulation. All resolved issues contained in the UNANIMOUS PARTIAL STIPULATION AND AGREEMENT have been incorporated within the UNANIMOUS

STIPULATION AND AGREEMENT. Furthermore, Staff testimony addressed many provisions incorporated within the Ringer Road Agreement that needed significant reevaluation. Staff believes the terms of this Stipulation, not only exceed the terms of the Ringer Road Agreement, but better enhance the relay and/or renewal of leaking direct-buried copper service lines, provides for better documentation and reporting of leaks, and requires for additional and more accurate leak surveys over direct-buried copper service lines.

Paragraph (8)

The Staff agreed to make filings in Case Nos. GS-98-422 and GS-98-423 no later than February 15, 2000, stating that Laclede has adequately addressed the recommendations contained in the incident reports, and recommending that the Commission close the cases. The Staff further agrees to work with Laclede to produce an appropriate pleading in Case No. GC-99-151 indicating that Laclede has adequately addressed the issues that caused Staff to file the complaint.

As agreed, on February 15, 2000, Staff filed its recommendations to close Case Nos. GS-98-422 and GS-98-423. In response to the agreement to address Case No. GC-99-151, A JOINT MOTION TO DISMISS COMPLAINT AND CLOSE CASE was filed on March 27, 2000.

Summary

Staff believes the voluntary and stipulated actions Laclede has committed to will work toward providing a better and safer system for Laclede and the public. For the reasons cited in the preceding paragraphs, the Staff believes the UNANIMOUS STIPULATION AND AGREEMENT represents a good and fair resolution of the issues and recommends the Commission's approval.

Service List for
Case No. GO-99-155
Revised: April 10, 2000

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