BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

FILED[3]
JAN 2 5 2002
Missouri Public Service Commission

In the Matter of Laclede Gas Company's Tariff Sheets Designed to Increase Rates for Gas Service Provided to Customers in the Missouri Service Area of the Company.	)))))	Case No. GR-2002-356

AFFIDAVIT

STATE OF MISSOURI)
) SS.
CITY OF ST. LOUIS)

Craig R. Hoeferlin, of lawful age, being first duly sworn, deposes and states:

1. My name is Craig R. Hoeferlin. My business address is 3950 Forest Park Avenue, St. Louis, Missouri 63108; and I am Vice President-Operations.

2. Attached hereto and made a part hereof for all purposes is my direct testimony, consisting of pages 1 to 12, inclusive.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded and the information contained in the attached schedules is true and correct to the best of my knowledge and belief.

Craig R. Hoeferlin

Subscribed and sworn to before me this 24th day of January 2002.

Barbara Ann McCarthy

BARBARA ANN MCCARTHY
St. Louis County
My Commission Expires
February 16, 2003

Exhibit No.:	
Issue:	Capital Costs of Mandated Replacement Programs and Removal of Natural Gas Holders
Witness:	Craig R. Hoeferlin
Type of Exhibit:	Direct Testimony
Sponsoring Party:	Laclede Gas Company
Case No.:	GR-2002-356

LACLEDE GAS COMPANY

GR-2002-356

DIRECT TESTIMONY

OF

CRAIG R. HOEFERLIN

Direct Testimony of Craig R. Hoeferlin

Table of Contents

DIRECT TESTIMONY OF CRAIG R. HOEFERLIN

General Information/Qualifications

Q. Please state your name and business address.

A. My name is Craig R. Hoeferlin, and my business address is 3950 Forest Park Avenue, St. Louis, Missouri 63108.

Q. By whom are you employed and in what capacity?

A. I am Vice President-Operations of Laclede Gas Company ("Laclede" or "Company").

Q. How long have you held this position, and would you briefly describe your duties?

A. I was appointed to this position on July 1, 2001.

In this capacity I manage the entire range of Company operations functions, including construction and maintenance, service and installation, customer relations, engineering, transportation, gas supply and control, and the Missouri Natural Division.

Q. What is your educational background?

A. I received a Bachelor of Science Degree in Chemical Engineering in 1984 from the University of Missouri-Columbia.

Q. Please describe your experience with Laclede.

A. I have been continuously employed by Laclede since June 1984. Prior to my current position, I held a variety of positions in the Engineering, Gas Supply and Control, and Construction and Maintenance Departments.

Q. Have you previously testified before this Commission?

A. Yes, I have. I testified in Case Nos. GR-98-374, GR-99-315 and GR-2001-629.

Mandated Replacement Programs

Q. What is the purpose of this portion of your testimony in this proceeding?

A. This portion of my testimony will provide a general explanation of the capital costs Laclede Gas Company incurs in carrying out replacement programs mandated by the Missouri Public Service Commission. I am furnishing this information as background for the Company's proposed treatment of mandated replacement costs that have been incurred and which Laclede anticipates will be incurred in the future.

Q. Does any other Company witness address this issue?

A. Yes. Company witness J. A. Fallert is sponsoring the accounting treatment concerning mandated replacement costs incurred by the Company and its request for future accounting treatment.

Q. Does Laclede Gas Company incur capital expenses to comply with replacement programs mandated by the Missouri Public Service Commission?

A. Yes, Laclede Gas Company incurs about $11.7 million per year in capital expenses to comply with replacement programs mandated by the Missouri Public Service Commission.

Q. Please list the mandated replacement programs.

A. The mandated replacement programs are listed on Schedule CRH-1. The mandated capital programs include: (A) the cast iron replacement; (B) the unprotected bare steel main replacement program; (C) the unprotected bare steel

service replacement program; (D) the direct buried copper service replacement program; and (E) the annual bar hole survey of those services.

Q. What is the basis for the cast iron replacement program?

A. The cast iron replacement program was mandated by 4 CSR 240-40.030(15)(D) and Case No. GO-91-275. At the time of its inception, the Cast Iron Replacement Program contained six Specific Priority Replacement Categories briefly described below:

Category Code	Required Replacement	Description
C1	10/1/94	6-inch Medium Pressure in areas of wall to wall pavement
C2	10/1/96	Low Pressure, 3 break areas with 1 occurring since 1983
C3	10/1/98	6-inch Medium Pressure in areas of concentrations of general public
C4	10/1/01	Low Pressure, 2 break areas with 1 occurring since 1983
C5	10/1/01	Low Pressure, 3 break areas all occurring prior to 1983
C6	10/1/03	All remaining areas of 6-inch Medium Pressure

Additionally, Ongoing Replacement Categories were defined as follows:

Category Code	Required Replacement	Description
C7	Within 3 years of discovery	Low Pressure, 2 break areas with the discovery of third break
C8	Within 5 years of discovery	Low Pressure, 1 break areas with the discovery of second break
C9	As required	Areas of extensive excavation, blasting or construction
D1	As required	Areas defined by 4 CSR 240-40.030(13)(Z)
D2	As required	Unspecified newly identified priority replacement areas

The Company has completed the Specific Priority Replacement Category C1, C2,

C3, C4, and C5 replacements. The Company is in compliance with the replacement requirements for Specific Priority Replacement Category C6, and Ongoing Replacement Categories C7 and C8. In addition, the Company continues to track and schedule for replacement, where practical, cast iron main replacements that were defined in the Long-Term Replacement Program. These areas include low pressure areas with two existing breaks which occurred prior to 1983, low pressure areas with one break since 1983, six-inch and smaller low pressure mains under wall to wall pavement, and sections which demonstrate significant graphitization. The replacements completed in fiscal year 2001 and the replacements anticipated for fiscal years 2002, 2003, 2004, and 2005 are shown in Schedule CRH-1.

Q. What levels of capital expenditures by the Company are required to comply with the mandated cast iron replacements?

A. The capital expenditures associated with the mandated replacements under the cast iron replacement program are shown in Schedule CRH-1. The Company anticipates spending $1.3 million, $1.3 million, $1.3 million, and $1.4 million respectively for the fiscal years 2002, 2003, 2004, and 2005.

Q. What is the basis for the unprotected bare steel main replacement program?

A. The bare steel main replacement program was mandated in 4 CSR 240-40.030(15)(E) and Case No. GO-91-239. The schedule set forth in Case No. GO 91-239 required replacement of 20,000 feet per year based on leak history and 1,800 feet per year based on wall-to-wall pavement and areas of high concentration of the general public through fiscal year 1998. The Company has

continued replacements at that rate. The replacements completed in fiscal year 2001 and the replacements planned for fiscal years 2002, 2003, and 2004, and 2005 are shown in Schedule CRH-1.

Q. What levels of capital expenditures by the Company are required to comply with the mandated bare steel main replacements?

A. The capital expenditures associated with the mandated replacements under the bare steel main replacement program are shown in Schedule CRH-1. The Company anticipates having to spend $1.0 million, $1.1 million, $1.1 million, and $1.1 million respectively for fiscal years 2002, 2003, 2004, and 2005.

Q. What is the basis for the unprotected bare steel service replacement program?

A. The bare steel service replacement program was mandated in 4 CSR 240-40.030(15)(C) and Case No. GO-91-239 and modified by Case No. GO-99-155. Case No. GO-99-155 revised the number of replacements to require the renewal of bare steel service lines found leaking and those exposed during main replacement programs or other routine work. The program will be completed when all services are renewed by 2020. The replacements completed in fiscal year 2001 and the replacements planned for fiscal years 2002, 2003, 2004, and 2005 are shown in Schedule CRH-1.

Q. What levels of capital expenditures by the Company are required to comply with the mandated bare steel service replacements?

A. The capital expenditures associated with the mandated replacements under the bare steel service replacement program are shown in Schedule CRH-1. The

Company anticipates having to spend $1.4 million, $1.5 million, $1.5 million, and $1.5 million respectively for fiscal years 2002, 2003, 2004, and 2005.

Q. What is the basis for the direct buried copper service replacement program and the associated requirement to bar hole survey direct buried copper services on an annual basis?

A. The direct buried copper service replacement program and the associated bar hole survey were mandated in Case No. GO-99-155. The Company is required to complete 8,000 qualifying replacements per program year for the first three years of the program. The required replacement rate is to be reevaluated by Staff after the first three years of the program. The Company is required to bar hole survey all direct buried copper services annually. The number of qualifying replacements completed in fiscal year 2001 and the number of qualifying replacements planned for fiscal years 2002, 2003, 2004, and 2005 are shown in Schedule CRH-1. The number of bar hole surveys completed in fiscal year 2001 and the number of bar hole surveys anticipated to be required for fiscal years 2002, 2003, 2004, and 2005 are shown in Schedule CRH-1.

Q. What levels of capital expenditures by the Company are required to comply with the mandated direct buried copper service replacements?

A. The capital expenditures associated with the mandated replacements under the direct buried copper service replacement program are shown in Schedule CRH-1. The Company anticipates having to spend $8.3 million, $7.8 million, $8.0 million, and $8.2 million respectively on direct buried copper service replacements for fiscal years 2002, 2003, 2004, and 2005. The capital expenditures associated with

the mandated bar hole survey of direct buried copper services are shown in Schedule CRH-1. The Company anticipates having to spend $510 thousand, $456 thousand, $397 thousand, and $334 thousand, respectively on the bar hole survey for fiscal years 2002, 2003, 2004, and 2005.

Gas Holders

Q. What is the purpose of this portion of your testimony?

A. I will explain the need to decommission and dismantle the Company's "gas holders."

Q. What are "gas holders?"

A. The gas holders are large, above-ground steel tanks that store natural gas for use by Laclede's customers. The unique design of these structures allows them to telescope upward and downward as they are filled and emptied of gas. The oldest surviving gas holder in Laclede's system dates back to 1901, and the newest one went into service in 1941. Figure 1 of my testimony shows a typical gas holder.

Q. Why is it appropriate to deal with the gas holders at this time?

A. In the past, both Laclede and the Staff of the Commission recognized that the gas holders were approaching the conclusion of their useful lives and that their decommissioning, including any environmental aspects, needed to be accomplished. The only question was at what time a commitment should be made to removal.

Q. Is Laclede now committed to the decommissioning and removal of these holders?

A. Yes. Laclede has concluded that it is prudent to commence removal of the gas holders in the near future.

Q. Why is Laclede now convinced that the holders can or should be dismantled?

A. Over the last several years, Laclede has gradually, yet deliberately, reduced its utilization of the gas holders as a means of testing to confirm that the distribution system can be operated securely without reliance on the gas holders. The winter of 2000-2001 exhibited the first appreciable, extended cold period since this testing began. This provided the necessary conditions for Laclede to determine, with certainty, that the holders are expendable.

Q. Does any other Company witness address this issue?

A. Yes. Company witness R. L. Sherwin is sponsoring testimony concerning recovery of the costs that the Company expects to incur directly as a result of dismantling the gas holders.

Q. How many gas holders does Laclede still operate?

A. There are four such structures at three locations.

Q. Please explain the history of the gas holders.

A. The four remaining gas holders are remnants of the extensive manufactured gas system that Laclede operated to serve its St. Louis customers prior to widespread conversion to natural gas in the late 1940's. Such holders were generally filled with manufactured gas taken off the distribution system during off-peak periods and then emptied as the peak load came on each day. After the conversion to natural gas, the gas holders were adapted to serve as peak-shaving units – similar to the function for which they were originally designed, only using natural gas from the pipeline instead. The gas holders continued to provide an economical

means to inject appreciable volumes of gas into the core of the distribution system at times of peak load.

Q. Do they no longer serve this function?

A. They are still capable of serving this function, but over the years our reliance on the gas holders for periodic peak shaving has been reduced, and this trend will continue.

Q. Please explain.

A. The Company continually reviews the design of its distribution system. Former design methodologies dictated that the distribution system was operated in such a way as to minimize distribution system pressures. As older mains are replaced with newer materials, the Company has shifted its focus toward installing smaller mains where possible and operating the system at higher pressures. This change in design philosophy has been implemented to reduce system replacement and reinforcement costs. The result is a more efficient distribution system. The increased distribution system pressures, however, tend to decrease the effectiveness of the holders since the existing outlet compressors were designed for lower distribution system pressures. This trend has substantially reduced Laclede's ability to effectively use the holders at times of peak demand.

Q. Are there other factors involved in Laclede's decision to accelerate removal of the gas holders?

A. Yes. There are several other considerations involved. Due to their reduced frequency of usage, the expense to man and maintain the gas holders has begun to exceed the value of any system benefits. Also, in most situations it would not be

economically feasible to replace or repair a major component of a gas holder or appurtenant equipment in the event of failure. In consideration of the age of these structures, Laclede believes it prudent to begin planned removal rather than risk waiting until such a failure is imminent or has already occurred. Furthermore, some of the gas holders are located near residential areas and there is growing public sentiment to eliminate them for aesthetic reasons.

Q. What is Laclede's current estimate to fully decommission the gas holders?

A. Our current estimate is $5.13 million. Schedule 2 of my testimony shows how this estimate was derived.

Q. Would you please explain the basis for this estimated cost?

A. Yes. This cost includes the actual dismantling and removal of the structures themselves and the removal of any residual wastes from the operations of the gas holders over the years. These wastes could include materials such as lead based paints, asbestos, tars and sludges that, to the extent they may exist, will require treatment in an environmentally sound manner.

Q. Are the existing gas holders a hazard to current workers or the public?

A. No. Currently, all materials are properly contained and exposure is controlled. During demolition and removal, that work will be performed in such a way as to insure worker and public safety.

Q. Why should Laclede's current customers pay for any environmental costs associated with these facilities?

A. It should be recognized that any environmental costs represent only one aspect of the financial impact on today's customers. Without the early development and

operation of these gas holders, much of the distribution system infrastructure required to serve our customers today would not have been built until much later, if at all. Since current customers benefit from the infrastructure developed as a result of these facilities, it is entirely appropriate that they pay any environmental costs associated with these facilities.

Q. Has the estimated cost to remediate the gas holders stabilized?

A. The current estimate was prepared by in-house engineering staff who maintain periodic contact with consultants and contractors, knowledgeable in the field. Laclede does not believe that there is any more to be gained by generating more estimates. The best way to verify the cost is to proceed with bid specifications and to solicit firm proposals from contractors to remove the gas holders. Of course, to the extent any variation from such cost does occur as the dismantling proceeds, such variation can be reflected and accounted for during the amortization period.

Q. Is recognition of removal costs consistent with Staff's previous position on this issue?

A. Yes. In his direct testimony in Case No. GR-99-315, Staff witness Paul Adam indicated that such treatment would be appropriate once a definitive commitment to decommission these holders was made. That commitment has now been made.

Q. How soon would Laclede propose to initiate removal?

A. Laclede is taking steps now to begin the decommissioning process and throughout the course of these proceedings will continue to apprise the Commission Staff of our progress and schedule in this regard.

Q. Does this conclude your testimony?

A. Yes.

Program	Regulation or Case	Basis for Replacements, Requirements and Remarks	Fiscal 2001				Fiscal 2002(est)			
			Total Footage Replaced /Eliminated:	Total Expense:	Program footage Replaced /Eliminated:	Program Expense:	Total Footage Replaced /Eliminated:	Total Expense:	Program footage Replaced /Eliminated:	Program Expense:
Cast Iron **A**	4 CSR 240-40.030 (15)(D) and Case No. GO-91-275	Number of circumfrential cast iron breaks per study section (minimum of two breaks within 500 feet). Replacement footage varies from year to year depending on cast iron break frequency. Scheduled by fiscal year. Program has no ending year defined.	64,642	$2,621,879	53,759	$2,180,465	30,000	$1,253,402	13,850	$578,654
Unprotected Bare Steel Main **B**	4 CSR 240-40.030 (15)(E) and Case No. GO-91-239	The schedule set forth in Case No. GO-91-239 required 20,000 feet per year based on leak history and 1,800 feet per year based on wall-to-wall pavement and areas of high concentration of the general public through fiscal year 1998. Future rates were to be negotiated with Staff.	21,800	$1,016,098			21,800	$1,046,618		
			Svc Lines Replaced/ Eliminated	Total Expense			Svc Lines Replaced/ Eliminated	Total Expense		
Unprotected Bare Steel Service Line **C**	4 CSR 240-40.030 (15)(C), Case No. GO-91-239 and modified by Case No. GO-99-155	GO-99-155 revised the number of replacements to require the renewal of bare steel service lines found leaking and those exposed during main replacement programs or other routine work. Program to be completed when all services are renewed by 2020.	638	$1,755,074			500	$1,416,715		
Direct Buried Copper Service Lines **D**	Case No. GO-99-155	8,000 qualifying replacements per year in first three years of program. Reevaluate after 3 years. Replacements prioritized by addresses with reported leaks. Pressure Region 1 to be replaced within 6 months and Pressure Region 2 to be replaced within 12 months of discovery. Non leak related replacements prioritized based on open leaks in the area, leak history of area and other factors. Scheduled by program year beginning on March 1st each year. Program has no ending year defined. Note: first program year began on January 1, 2000.	6,274	$5,739,267			8,850	$8,338,648		
			Surveys Completed	Total Expense			Surveys Completed	Total Expense		
Bar Hole Leak Survey - Direct Buried Copper **E**	4 CSR 240-40.030 (15)(E) and Case No. GO-99-155	Consists of annual CGI bar hole survey at tee, curb, and riser of each "qualifying" service line. Also includes visual inspection of outside meter set.	68,723	$566,965			60,000	$510,000		

Program	Regulation or Case	Basis for Replacements, Requirements and Remarks	Fiscal 2003(est)				Fiscal 2004(est)		
			Total Footage Replaced /Eliminated:	Total Expense:	Program footage Replaced /Eliminated:	Program Expense:	Total Footage Replaced /Eliminated:	Total Expense:	Program footage Replaced /Eliminated:
Cast Iron **A**	4 CSR 240-40.030 (15)(D) and Case No. GO-91-275	Number of circumfrential cast iron breaks per study section (minimum of two breaks within 500 feet). Replacement footage varies from year to year depending on cast iron break frequency. Scheduled by fiscal year. Program has no ending year defined.	30,000	$1,290,900	12,730	$547,772	30,000	$1,329,900	17,000
Unprotected Bare Steel Main **B**	4 CSR 240-40.030 (15)(E) and Case No. GO-91-239	The schedule set forth in Case No. GO-91-239 required 20,000 feet per year based on leak history and 1,800 feet per year based on wall-to-wall pavement and areas of high concentration of the general public through fiscal year 1998. Future rates were to be negotiated with Staff.	21,800	$1,078,010			21,800	$1,110,492	
			Svc Lines Replaced/ Eliminated	Total Expense			Svc Lines Replaced/ Eliminated	Total Expense	
Unprotected Bare Steel Service Line **C**	4 CSR 240-40.030 (15)(C), Case No. GO-91-239 and modified by Case No. GO-99-155	GO-99-155 revised the number of replacements to require the renewal of bare steel service lines found leaking and those exposed during main replacement programs or other routine work. Program to be completed when all services are renewed by 2020.	500	$1,459,215			500	$1,502,995	
Direct Buried Copper Service Lines **D**	Case No. GO-99-155	8,000 qualifying replacements per year in first three years of program. Reevaluate after 3 years. Replacements prioritized by addresses with reported leaks. Pressure Region 1 to be replaced within 6 months and Pressure Region 2 to be replaced within 12 months of discovery. Non-leak related replacements prioritized based on open leaks in the area, leak history of area and other factors. Scheduled by program year beginning on March 1st each year. Program has no ending year defined. Note: first program year began on January 1, 2000.	8,000	$7,763,840			8,000	$7,996,720	
			Surveys Completed	Total Expense			Surveys Completed	Total Expense	
Bar Hole Leak Survey - Direct Buried Copper **E**	4 CSR 240-40.030 (15)(E) and Case No. GO-99-155	Consists of annual CGI bar hole survey at tee, curb, and riser of each "qualifying" service line. Also includes visual inspection of outside meter set.	52,000	$455,520			44,000	$396,880	

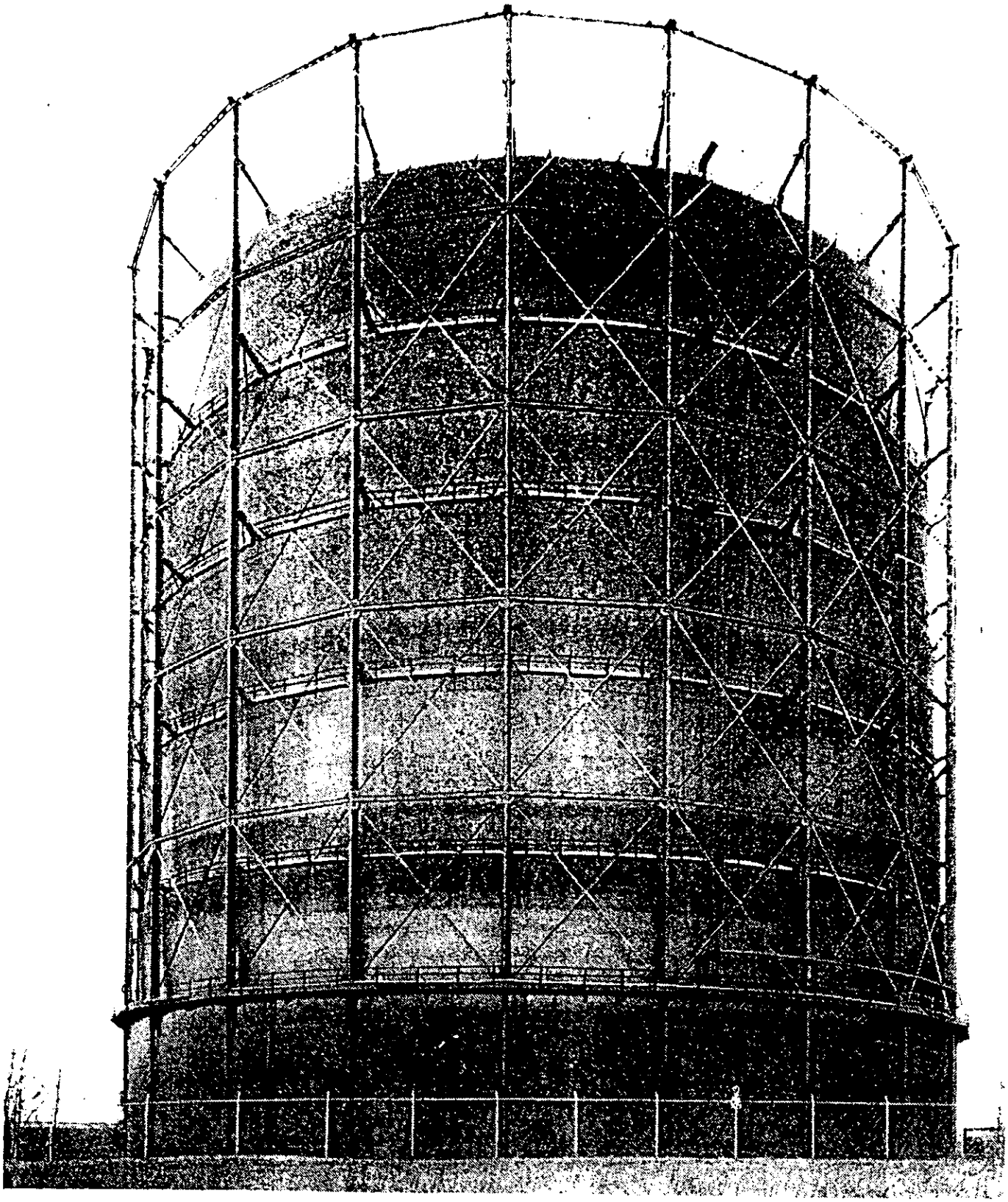
Program	Regulation or Case	Basis for Replacements, Requirements and Remarks	Program Expense:	Fiscal 2005(est) Total Footage Replaced /Eliminated:	Total Expense:	Program footage Replaced /Eliminated:	Program Expense:
Cast Iron **A**	4 CSR 240-40.030 (15)(D) and Case No. GO-91-275	Number of circumfrential cast iron breaks per study section (minimum of two breaks within 500 feet). Replacement footage varies from year to year depending on cast iron break frequency. Scheduled by fiscal year. Program has no ending year defined.	$753,610	30,000	$1,369,800	12,000	$547,920
Unprotected Bare Steel Main **B**	4 CSR 240-40.030 (15)(E) and Case No. GO-91-239	The schedule set forth in Case No. GO-91-239 required 20,000 feet per year based on leak history and 1,800 feet per year based on wall-to-wall pavement and areas of high concentration of the general public through fiscal year 1998. Future rates were to be negotiated with Staff.		21,800	$1,143,846		
				Svc Lines Replaced/ Eliminated	Total Expense		
Unprotected Bare Steel Service Line **C**	4 CSR 240-40.030 (15)(C), Case No. GO-91-239 and modified by Case No. GO-99-155	GO-99-155 revised the number of replacements to require the renewal of bare steel service lines found leaking and those exposed during main replacement programs or other routine work. Program to be completed when all services are renewed by 2020.		500	$1,548,085		
Direct Buried Copper Service Lines **D**	Case No. GO-99-155	8,000 qualifying replacements per year in first three years of program. Reevaluate after 3 years. Replacements prioritized by addresses with reported leaks. Pressure Region 1 to be replaced within 6 months and Pressure Region 2 to be replaced within 12 months of discovery. Non leak related replacements prioritized based on open leaks in the area, leak history of area and other factors. Scheduled by program year beginning on March 1st each year. Program has no ending year defined. Note: first program year began on January 1, 2000.		8,000	$8,236,640		
				Surveys Completed	Total Expense		
Bar Hole Leak Survey - Direct Buried Copper **E**	4 CSR 240-40.030 (15)(E) and Case No. GO-99-155	Consists of annual CGI bar hole survey at tee, curb, and riser of each "qualifying" service line. Also includes visual inspection of outside meter set.		36,000	$334,440		

Laclede Gas Company Case No. GR- 2002-356
Gas Holders -- Decommissioning Cost Estimate

Item / Description	Station G	Station N	Shrew. #23	Shrew. #24	Cost
Year holder went into service	1901	1930	1925	1941	
Approximate holder capacity (mmcf)	4	10	3	5	
Contractor mobilization & demobilization	$50,000	$50,000	$50,000 (1)		$150,000
Drain & dispose of interior water	$259,000	$505,000	$198,000	$262,000	$1,224,000
Remove & centrifuge sludge	$98,000	$115,000	$50,000	$67,000	$330,000
Clean interior & exterior holder surfaces	$141,000	$294,000	$125,000	$167,000	$727,000
Remove internal support timbers	$45,000	$74,000	$43,000	$43,000	$205,000
Demolition of structures (2)	$135,000	$230,000	$130,000	$130,000	$625,000
Transport & dispose of sludge	$47,000	$74,000	$33,000	$44,000	$198,000
Treat & dispose of centrate water	$150,000	$200,000	$87,000	$115,000	$552,000
Transport & dispose of support timbers	$18,000	$23,000	$14,000	$18,000	$73,000
Perimeter air monitoring	$108,000	$130,000	$132,000 (1)		$370,000
Laclede labor, equipment, and overhead to purge holders and disconnect piping	$60,000	$60,000	$90,000 (1)		$210,000
Total cost by holder:	$1,111,000	$1,755,000	$952,000	$846,000	$4,664,000
		Add 10% for contingencies			$466,400
		Total Estimated Cost:			**$5,130,400**

Notes:
1. Assumes both holders at this location are demolished concurrently.
2. Net of salvage value for steel.

Schedule CRH-2, Page 1 of 1



Typical Gas Holder

Figure 1