Exhibit No.:
Issues: *Purchasing Practices; Reliability Analysis*
Witness: *Lesa A. Jenkins*
Sponsoring Party: *MoPSC Staff*
Type of Exhibit: *Supplemental Direct Testimony*
Case Nos.: *GR-2001-382, GR-2000-425, GR-99-304 & GR-98-167 (Consolidated)*
Date Testimony Prepared: *October 3, 2003*

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY SERVICES DIVISION

SUPPLEMENTAL DIRECT TESTIMONY

OF

LESA A. JENKINS

MISSOURI GAS ENERGY
CASE NOS. GR-2001-382, GR-2000-425, GR-99-304 & GR-98-167
(Consolidated)

Jefferson City, Missouri
October 2003

****Denotes Highly Confidential Information****

NP

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Missouri Gas Energy's Purchased Gas Adjustment Tariff Revisions to be Reviewed in its 2000-2001 Actual Cost Adjustment	)))	**Case No. GR-2001-382**
In the Matter of Missouri Gas Energy's Purchased Gas Cost Adjustment Factors to be Reviewed in its 1999-2000 Actual Cost Adjustment	)))	**Case No. GR-2000-425**
In the Matter of Missouri Gas Energy's Purchased Gas Cost Adjustment Factors to be Reviewed in its 1998-1999 Actual Cost Adjustment	)))	**Case No. GR-99-304**
In the Matter of Missouri Gas Energy's Purchased Gas Cost Adjustment Tariff Revisions to be Reviewed in its 1997-1998 Actual Cost Adjustment	)))	**Case No. GR-98-167**

AFFIDAVIT OF LESA A. JENKINS

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

Lesa A. Jenkins, of lawful age, on her oath states: that she has participated in the preparation of the following supplemental direct testimony in question and answer form, consisting of 16 pages to be presented in the above case; that the answers in the following supplemental direct testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of her knowledge and belief.

Lesa A. Jenkins

Subscribed and sworn to before me this 2nd day of October 2003.

Notary Public

TONI M. CHARLTON NOTARY SEAL NOTARY PUBLIC STATE OF MISSOURI

My Commission Expires: _____

TONI M. CHARLTON
NOTARY PUBLIC STATE OF MISSOURI
COUNTY OF COLE
My Commission Expires December 28, 2004

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SUPPLEMENTAL DIRECT TESTIMONY OF

LESA A. JENKINS

MISSOURI GAS ENERGY

CASE NOS. GR-2001-382, GR-2000-425, GR-99-304, GR-98-167

(CONSOLIDATED)

LIST OF SCHEDULES OF

SUPPLEMENTAL DIRECT TESTIMONY OF

LESA A. JENKINS

MISSOURI GAS ENERGY

CASE NOS. GR-2001-382, GR-2000-425, GR-99-304, GR-98-167

(CONSOLIDATED)

SUPPLEMENTAL DIRECT TESTIMONY

OF

LESA A. JENKINS

MISSOURI GAS ENERGY

CASE NOS. GR-2001-382, GR-2000-425, GR-99-304, GR-98-167

(CONSOLIDATED)

Q. Please state your name and business address.

A. Lesa A. Jenkins, P.O. Box 360, Jefferson City, MO 65102.

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

A. I am a Regulatory Engineer in the Procurement Analysis Department with the Missouri Public Service Commission (Commission).

Q. Are you the same Lesa A. Jenkins who filed direct, rebuttal and surrebuttal testimony in the consolidated Case Nos. GR-2001-382, GR-2000-425, GR-99-304 and GR-98-167?

A. Yes, I am.

Q. What is the purpose of your supplemental direct testimony?

A. The purpose of my supplemental direct testimony is threefold. First, I will address the question asked by Commissioner Gaw during the hearing. He asked if storage had been managed according to Staff's plan, would the adjustment for the minimum level of hedging be different?

Second, I will address Mr. Duffy's comments during the hearing that data Staff relied upon to make the purchasing practices storage adjustment, numbers from the Missouri Gas Energy (MGE or Company) 2000/2001 Reliability Report, are not the warmest month

requirements. Mr. Duffy asked that Staff use the November 1999 and December 1999 actual volumes from Mr. Langston's direct, Schedule MTL-14 in the worksheets for calculating the adjustment for purchasing practices – storage.

Third, Judge Woodruff stated during the hearing that as Staff developed this information, if it had an effect on any of the other issues, Staff was to let the Commission know and it would be considered. He stated that the Commission wanted full information, as much as possible. In the course of checking the low case numbers, additional data requests were sent and responses were received. Staff will address how additional data provided by the Company changes the adjustment for the minimum level of hedging and for purchasing practices – storage. Analysis of more recent Company data shows that customer usage is different from the 1994 analyses, and thus supports that the Company should use current data to routinely evaluate natural gas requirements.

My supplemental direct testimony is specifically related to "Purchasing Practices – Minimum Level of Hedging" and "Purchasing Practices-Storage" in Case No. GR-2001-382 and "Reliability Analysis" in Case Nos. GR-2001-382 and GR-2000-425.

PURCHASING PRACTICES-MINIMUM LEVEL OF HEDGING

Q. During the hearing on May 14, 2003, Commissioner Gaw asked how Staff's adjustment for purchasing practices – minimum level of hedging would change if the Company had planned for storage withdrawals consistent with Staff's proposed normal withdrawals. You responded that you could provide a spreadsheet showing the change in the adjustment. Have you prepared this spreadsheet?

A. Yes. Rows 16-26 of Schedule 1 show that if the Company had planned for storage withdrawals according to Staff's proposed normal withdrawals, the Company would

have hedged at least 30% each month. Thus, there would be no adjustment for purchasing practices – minimum level of hedging. However, the Company did not plan for storage withdrawals according to Staff's proposed normal withdrawals.

Q. Does new information provided by the Company change Staff's recommended adjustment related to minimum level of hedging?

A. Yes.

Q. Please explain.

A. As noted in my earlier direct, rebuttal and surrebuttal testimony, I had concerns with the usage estimates provided by the Company that were used in calculating normal monthly requirements. For example, the Company provided Staff with a copy of its *Missouri Gas Energy Reliability Report, July 1, 2000 through June 30, 2001*, dated July 1, 2000. This report provides Staff with information about the Company's forecast for base case (estimated usage for normal weather). The Reliability Report includes estimates of base case usage for each month of July 2000 through June 2001. Estimates are also provided for both low case and high case usage. The Company states in this report that, "A key consideration in the forecasting process is the firm demand during extreme weather conditions. This information is necessary to allow the Company to ensure adequate supplies and pipeline capacity to meet all of its firm sales obligations under such conditions." When Staff requested a copy of some of the data used in the preparation of this report, the Company stated that this analysis was undertaken in 1994 and cannot be found. As noted in prior testimony, this was surprising because it was my impression from the review of the Company's reliability report that the Company reviewed usage information on an annual basis. Because the data cannot be found, MGE cannot establish, and Staff cannot confirm,

that estimates provided in the Reliability Report are reasonable. Additionally, the Company cannot verify whether the data analyzed was 1994 data or data from three years prior to 1994. Even if the 1994 analysis could be found, there is the concern that analysis of data that was at least six-years old prior to the date of this Reliability Report would not be representative of customer usage for this ACA period.

Other examples of Staff's concerns with Company's plans for natural gas supply are contained in: my earlier direct, rebuttal and surrebuttal testimonies; in the direct, rebuttal and surrebuttal testimonies of Staff witnesses David Sommerer and John Herbert; and in the direct and surrebuttal testimonies of Staff witness Anne Allee.

The Company's Supply Demand Summary provided in the response to Data Request Nos. 21 and 68, included as Schedules 5 and 6 of my earlier direct testimony, contains data for normal estimated usage. Since these estimates are close to the base case estimates in the 2000/2001 Reliability Report, and these estimates were the best information available to Staff at the time the adjustment was calculated, Staff utilized the Company estimates of normal usage to calculate the adjustment.

In the Company's Data Request No. 153 response, attached as schedule 2, the Company states that it has not argued that the Reliability Report information is inaccurate. The response also states that once becoming aware of Staff's concerns, MGE sought to address this issue when it filed its 2002/2003 reliability report. Staff is extremely concerned that the Company made decisions for the 2000/2001 winter based on a 1994 analysis and that it seems that the Company is only making changes in 2002/2003 because of Staff concerns. It does not seem reasonable that Staff must point out to the Company that an analysis has not been done since 1994.

Q. Please continue.

A. Additional data has since been received from the Company for monthly usage data for July 1997 through June 2000. This data is obviously more current than the 1994 analyses and this data should have been available to the Company prior to the 2000/2001 winter. Although the Company did not ask Staff to reevaluate the estimates of normal usage, in light of the concerns with the information in the Reliability Report, Staff undertook a regression analysis of the Company information for actual heating degree days (HDD) and actual usage for July 1998 through June 2000. This regression analysis results in a coefficient of determination, R^2, of 0.9855, which means there is a strong relationship between HDD and expected usage. The input data and the regression analysis are included in Schedule 3.

When the base load factor and heat load factor from the regression analysis are used with estimates of normal heating degree days, Staff obtains different estimates of normal or base case usage than previously provided by the Company. Comparisons of estimates of normal usage are shown in Schedule 4. Staff calculated 30% of the revised normal estimate from the regression analysis results, and this supports a reduced Staff adjustment for purchasing practices – minimum level of hedging.

Q. Were there any other revisions to Staff's worksheet for the minimum level of hedging adjustment?

A. No. Only the estimate for 30% of normal requirements was revised.

Q. What is Staff's revised adjustment?

A. The revised adjustment is $130,137. The worksheet supporting this adjustment is in Schedule 5. For comparison, Staff's previous adjustment was $614,365.

Q. Would the revised estimate for 30% of normal requirements change your response to Commissioner Gaw's question: How would Staff's adjustment for purchasing practices –minimum level of hedging change if the Company had planned for storage withdrawals consistent with Staff's proposed normal withdrawals?

A. The 30% of normal numbers in Schedule 1 would be different, but the result would be the same. If the Company had planned for storage withdrawals according to Staff's proposed normal withdrawals, the Company would have hedged at least 30% each month. Thus, there would be no adjustment for purchasing practices – minimum level of hedging. However, the Company did not plan for storage withdrawals according to Staff's proposed normal withdrawals.

Q. Does Staff recommend that the revised adjustment of $130,137 be accepted?

A. Yes. Staff believes that the revised adjustment more accurately reflects information that the Company had, and that it should have considered when it was making purchasing decisions for its customers for November 2000 through March 2001. The cost burden to customers for failure to hedge a minimum of 30% of normal requirements for each heating season month was $130,137.

Q. Does this conclude your supplemental direct testimony for the MGE Purchasing Practices – Minimum Level of Hedging adjustment?

A. Yes, it does.

PURCHASING PRACTICES-STORAGE

Q. Has Staff reevaluated the adjustment based on the Company's assertion that actual November and December 1999 data should be used as the warmest weather usage estimates?

A. Yes. Using November and December 1999 for the low case, warmest month estimate for November and December 2000 reduces the purchasing practices – storage adjustment to $2,502,453.

Q. Were any other changes made to Staff's calculations when this estimate was revised?

A. Yes. Staff found that the calculations built into the spreadsheet did not properly revise the Company's first of month (FOM) nominations. This correction was necessary because Staff's assumption was that the Company's first of month (FOM) nominations should cover warmest month requirements – adjusted for deviations from planned storage inventory levels. Staff did not state that FOM nominations must exactly equal the warmest month requirements. Staff stated that FOM nominations must at least cover warmest month requirements – adjusted for deviations from planned storage inventory levels. To check for deviations from planned storage inventory levels, the calculation should consider whether the deviation from planned storage inventory was positive or negative. Staff's logic built in the spreadsheet did not properly check for negative numbers, and thus, this was corrected.

Q. Is the adjustment of $2,502,453, the result expected by the Company?

A. No. The worksheet that the Company provided to Staff using the November and December 1999 for the low case, warmest month estimate for November and December 2000 still had the spreadsheet error discussed above that did not properly revise the Company's first of month (FOM) nominations. If this error in the spreadsheet is left uncorrected, Staff obtains a number very near the Company number. (The difference is

minor and is probably the number of decimal places for the daily volume.) However, Staff does not believe that it is reasonable to ignore the spreadsheet error.

Q. Does Staff recommend that this adjustment of $2,502,453 be accepted?

A. No. The Company is asking Staff to change only the low-case, warmest month estimate for November 2000 and December 2000, by using the actual usage from November 1999 and December 1999. A review of HDD data shows that November 1999 is the warmest November in the last 30 years, but December 1999 is not. Warmer Decembers were encountered in 1991 and 1994. Since there are questions about the validity of the November and December 2000 low case estimates from the 2000/2001 Reliability Report, it would follow that the Company should also have concerns about the low case estimates for January through March 2001 and the normal estimates for all of these months, November 2000 through March 2001. The Company does not state what estimates of usage should be used for a warmest January, February or March. Furthermore, Staff compared the November and December 1999 usage to that estimated for warmest weather using the regression analysis of the more current July 1998 through June 2000 usage data, attached in Schedule 6. The numbers are not comparable.

For these reasons, Staff cannot support changing only the low case estimate for November 2000 and December 2000.

Q. Is there other information that changes Staff's recommended adjustment related to purchasing practices - storage?

A. Yes.

Q. Please explain.

A. Staff uses both the Company estimates of normal usage and low-case usage to calculate the proposed adjustment for purchasing practices – storage. Staff's concerns with previous Company data and usage estimates are the same as those documented in the section, Purchasing Practices – Minimum Level of Hedging, pages 3-4 of this supplemental direct testimony.

As noted in the Purchasing Practices – Minimum Level of Hedging section, Staff has received additional data from the Company for monthly usage for July 1997 through June 2000. This data is obviously more current than the 1994 Company analyses and this data was available to the Company prior to the 2000/2001 winter.

In light of the concerns with the information in the 2000/2001 Reliability Report, Staff undertook a regression analysis of the Company information for actual heating degree days and actual usage for July 1998 through June 2000. This regression analysis results in a coefficient of determination, R^2, of 0.9855, which shows a strong relationship between HDD and expected usage. To obtain a reasonable estimate for normal and low-case usage, Staff used the base load factor and heat load factor from the regression analysis with estimates of normal heating degree days and warmest month heating degree days. As previously noted, Staff's analysis results in different estimates of normal or base case usage than previously provided by the Company. Comparisons of estimates of normal usage are shown in Schedule 4. Staff also obtains different estimates of warmest month or low case usage than previously provided by the Company. Comparisons of estimates of low-case usage are shown in Schedule 6. It is not surprising that these estimates are different since the Company numbers in the 2000/2001 Reliability Report are based on 1994 analyses that cannot be found by the Company.

Q. Were other changes made to Staff's worksheet's in the recalculation of the adjustment for purchasing practices storage?

A. Yes. Staff reviewed the worksheets and assumptions to make sure that the adjustment fairly represented information that was or should have been known when purchasing practices decisions were being made by the Company. Five changes were made to the worksheets.

First, as previously noted, there was a calculation error in the worksheet. The calculations built into the spreadsheet did not properly revise the first of month (FOM) nominations. This correction was necessary because Staff's assumption was that the Company's FOM nominations should cover warmest month requirements – adjusted for deviations from planned storage inventory levels. Staff did not state that FOM nominations must exactly equal the warmest month requirements. Staff stated that FOM nominations must at least cover warmest month requirements, adjusted for deviations from planned storage inventory levels. To check for deviations from planned storage inventory levels, the calculation should consider whether the deviation from planned storage inventory was positive or negative. Staff's logic built in the spreadsheet did not properly check for negative numbers, and thus, this was corrected.

Second, Staff used the revised estimates of normal monthly requirements and warmest month requirements from the regression analysis of the more current July 1998 through June 2000 data. Staff believes that these estimates more fairly represent what the Company should have known about expected normal and warmest weather requirements for the heating season of 2000/2001.

Third, because of Company concerns that it has less flexibility to inject natural gas into storage in November, Staff revised the worksheet so that no more natural gas is calculated for FOM nominations than required for a warmest November.

Fourth, the current Staff worksheet applies the same methodology for December 2000 through March 2001. FOM nominations must at least cover the warmest months' requirements, adjusted for deviations from planned storage inventory levels. Staff had previously not checked the level of flowing supplies in February and March against warmest month requirements. Staff's reasoning was that the Company should have a better handle on the storage volumes available to meet requirements for the rest of the heating season. The reasoning to use the same methodology for February and March 2001 is that the Staff worksheet already considers what the Company knew about storage inventory levels at the time decisions were made for February and March FOM nominations. It makes no sense to ignore storage inventory information that was available to the Company at the end of January and February. This information will affect FOM nomination decisions for February and March.

Fifth and final, Staff revised the data in the worksheet about the November end of month storage inventory. Mr. Langston makes comments about the date that decisions are made in November for December first-of-month supplies. Based on a review of contracts, Staff expected first-of-month decisions to be made on November 22, 2000. However, Mr. Langston comments that decisions were actually made on November 27, 2000. (Langston direct, p. 58, ll. 3-9) Staff did not previously change the calculations for the storage inventory for information known on November 27, 2000 instead of November 22, 2000. However, since all of the estimates of normal usage and low-case, warmest month

usage are being revised, Staff believes that it is appropriate to consider this change as well because this information was known at the time that the Company was making decisions for December 2000 flowing supplies. The additional information known about storage on November 27, 2000 reveals that the Company had used even more storage than planned and thus, the Company should have further increased flowing supplies in December 2000.

Q. How is Staff's methodology for November FOM, Staff's third change, different than Staff's prior methodology for calculating the purchasing practices – storage adjustment?

A. Staff's assumption was that the Company's FOM nominations would cover warmest month requirements – adjusted for deviations from planned storage inventory levels. The Company's Supply Demand Summary provided in the response to Data Request Nos. 21 and 68, included as Schedules 5 and 6 of my earlier direct testimony, takes the November normal estimated requirements less the planned November storage withdrawals to obtain the planned flowing supplies. Staff does the same calculation, but with a revised estimate of normal November requirements and what Staff believes is a more prudent storage withdrawal plan for normal weather. FOM nominations could have been more or less than warmest month requirements. If the FOM nominations were less than the warmest month requirements, Staff forced the November FOM to warmest month requirements, less the additional ISS storage of 150,000. (Staff had accepted the Company's explanation that it had additional storage that it was planning to use in November 2000.) None of this is different from Staff's prior methodology.

The change in Staff's methodology for November only, to address the Company's concern that it has less flexibility to inject natural gas in November, is that FOM nominations

will equal the warmest November requirements. As noted in prior testimony, the Company still has some flexibility to make injections of natural gas into storage for extremely warm days in the month of November.

Q. Has Staff previously explained why it believes the Company storage withdrawal plan is imprudent?

A. Yes. This is addressed in my earlier direct, rebuttal, and surrebuttal testimony. To summarize, MGE's plan for normal weather is to have the largest planned withdrawal in November, the heating season month with the fewest number of heating degree days, and to have the smallest planned withdrawal in January, the heating season month with the greatest number of heating degree days. As noted in my earlier direct testimony (Jenkins direct, pages 15-16), a review of recent Reliability Reports illustrates that the planned withdrawal for November 2000 was higher than that shown for November in the previous three Reliability Reports. For the immediately preceding Reliability Report (1998/1999), MGE planned to withdraw 15.9% of the storage, which is 7.5 percentage points less than the 23.4% planned by MGE for November 2000. It does not make sense to Staff to have the largest planned withdrawal in the winter of 2000/2001 for the month of November, the heating season month with the fewest number of heating degree days. Nor does it make sense for MGE to have increased its planned withdrawals in November 2000 compared to the planned withdrawals for the month of November in the previous years.

A general explanation of Staff's calculation is that planned storage withdrawals follow the same distribution as the distribution of normal heating degree days. Thus, greater withdrawal of natural gas from storage is planned for the coldest heating season months. The purpose of the storage withdrawal approach laid out by Staff is that by purchasing more

FOM natural gas, the Company would preserve storage volumes so that natural gas from storage is available in later winter months when the potential for cold weather is still great, and to ensure that adequate storage inventory is available to meet the pipeline constraints in each of the heating season months.

Q. What is Staff's revised adjustment?

A. The proposed adjustment for purchasing practices – storage is $2,924,398. The worksheet supporting this adjustment is attached as Schedule 5. For comparison, Staff's previous adjustment, was $8,051,049.

Q. Does Staff recommend that this revised adjustment for purchasing practices – storage of $2,924,398 be accepted?

A. Yes. Staff believes that the revised adjustment more accurately reflects information that should have been used by the Company when it was making purchasing decisions for its customers for November 2000 through March 2001. The cost burden to customers was $2,924,398.

Q. Does this conclude your supplemental direct testimony for the MGE Purchasing Practices – Storage adjustment?

A. Yes, it does.

RELIABILITY ANALYSIS

Q. Does this new information provided by MGE raise any new concerns related to your reliability analysis?

A. Yes. Staff's concerns with previous Company data and usage estimates are the same as those documented in the section, Purchasing Practices – Minimum Level of Hedging, pages 3-4 of this supplemental direct testimony. Staff's evaluation of the Company

July 1998 through June 2000 data shows that the Company's planning for normal weather, warm weather and cold weather is not based on reasonable estimates. This is not surprising since the Company numbers in the 2000/2001 Reliability Report are based on 1994 analyses that cannot be found by the Company.

By routinely evaluating usage data, the Company can determine whether usage patterns have changed and take appropriate action to update natural gas capacity and supply plans. Updated reliability reports and updated demand and capacity analyses are a means to document usage patterns, projected growth, and changes in supply planning needed to meet customer needs during normal weather and the extremes of warmest month weather, coldest month weather and a peak cold day. Additionally, there may be other Company or system constraints that must be considered in a Company reliability report or demand and capacity analyses so that the Company adequately plans for the natural gas requirements of its customers.

As noted previously, the Company's Data Request No. 153 response, attached as Schedule 2, states that it has not argued that the Reliability Report information is inaccurate. The response also states that once becoming aware of Staff's concerns, MGE sought to address this issue when it filed its 2002/2003 reliability report. Staff is extremely concerned that the Company made decisions for the 2000/2001 winter based on a 1994 analysis and that it seems that the Company is only making changes in 2002/2003 because of Staff concerns. It does not seem reasonable that Staff must point out to the Company that an analysis has not been done since 1994. Staff also has to question whether the Company is only going to update its future reliability reports only when Staff has concerns, instead of making it a

Company procedure to routinely evaluate data so that the Company has current information necessary to make prudent gas purchasing practices decisions.

As explained in my direct testimony, the Company's July 1, 2002 Reliability Report addressed some, but not all of the Staff concerns. Concerns not properly addressed are included in my earlier direct testimony, pages 27-28.

Q. Does this conclude your supplemental direct testimony?

A. Yes, it does.

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**Missouri Gas Energy, Case Number GR-2001-382**												
2	**Schedule 1: Commissioner Gaw's Question**												
3													
4	**Copy of Schedule 8, Jenkins Direct:** Hedge Effect								0 for H<0,				
5							(C+ D)	(B - G)	Else =H			(J - K)	(I x L)
6							**Hedge Effect**						
7	**Month**	**30% of Normal Req**	**Company's Normal Monthly Storage w/d**	**Volumes w/ Fixed Price**	**Actual Volumes Withdrawn**	**Expected Storage Withdrawals** (for revised flowing supplies)	**Planned Hedged Volumes**	**30% Normal Minus Planned Hedged**	**Volumes Short for Minimum Planned Hedge**	**NYMEX close**	**Available Hedged Price**	**Futures Gain/ (Loss)**	**Charge for Minimum Hedge**
8	Nov-00	2,220,108	4,150,166	0	5,673,557	3,464,267	4,150,166	(1,930,058)	0	$ 4.541	$ 4.652	$ (0.111)	$0
9	Dec-00	3,712,640	3,454,240	620,000	6,727,710	5,521,252	4,074,240	(361,600)	0	$ 6.016	$ 4.726	$ 1.290	$0
10	Jan-01	4,160,526	3,464,251	620,000	170,523	1,257,104	4,084,251	76,275	76,275	$ 9.978	$ 4.705	$ 5.273	$402,198
11	Feb-01	3,364,049	3,162,867	2,237,309	2,467,950	4,440,494	5,400,176	(2,036,127)	0	$ 6.293	$ 4.475	$ 1.818	$0
12	Mar-01	2,527,042	2,247,507	0	1,816,292	2,197,065	2,247,507	279,535	279,535	$ 4.998	$ 4.239	$ 0.759	$212,167
13	Total	15,984,365	16,479,031	3,477,309	16,856,032	16,880,182	19,956,340	(3,971,975)	355,810				**$614,365**
14													
15													
16	**Calculation for Commissioner Gaw's Question:** Hedge Effect if Change Planned Storage Withdrawals to Staff's Proposed Normal Withdrawals												
17									0 for H<0,				
18							(C+ D)	(B - G)	Else =H			(J - K)	(I x L)
19							**Hedge Effect**						
20	**Month**	**30% of Normal Req**	**Staff's Calculation of Normal Monthly Storage w/d**	**Volumes w/ Fixed Price**	**Actual Volumes Withdrawn**	**Expected Storage Withdrawals** (for revised flowing supplies)	**Planned Hedged Volumes**	**30% Normal Minus Planned Hedged**	**Volumes Short for Minimum Planned Hedge**	**NYMEX close**	**Available Hedged Price**	**Futures Gain/ (Loss)**	**Charge for Minimum Hedge**
21	Nov-00	2,220,108	2,474,336	0	5,673,557	3,464,267	2,474,336	(254,228)	0	$ 4.541	$ 4.652	$ (0.111)	$0
22	Dec-00	3,712,640	4,122,699	620,000	6,727,710	5,521,252	4,742,699	(1,030,059)	0	$ 6.016	$ 4.726	$ 1.290	$0
23	Jan-01	4,160,526	4,679,820	620,000	170,523	1,257,104	5,299,820	(1,139,294)	0	$ 9.978	$ 4.705	$ 5.273	$0
24	Feb-01	3,364,049	3,634,737	2,237,309	2,467,950	4,440,494	5,872,046	(2,507,997)	0	$ 6.293	$ 4.475	$ 1.818	$0
25	Mar-01	2,527,042	2,677,578	0	1,816,292	2,197,065	2,677,578	(150,536)	0	$ 4.998	$ 4.239	$ 0.759	$0
26	Total	15,984,365	17,589,170	3,477,309	16,856,032	16,880,182	21,066,479	(5,082,114)	0				**$0**
27													

29	**From Schedule 13, Table 3-1:** Storage Withdrawals Expected Based on Distribution of Normal HDD			
30		Normal HDD	Monthly Distr.	Storage Distr.
31	Nov-00	657	14.3%	2,474,336
32	Dec-00	1,073	23.4%	4,122,699
33	Jan-01	1,218	26.6%	4,679,820
34	Feb-01	946	20.6%	3,634,737
35	Mar-01	691	15.1%	2,677,578
36	Total	4,585	100.0%	17,589,170

MISSOURI GAS ENERGY
A Division of Southern Union Company

MISSOURI PUBLIC SERVICE COMMISSION
DATA INFORMATION REQUEST RESPONSE
Case No: GR-2001-382
Data Request No: 153

Requested From: Mike Noack

Date Requested: May 22, 2003

Information Requested: The Company has suggested that the heating and/or base load formulas used in the reliability reports supplied to Staff are inaccurate.

a. Please specify the formulas that the Company is suggesting are inaccurate based upon "actual delivered volumes" shown in MTL-14.

b. Please indicate all areas (such as nominations of flowing supply, storage operations, peak day planning) of the Company's gas procurement function that are impacted by these formulas.

c. Please provide a copy of all reviews and analysis done to determine the accuracy of these formulas. Provide the analysis in both hard copy and electronic file(s).

d. Please provide the formulas that the Company considers as accurate for the 2000/2001 ACA period and provide the assumptions and data used to develop these formulas. Provide the data and analysis in both hard copy and electronic files.

Requested By: Lesa Jenkins

Information Provided:
MGE has not argued that the Reliability Report information was inaccurate. Rather, Staff has argued that the Reliability Report information is inaccurate (or at least not up to date since it is based on 1994 data and not current data.) Once becoming aware of staff's concerns, MGE sought to address this issue when it filed its 2002/2003 reliability report.

Date Response Received: 6/19/03

Signed By: Michael F. Noack

Date: 6/16/03

Schedule 2

MGE, GR-2001-382
Schedule 3: Analysis of More Current Usage Data
Schedule 4: Comparisons of Normal or Base Case Usage Estimates

Schedule 3 and Schedule 4 have been deemed Highly Confidential in their entirety.

NP

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	**Missouri Gas Energy, Case Number GR-2001-382**												
2	**Schedule 5: Revised Staff Calculation of Adjustment for Purchasing Practices - Minimum Level of Hedging and Purchasing Practices - Storage**												
3													
4													
5									0 for H<0,				
6							(C+ D)	(B - G)	Else =H			(J - K)	(I x L)
7		**REVISED**				**REVISED**	**Hedge Effect**						
8	**Month**	**30% of Normal Req**	**Company Normal Monthly Storage w/d**	**Volumes w/ Fixed Price**	**Actual Volumes Withdrawn**	**Expected Storage Withdrawals** (for revised flowing supplies)	**Planned Hedged Volumes**	**30% Normal Minus Planned Hedged**	**Volumes Short for Minimum Planned Hedge**	**NYMEX close**	**Available Hedged Price**	**Futures Gain/ (Loss)**	**(Credit)/ Charge for Minimum Hedge**
9	Nov-00	2,306,039	4,150,166	0	5,673,557	3,938,177	4,150,166	(1,844,127)	0	$ 4.541	$ 4.652	$ (0.111)	$0
10	Dec-00	3,557,333	3,454,240	620,000	6,727,710	6,239,863	4,074,240	(516,907)	0	$ 6.016	$ 4.726	$ 1.290	$0
11	Jan-01	3,989,436	3,464,251	620,000	170,523	129,076	4,084,251	(94,815)	0	$ 9.978	$ 4.705	$ 5.273	$0
12	Feb-01	3,144,054	3,162,867	2,237,309	2,467,950	4,771,538	5,400,176	(2,256,122)	0	$ 6.293	$ 4.475	$ 1.818	$0
13	Mar-01	2,418,965	2,247,507	0	1,816,292	1,329,530	2,247,507	171,458	171,458	$ 4.998	$ 4.239	$ 0.759	$130,137
14	Total	15,415,827	16,479,031	3,477,309	16,856,032	16,408,184	19,956,340	(4,540,513)	171,458				$130,137
15													
16													

		(F - E) from above table			(D - C) from this table	(E x B) from this table	M (from above table) + F (from this table)
17		**Storage Effect**					
18	**Month**	**Storage Expected Minus Actual**	**Storage WACOG**	**Williams FOM**	**FOM Minus WACOG**	**Revised Storage (Credit)/ Charge**	**Total Adjustment**
19	Nov-00	(1,735,380)	$ 4.261	$ 4.430	$ 0.169	$ (292,647)	$ (292,647)
20	Dec-00	(487,847)	$ 4.224	$ 5.900	$ 1.676	$ (817,621)	$ (817,621)
21	Jan-01	(41,447)	$ 4.279	$ 9.980	$ 5.701	$ (236,289)	$ (236,289)
22	Feb-01	2,303,588	$ 4.279	$ 6.290	$ 2.011	$ 4,633,366	$ 4,633,366
23	Mar-01	(486,762)	$ 4.285	$ 5.030	$ 0.745	$ (362,412)	$ (232,275)
24	Total	(447,848)				**$ 2,924,398**	**$ 3,054,535**
25							
26							
27							

		Revised	
28	**Month**	Normal Requirements	30% of Normal Requirements
29	Nov-00	7,686,797	2,306,039
30	Dec-00	11,857,776	3,557,333
31	Jan-01	13,298,119	3,989,436
32	Feb-01	10,480,179	3,144,054
33	Mar-01	8,063,218	2,418,965
34	Total	51,386,089	15,415,827
35			

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Schedule 6: Comparisons of Low Usage Estimates

Schedule 6 has been deemed Highly Confidential in its entirety.

NP