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November 14, 2003

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

> RE: Missouri Gas Energy Case No. GR-2001-382

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Missouri Pulma Service Commission

Dear Mr. Roberts:

Enclosed for filing on behalf of Missouri Gas Energy are the original and eight (8) copies of Supplemental Rebuttal Testimony of Michael T. Langston. The Schedule for the filing has been designated as "Highly Confidential" and is being filed under seal with the testimony. One copy of the public version of the testimony and schedule is also enclosed.

A copy of this filing is being provided to the General Counsel and Office of the Public Counsel.

Please see that this filing is brought to the attention of the appropriate Commission personnel. I thank you in advance for your assistance in this matter.

Sincerely,

Dean L. Coope

BRYDON, SA EARENGEN & ENGLAND P.C.

By:

DLC/jar Enclosures

Doug Micheel cc:

Tim Schwarz

Jim Deutsch

Jeff Keevil

Rob Hack

Michael Langston

Mac Ketchum

Exhibit No.:

Issues:

Purchasing Practices: Storage

Witness:

Michael T. Langston

Sponsoring Party: Type of Exhibit:

Missouri Gas Energy Supplemental Rebuttal

Case No.:

GR-2001-382 et al.

Date Prepared:

November 14, 2003

### MISSOURI PUBLIC SERVICE COMMISSION

#### **MISSOURI GAS ENERGY**

CASE NO. GR-2001-382

#### SUPPLEMENTAL REBUTTAL TESTIMONY OF

MICHAEL T. LANGSTON

FILED?

NOV 1 4 2003

Service Commission

Jefferson City, Missouri

November 14, 2003

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### 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	) ) )	<u>Case No. GR-98-167</u>				
AFFIDAVIT OF MICHAEL T	. LANGS	STON				
STATE OF Texas )						
STATE OF TEXAS ) ss. COUNTY OF Harris )						
Michael T. Langston, of lawful age, on his oath states: that he has participated in the preparation of the foregoing Supplemental Rebuttal Testimony in question and answer form, to be presented in the above case; that the answers in the foregoing Supplemental Rebuttal Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge and belief.						
-		Tell foll				
	<del></del>	MICHAEL T. LAMOSTON				
Subscribed and sworn to before me this ## day of ** Alovember* 2003.						
BUSAN M LOHMANN WINN RELESTATE OF TEAS PARTITION DA 2004	Notary	Public				

My Commission Expires: <u>September 24,2004</u>

#### **SUMMARY**

In her supplemental direct testimony, Staff Witness Jenkins has gone well beyond the scope of the supplemental portion of this proceeding and has revised the approach that she uses to evaluate MGE's storage utilization for the winter of 2000/2001. The reasons that Ms. Jenkins has advanced in support of her revisions, namely that a claimed "error" in her spreadsheet needed to be corrected and that "warmest month" demand estimates were needed for January, February and March 2000, are entirely without merit. Ms. Jenkins has made these revisions with absolutely no basis or support for doing so. As such, except for the portion of her supplemental direct testimony that actually addresses the defined scope of the supplemental phase of this proceeding, the Commission should disregard her supplemental direct testimony altogether.

If, however, the Commission does consider Ms. Jenkins' supplemental direct testimony and her significantly "revised" supplemental storage utilization approach, the Commission should ascribe no value to the analysis since it suffers from two fatal flaws. First, Ms. Jenkins' "revised" storage utilization plan is based upon MGE only utilizing 79% of its contracted storage capacity in a normal winter. Second, Ms. Jenkins' "revised" plan is based upon "warmest month" demand estimates that she developed that are simplistic, arbitrary and inaccurate.

Therefore, while Ms. Jenkins has continually tried to adjust her storage utilization proposal, neither her original storage utilization plan as presented in her direct testimony, her "revised" original plan in which she claims to correct the "error" in her spreadsheet, nor her "revised" supplemental storage plan is an appropriate or reasonable way of evaluating MGE's utilization of storage for the winter of 2000/2001. In contrast, MGE's witnesses have demonstrated in their direct, rebuttal, and surrebuttal testimony in this proceeding that its storage utilization practices were well within the range of reasonable and prudent conduct.

### SUPPLEMENTAL REBUTTAL TESTIMONY OF

### MICHAEL T. LANGSTON

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	SUPPLEMENTAL REBUTTAL TESTIMONY OF
	MICHAEL T. LANGSTON
	CASE NO. GR-2001-382
	NOVEMBER 14, 2003
Q.	PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
A.	My name is Michael T. Langston. My business address is Panhandle Energy, 5444
	Westheimer Road, Houston, Texas 77056-5306.
Q.	ARE YOU THE SAME MICHAEL T. LANGSTON THAT PREVIOUSLY
	SUBMITTED DIRECT, REBUTTAL, SURREBUTTAL AND SUPPLEMENTAL
	DIRECT TESTIMONY IN THIS PROCEEDING?
A.	Yes.
INTI	RODUCTION
Q.	WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL REBUTTAL
	TESTIMONY?
A.	In her supplemental direct testimony, Staff Witness Jenkins has gone well beyond the
	scope of the supplemental portion of this proceeding and revised the approach that she
	uses to evaluate MGE's storage utilization for the winter of 2000/2001. The purpose of
	my supplemental rebuttal testimony is to address the numerous changes that Ms. Jenkins'
	has proposed in her "revised supplemental" storage utilization plan that she has relied
	A.  Q.  INTI Q.

upon to develop her currently proposed storage disallowance in this proceeding. In addition, I will comment on Ms. Jenkins' revised disallowance concerning the hedging issue as well.

Α.

#### Q. ARE YOU SPONSORING ANY SCHEDULES TO YOUR TESTIMONY?

Yes. I am sponsoring six different schedules. The first three schedules (i.e., Schedules MTL-37, MTL-38 and MTL-39) are copies of the workpapers Ms. Jenkins' utilized in preparation of her supplemental direct testimony that were provided to MGE. Schedule MTL-40 illustrates that the framework upon which Ms. Jenkins' bases her "revised supplemental" disallowance is erroneous since it assumes that MGE should only plan on utilizing 14 Bcf of its 17.8 Bcf of purchased storage capacity. Schedule MTL-41 shows the inaccuracy of the new "warmest month" demand regression that Ms. Jenkins relies on in her supplemental direct testimony. Finally, Schedule MTL-42 is an update of Schedule MTL-15 that was part of my direct testimony. Schedule MTL-15 has been updated on Schedule MTL-42 to show how the revised flowing supply amount that Ms. Jenkins has most recently proposed for November in her supplemental direct testimony would still result in MGE significantly over-scheduling first-of-month flowing supplies for November, which could have harmful operational and/or financial consequences.

## Q. COULD YOU PLEASE SUMMARIZE YOUR SUPPLEMENTAL REBUTTAL TESTIMONY?

In her supplemental direct testimony, Ms. Jenkins discusses three different storage utilization disallowance figures, although she is only supporting one of those proposals at the current time. Therefore, for ease of reference, Ms. Jenkins' analysis that was included as Schedule 13 of her direct testimony will be referred to as her "original" analysis, the analysis that produced the disallowance of approximately \$2.5 million will be

In her supplemental direct testimony, Staff Witness Jenkins has gone well beyond the scope of the supplemental portion of this proceeding and has revised the approach that she uses to evaluate MGE's storage utilization for the winter of 2000/2001. The reasons that Ms. Jenkins has advanced in support of her revisions, namely that a claimed "error" in her spreadsheet needed to be corrected and that "warmest month" demand estimates were needed for January, February and March 2000, are entirely without merit. Ms. Jenkins has made these revisions with absolutely no basis or support for doing so. As such, except for the portion of her supplemental direct testimony that actually addresses the defined scope of the supplemental phase of this proceeding, the Commission should disregard her supplemental direct testimony altogether.

Α.

If, however, the Commission does consider Ms. Jenkins' supplemental direct testimony and her significantly "revised" supplemental storage utilization approach, the Commission should ascribe no value to the analysis since it suffers from two fatal flaws. First, Ms. Jenkins' "revised" storage utilization plan is based upon MGE only utilizing 79% of its contracted storage capacity in a normal winter. Second, Ms. Jenkins' "revised" plan is based upon "warmest month" demand estimates that she developed that are simplistic, arbitrary and inaccurate.

Therefore, while Ms. Jenkins has continually tried to adjust her storage utilization and hedging proposals, neither her original storage utilization plan as presented in her direct testimony, her "revised" original plan in which she claims to correct the "error" in her

referred to as the "revised original" analysis, and the analysis that produced the disallowance that she is now supporting of approximately \$2.9 million will be referred to as the "revised supplemental" analysis.

spreadsheet, nor her "revised" supplemental storage plan is an appropriate or reasonable way of evaluating MGE's utilization of storage or hedging for the winter of 2000/2001. In contrast, MGE's witnesses have demonstrated in their direct, rebuttal, and surrebuttal testimony in this proceeding that its storage utilization practices were well within the range of reasonable and prudent conduct.

### NO BASIS FOR JENKINS' REVISED STORAGE UTILIZATION APPROACH

- Q. WHAT WAS THE SCOPE AND PURPOSE OF THE SUPPLEMENTAL DIRECT
  AND REBUTTAL TESTIMONY, AS WELL AS THE ADDITIONAL HEARINGS
  IN THIS PROCEEDING?
- 11 A. Specifically, the parties agreed after the original hearings in this proceeding that the
  12 issues to be addressed in the supplemental direct and rebuttal testimony and discovery
  13 would be limited to three primary issues surrounding the proposed storage utilization
  14 disallowance:
  - 1) MGE's 1999/2000 heating season delivered natural gas volumes;
  - 2) the use of those volumes in the spreadsheet developed by Ms. Jenkins; and
  - 3) MGE's low case scenario used by Ms. Jenkins.

In addition, the parties agreed that the supplemental testimony would also address the request for information made by Commissioner Gaw at the hearing regarding the percentage of monthly hedging (see Tr. pages 536-537).

Q. PURSUANT TO THE SCOPE ESTABLISHED FOR THE SUPPLEMENTAL
TESTIMONY, DID MS. JENKINS REPLACE THE "WARMEST MONTH"

## DEMAND ESTIMATE FOR NOVEMBER AND DECEMBER 2000 WITH THE WARM MONTH ACTUAL DEMAND OF NOVEMBER 1999 AND DECEMBER 1999?

Yes. Schedule MTL-37 is a copy of the workpapers to her supplemental direct testimony in which she has replaced her estimated "warmest month" demand for November and December 2000 with the actual demand for November 1999 and December 1999 pursuant to the scope established for the supplemental portion of this proceeding. With the exception of the replacement of these two numbers, Schedule MTL-37 is the same storage utilization analysis that Ms. Jenkins originally filed as Schedule 13 of her direct testimony and which resulted in a proposed \$8,051,049 disallowance (referred hereafter as Ms. Jenkins' "original" storage utilization analysis).

A.

Specifically, on Schedule MTL-37, Ms. Jenkins replaced the "warmest month" demand estimate for November and December 2000 that she previously relied upon with the actual demand for November and December 1999, i.e., the warmest and fourth warmest of each of those months, respectively, in the past 40 years. The two demand figures that have been replaced are shown on Schedule MTL-37, page 7, on line 86, in columns (c) and (e) and have been shaded for easy reference. After replacing the estimated demand amounts, Ms. Jenkins acknowledged in her supplemental direct testimony (see p. 7, line 21 to p. 8, line 1) that her proposed disallowance for storage utilization resulted in the same figure that MGE calculated using Ms. Jenkins' spreadsheets at the May 2003 hearings, or a disallowance of \$182,159.

### Q. IS THIS THE DISALLOWANCE FOR STORAGE UTILIZATION THAT MS. JENKINS IS NOW PROPOSING IN THIS PROCEEDING?

Α.

A. No, which is the very reason that my supplemental rebuttal testimony is necessary. Ms. Jenkins is not supporting a storage utilization disallowance of \$182,159 because she has claimed in her supplemental direct testimony that there was an "error" embedded within Schedule 13 of her direct testimony that was ultimately utilized to calculate her proposed disallowance that was reflected on Schedule 8 of her direct testimony. Therefore, while Ms. Jenkins replaced the "warmest month" demand for November and December, she indicated that she also needed to correct this "error". Her "corrected" analysis produced a storage utilization disallowance of approximately \$2.5 million. Her workpapers that reflect this \$2.5 million disallowance are presented as Schedule MTL-38 and will hereafter be referred to as Ms. Jenkins' "revised original" analysis.

### Q. IS MS. JENKINS NOW SUPPORTING A DISALLOWANCE FOR STORAGE

**UTILIZATION OF \$2.5 MILLION?** 

No. In addition to fixing the "error" that she found in her spreadsheet, Ms. Jenkins also claimed that it was necessary to make numerous other revisions to her approach and the calculation of her proposed disallowance. These significant changes to her approach were well outside of the scope of the supplemental portion of this proceeding. In fact, Ms. Jenkins revised her proposal to make four additional changes to her approach and calculations — beyond the "error" correction noted above — which produced a storage utilization disallowance of approximately \$2.9 million. These changes are discussed on pages 10 through 12 of her supplemental direct testimony. I have attached Ms. Jenkins'

workpapers that reflect this \$2.9 million disallowance as Schedule MTL-39 and will hereafter refer to the analysis contained therein as Ms. Jenkins' "revised supplemental" analysis. It is the \$2.9 million disallowance that results from her "revised supplemental" storage utilization analysis that she is now supporting.

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4

- Q. WAS THE "ERROR" THAT MS. JENKINS CORRECTED IN HER
   "ORIGINAL" STORAGE UTILIZATION ANALYSIS A MATHEMATICAL
   ERROR?
- 9 A. No. It is important for the Commission to understand that Ms. Jenkins' "error" was not a
  10 calculation error within her "original" storage utilization spreadsheet or that she had an
  11 incorrect link in the spreadsheet. Rather, Ms. Jenkins' "error" is the result of a <u>claimed</u>
  12 misapplication of the logic within her spreadsheet to have it conform to her perception of
  13 how storage should have been utilized. Ms. Jenkins was not correcting mathematical
  14 errors in her spreadsheet.

- 16 Q. PLEASE EXPLAIN THE "ERROR" THAT MS. JENKINS CLAIMED NEEDED
  17 TO BE CORRECTED IN HER SUPPLEMENTAL TESTIMONY.
- A. The "error" that Ms. Jenkins has claimed was in her "original" analysis on Schedule 13

  can be seen from the differences between Schedule MTL-37, which are her workpapers

  that resulted in a storage utilization disallowance of \$182,159, and Schedule MTL-38,

  which are her workpapers that resulted in a storage disallowance of \$2.5 million after the

  supposed "error" was corrected and no other adjustments had been made. Specifically,

  on Schedule MTL-37, page 7, line 83, Ms. Jenkins' "original" analysis revised the daily

flowing supply figure for November downward from 162,749 MMBtu/day (shown in column (c)) to 142,151 MMBtu/day (shown in column (d)). Ms. Jenkins' approach adjusted the November flowing supply amount to 142,151 MMBtu/day because this represented the "warmest month" demand for November (as it actually occurred in November 1999). However, in Schedule MTL-38, page 7, line 83, Ms. Jenkins does not make the same adjustment to the flowing supply figure from column (c) to column (d). Ms. Jenkins does not adjust the flowing supply amount downward for November to reflect the "warmest month" demand, but instead holds the flowing supply figure at 162,749 MMBtu/day, which is significantly higher than the "warmest month" demand for November.

## Q. WHAT BASIS OR SUPPORT HAS MS. JENKINS PROVIDED FOR CLAIMING THAT HER "ORIGINAL" STORAGE UTILIZATION ANALYSIS CONTAINED AN "ERROR"?

15 A. In her supplemental direct testimony, Ms. Jenkins provided the following explanation of
16 why her "original" storage utilization analysis was incorrect:

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. (emphasis added) (Supplemental Direct Testimony of Lesa A. Jenkins, Case No. GR-2001-382, et. al., p. 7, ll. 6-13).

In other words, Ms. Jenkins is now trying to make the distinction that she never stated that her recommended first-of-month flowing supply figures should equal the "warmest month" demand, but rather must at least cover the "warmest month" demand. Therefore, in her analysis shown on Schedule MTL-38, Ms. Jenkins now claims that her proposed November daily flowing supply amount should not have been adjusted from 162,749 MMBtu/day to 142,151 MMBtu/day (the "warmest month" demand for November) because the proposed flowing supply amount of 162,749 MMBtu/day at least covers the "warmest month" demand of 142,151 MMBtu/day. In other words, Ms. Jenkins is now attempting to claim that her "original" analysis should not have based the flowing supply amount for November on the "warmest month" demand, but rather on a calculation involving normal heating degree days since this amount (i.e., 162,749 MMBtu/day) at least covered the "warmest month" demand.

Q.

Α.

# DID MS. JENKINS ACTUALLY MAKE THIS DISTINCTION IN HER DIRECT TESTIMONY THAT FLOWING SUPPLIES SHOULD "AT LEAST COVER" RATHER THAN "EQUAL" THE WARMEST MONTH DEMAND?

Absolutely not, and in fact, quite the contrary. Ms. Jenkins' direct testimony does not describe her proposed storage utilization approach for determining November flowing supplies as "at least covering" the "warmest month" demand. In fact, the reasoning that Ms. Jenkins' has utilized in her supplemental direct testimony for claiming that there was an "error" actually contradicts her direct testimony. In her direct testimony, Ms. Jenkins stated:

Staff believes that it is reasonable to expect the Company to have sufficient "assigned term supplies" - planned first-of-month (FOM)

flowing supplies — scheduled to cover warm weather requirements for November through January, and that these would be adjusted beginning in December if the Company had withdrawn more or less natural gas from storage than planned. This means that when the month experiences heating degree days that are the warmest for that month, flowing supplies would cover the requirements. However, storage would be used when the weather is colder than the warmest heating degree days. (emphasis added) (Direct Testimony of Lesa A. Jenkins, Case No. GR-2001-382, et. al., p. 19, line 19 to p. 20, line 3).

As can be seen, Ms. Jenkins uses the term "would cover" in relation to flowing supplies, but she does not say at least cover or exactly cover. However, her direct testimony clearly states that flowing supplies would be used to meet warmest month demand and that "storage would be used when the weather is colder than the warmest heating degree days". It is clear that Ms. Jenkins was proposing in her direct testimony that storage withdrawals would be utilized to meet demand greater than the "warmest month" demand. In other words, regardless of what Ms. Jenkins now is attempting to claim, her own direct testimony states that flowing supplies for November should equal warm weather requirements because she stated in her direct testimony that storage should meet demand above warm weather requirements.

- Q. DID MS. JENKINS' ORAL TESTIMONY AT THE MAY 2003 HEARINGS
  CONFIRM THAT HER STORAGE UTILIZATION APPROACH SETS FIRSTOF-MONTH FLOWING SUPPLIES <u>EQUAL TO</u> "WARMEST MONTH"
  DEMAND?
- 26 A. Yes. On cross-examination at the May 2003 hearings, Ms. Jenkins confirmed that her 27 storage utilization proposal was to set the amount of first-of-month flowing supplies

1		equal to "warmest month" demand. Specifically, on cross-examination, Ms. Jenkins
2		stated the following:
3 4 5 6 7 8		Q. So if we took your [storage utilization] approach of using more flowing supply – first of the month flowing supplies and during that month the prices actually came down or the weather became warmer driving prices downward, would that have not possibly and perhaps even likely resulted in having to sell excess gas into a market that was moving downward?
9 10 11 12 13		A. No. I'm not convinced of that, because <u>I used warmest month in my Surrebuttal</u> . I also stated that if the company could provide that, I can see possibly having lower first of the month, but then as the weather turned colder, they would have to bring on swing supplies to make up that difference. They couldn't then swing on storage.
15 16		Q. But you're assuming that it's warmer than normal first of the month and colder than normal within the month; is that right?
17 18 19 20		A. No. I'm saying they nominate at warmest month because they know they're going to flow that amount regardless of what the weather ends up being. Even if the weather is as warm as it's ever been, they can count on for the month that amount of gas.
22 22 23 24		(clarification and emphasis added) (Cross-Examination of Lesa Jenkins, Case No. GR-2001-382, May 14, 2003, transcript p. 505, ll. 3-22.)
25	Q.	IN FACT, HAS MS. JENKINS ADMITTED IN HER OCTOBER 30, 2003
26		DEPOSITION ("OCTOBER 30 <sup>TH</sup> DEPOSITION") THAT HER ORAL
27		TESTIMONY AT THE MAY 2003 HEARINGS IS CONTRADICTORY TO HOW
28		SHE HAS ACTUALLY CALCULATED HER "REVISED SUPPLEMENTAL"
29		STORAGE UTILIZATION DISALLOWANCE?
30	A.	Yes. When asked about this in her October 30th deposition, Ms. Jenkins admitted that
31		there was an inconsistency between her oral testimony at the May 2003 hearings and her
32		proposed disallowance as calculated in her supplemental direct testimony:

2	hearing?
3	A. I have some of them. What page are you looking at?
4 5 6 7 8 9	Q. Let's look at pages 505 and 506. I'm looking at line 18 on page 505 and that's you testifying there in an answer. And it says, "no, I'm saying they nominate at warmest month because they know they're going to flow that amount, regardless of what the weather ends up being." When you say MGE nominates at warmest month, aren't you saying that the nomination should be equal to the warmest month requirement there?
11 12 13	A. The term "at", I agree that's what it means, but if you go to my direct testimony on page 19, it says that it's reasonable to expect the company to have sufficient assigned term supplies –
15 16	THE REPORTER: I'm sorry. I can't hear you.
17 18 19 20 21 22 23	THE WITNESS [i.e., Ms. Jenkins]:  A. Staff believes that it is reasonable to expect the company to have sufficient assigned term supplies, planned first of month flowing supplies scheduled to cover warmest weather requirements for November through January and that these would be adjusted beginning in December if the company had withdrawn more or less natural gas from storage than planned.
24 25 26 27	BY MR. DUFFY [i.e., MGE's Attorney]: Q. And the point of your answer there? I'm sorry. I missed it. Can you tell me what the point is?
28 29 30 31 32	A. The point is that the work sheets that are included in my direct and also included in my supplemental direct don't set it at warmest. They check to make sure it at least covers warmest, and also adjust it so if November pulls more storage than planned, you adjust what you're going to do in December. Same thing for subsequent months.
33 34	Q. Doesn't at least cover mean that it would be that it would equal warmest month?
35 36	A. That's not you're right. That's what that means, but that is not what I did.
37 38	(clarification and emphasis added) (Deposition of Lesa Jenkins, Case No. GR-2001-382, October 30, 2003, p. 30, line 14 to p. 31, line 25.)
39	

Therefore, Ms. Jenkins has admitted that she previously stated that the flowing supply number should "equal warmest month" but that is not what she did in developing her proposed "revised supplemental" disallowance.

Α.

## Q. HOW WOULD YOU CHARACTERIZE MS. JENKINS' SUPPLEMENTAL DIRECT TESTIMONY THEN WITH REGARD TO HER FIXING THE "ERROR"?

It is very important for the Commission to understand that there was never really an "error" in Ms. Jenkins' analysis as she has now claimed in her supplemental direct testimony. The storage utilization analysis she developed on Schedule 13 and Schedule 8 of her direct testimony reflected the approach that she described and supported in her direct testimony. While Ms. Jenkins is attempting in her supplemental direct testimony to make a distinction that her proposed flowing supplies for November should have "at least covered" rather than "equaled" the warmest month demand requirements, her own direct testimony disproves this claim. In simple terms, Ms. Jenkins is attempting through her supplemental direct testimony to make wholesale revisions to her approach under the guise that her "original" analysis contained an alleged "error" that needed to be corrected. These revisions are well beyond the scope of the supplemental portion of this proceeding and should not be permitted. In other words, Ms. Jenkins has not just corrected an "error" in her spreadsheet and updated her analysis, but rather has fundamentally changed her proposed storage utilization approach.

1	Q.	HAS MS. JENKINS OFFERED ANY OTHER EXPLANATION AS TO WHY SHE
2		BELIEVES IT IS NECESSARY TO MAKE ADDITIONAL CHANGES TO HER
3		STORAGE UTILIZATION ANALYSIS AT THIS TIME?
4	A.	Yes. In her supplemental direct testimony, Ms. Jenkins stated that she was not
5		supporting her "revised original" analysis (which included replacing the "warmest
6		month" demand for November and December) and needed to make additional changes to
7		her approach because there were questions about the validity of MGE's "warmest month"
8		estimates for January, February and March from the Reliability Report. Specifically, Ms.
9		Jenkins stated in her supplemental direct testimony:
10		Q. Does Staff recommend that this adjustment of \$2,502,453 be accepted?
12 13 14 15 16 17 18 19 20 21 22 22 23 24 25 26		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.  (emphasis added) (Supplemental Direct Testimony of Lesa A. Jenkins, Case No. GR-2001-382, et. al., p. 8, ll. 3-13).
28		Therefore, Ms. Jenkins is arguing that further changes to her analysis are now required to

address the estimates of "warmest month" demand for January, February and March.

]	Q.	IS THERE ANY BASIS FOR MS. JENKINS' CLAIM THAT "WARMEST
2		MONTH" DEMAND ESTIMATES ARE REQUIRED FOR HER PROPOSED
3		STORAGE UTILIZATION APPROACH?
4	A.	No – absolutely not. The fallacy with Ms. Jenkins' argument is that there was no reason
5		for MGE to, as she claims, "state what estimates of usage should be used for a warmest
6		January, February or March" since Ms. Jenkins' storage utilization approach as set
7		forth in her direct testimony on Schedule 13 did not rely upon "warmest month"
8		demand for January, February or March.
9		
10	Q.	WHAT STORAGE UTILIZATION APPROACH DID MS. JENKINS SUPPORT
11		IN HER DIRECT TESTIMONY?
12	A.	Ms. Jenkins' "original" storage utilization approach, i.e., the approach she supported in
13		her direct, rebuttal and surrebuttal testimonies, can be summarized as follows:
14 15 16 17 18 19 20 21 22 23 24 25 26		For November and December only, Ms. Jenkins first calculated the level of first-of-month flowing supplies based on her "warmest month requirements" approach, with the storage withdrawals for those months then falling out as the difference between total normal monthly demand and the level of first-of-month flowing supplies. In contrast, for January through March, Ms. Jenkins instead first calculated the level of storage withdrawals (rather than flowing supplies) based on her "distribution of normal heating degree days" approach, with the level of flowing supplies for those months then falling out as the difference between total normal monthly demand and the projected monthly storage withdrawals. In other words, Ms. Jenkins calculated a flowing supply amount for the first part of the winter, but calculated a storage withdrawal amount for the second part of the winter.
27		Therefore, for January through March, Ms. Jenkins did not rely upon any "warmest
28		month" demand estimate for her calculation of flowing supplies or storage withdrawals.
29		At the end of the May 2003 hearings, MGE only highlighted for the Commission that Ms.

Jenkins was utilizing inaccurate "warmest month" demand for November and December

February or March. It is completely disingenuous of Ms. Jenkins to now claim that additional "warmest month" estimates are required so that she can change her analysis, when her "original" analysis did not even rely upon "warmest month" estimates for those three months.

Α.

Q. ARE YOU RECOMMENDING THAT THE COMMISSION DISREGARD ALTOGETHER MS. JENKINS' "REVISED ORIGINAL" ANALYSIS THAT RESULTED IN A \$2.5 MILLION DISALLOWANCE, AS WELL AS HER "REVISED SUPPLEMENTAL" ANALYSIS THAT RESULTED IN A \$2.9 MILLION DISALLOWANCE?

Yes. With exception of the portion of her supplemental direct testimony that actually addresses the defined scope of the supplemental phase of this proceeding, the Commission should disregard her supplemental direct testimony altogether. The entire reason for the supplemental portion of this proceeding was that MGE discovered that Ms. Jenkins had utilized "warmest month" demand amounts in her approach for November and December that were clearly wrong because they were substantially higher than actual demand that was experienced in November and December of 1999. While I have testified at length that MGE does not support Ms. Jenkins' "original" storage utilization approach, there is absolutely no basis for Ms. Jenkins to make changes to her "original" analysis. There was no "error" in the spreadsheet that needed to be corrected, nor is there any basis for the numerous other changes that she has proposed in her supplemental direct testimony. The Commission should disregard the various other analyses that Ms.

Jenkins has subsequently developed in her supplemental direct testimony because it is 1 now exceedingly clear based on the numerous errors, modifications and adjustments 2 contained in her approach that there has never been a firm basis for her alternative 3 analyses in the first place. 4 5 JENKINS' "REVISED SUPPLEMENTAL" ANALYSIS 6 Q. IF THE COMMISSION WERE TO CONSIDER MS. JENKINS'

- 7 Q. IF THE COMMISSION WERE TO CONSIDER MS. JENKINS'
  8 "SUPPLEMENTAL REVISED" ANALYSIS, SHOULD THE COMMISSION
  9 GIVE ANY WEIGHT TO HER ANALYSIS?
- 10 A. No. Even if the Commission is to consider Ms. Jenkins' "supplemental revised" analysis,
  11 her analysis remains fraught with error, even after all of the adjustments and purported
  12 "corrections" she is proposing to make.

14 Q. WHAT ARE THE CHANGES THAT MS. JENKINS MADE TO DEVELOP HER

"REVISED SUPPLEMENTAL" STORAGE UTILIZATION ANALYSIS?

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- 16 A. In addition to correcting the "error" discussed earlier, she claimed in her supplemental
  17 testimony that there were four additional changes to her approach and calculations for her
  18 "revised supplemental" storage utilization approach:
  - Revised the overall approach for January, February and March so that flowing supplies are based on "warmest month" demand and not based on the amount of demand that is left after first determining storage withdrawals using the distribution of normal heating degree days;
  - 2) Developed entirely new estimates of normal and "warmest month" demand for all five winter months using a regression analysis based on two years of heating degree day and volume data;
  - 3) Forced the flowing supply plan for November to be no more than "warmest month" demand; and

4) Changed the date on which MGE made decisions for December 2000 to November 27, 2000 rather than November 22, 2000 based on information provided by MGE.<sup>2</sup>

All of the changes to Ms. Jenkins' storage utilization analysis noted above, including the correction of the "error" in her spreadsheet, were then utilized to calculate her proposed "revised supplemental" disallowance as presented on Schedule 5 of her supplemental testimony.

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Q. IN TERMS OF THE FIRST CHANGE NOTED ABOVE INCLUDED IN HER "REVISED SUPPLEMENTAL" ANALYSIS, COULD YOU PLEASE EXPLAIN HOW MS. JENKINS HAS CHANGED THE APPROACH THAT SHE IS RELYING UPON TO EVALUATE MGE'S STORAGE UTILIZATION?

A. As I discussed earlier, Ms. Jenkins' "original" storage utilization approach, i.e., the approach she supported in her direct, rebuttal and surrebuttal testimonies, can be summarized as follows:

For November and December only, Ms. Jenkins first calculated the level of first-of-month flowing supplies based on her "warmest month requirements" approach, with the storage withdrawals for those months then falling out as the difference between total normal monthly demand and the level of first-of-month flowing supplies. In contrast, for January through March, Ms. Jenkins instead first calculated the level of storage withdrawals (rather than flowing supplies) based on her "distribution of normal heating degree days" approach, with the level of flowing supplies for those months then falling out as the difference between total normal monthly demand and the projected monthly storage withdrawals. In other words, Ms. Jenkins calculated a flowing supply amount for the first part of the winter, but calculated a storage withdrawal amount for the second part of the winter.

While Ms. Jenkins was aware of this change in date after the filing of my direct testimony, she has only now proposed such a change, even though she could have done so in her rebuttal or surrebuttal testimony.

However, in her supplemental direct testimony, Ms. Jenkins has changed the approach by which she evaluates MGE's storage utilization for the winter of 2000/2001. In her supplemental direct testimony, her approach can be summarized as follows:

For all five winter months, Ms. Jenkins has first calculated the level of first-of-month flowing supplies based on her "warmest month requirements" approach, with the storage withdrawals for those months then falling out as the difference between total normal monthly demand and the level of first-of-month flowing supplies. Ms. Jenkins no longer relies upon her "distribution of normal heating degree days" approach to calculate the level of storage withdrawals for any month.

In addition to the change in approach noted above, another significant change to her "revised supplemental" storage utilization plan is that Ms. Jenkins has also created her own estimates of normal and "warmest month" demand requirements that she utilizes in her proposed storage utilization disallowance calculations.

## Q. IS MS. JENKINS' SUPPLEMENTAL DIRECT TESTIMONY CONSISTENT WITH HER "REVISED SUPPLEMENTAL" PROPOSAL?

- A. No. In her supplemental direct testimony, Ms. Jenkins claims that her storage utilization approach is still based on the distribution of normal heating degree days when this is simply not the case. Specifically, Ms. Jenkins' supplemental direct testimony states:
  - 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. ... 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.

(Supplemental Direct Testimony of Lesa A. Jenkins, Case No. GR-2001-382, et. al., p. 13, ll. 4-7 and ll. 20-22).

While Ms. Jenkins continues to claim in her supplemental direct testimony that her storage utilization plan is based upon the distribution of normal heating degree days, the workpapers to her supplemental direct testimony clearly indicate otherwise. On Schedule MTL-39, which are the workpapers that support the \$2.9 million disallowance that Ms. Jenkins is now proposing, it shows that Ms. Jenkins has completely abandoned the distribution of normal heating degree days approach. On Schedule MTL-39, page 7, line 85 (which is in Table 3-2 of her spreadsheet), the columns (D), (F), (H), (J) and (L) reflect Ms. Jenkins' revised daily flowing supply amounts for each winter month. The daily flowing supplies reflected in on line 85 in those columns are based solely on "warmest month" demand, as adjusted for the previous month's storage underage/overage usage. As shown in those same columns but on line 83, Ms. Jenkins' proposed daily storage withdrawals bear no relation to how storage would be distributed each month based on the distribution of normal heating degree days in those months.

Q.

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CHANGES TO HER APPROACH, WERE THERE IN FACT OTHER CHANGES
THAT SHE MADE THAT EITHER IMPACTED HER PREVIOUS TESTIMONY
OR HER "REVISED SUPPLEMENTAL" DISALLOWANCE CALCULATIONS?
Yes. As noted above, Ms. Jenkins stated that she corrected an "error" in the spreadsheet that she originally utilized to calculate the storage disallowance. However, there were at least two other apparent errors in Ms. Jenkins' spreadsheet that she corrected in the workpapers supporting her supplemental direct testimony, yet she failed to address in her supplemental direct testimony. For example, Ms. Jenkins made the following

ALTHOUGH MS. JENKINS CLAIMED SHE MADE FOUR ADDITIONAL

- adjustments to her "revised supplemental" analysis that were not addressed in her supplemental direct testimony:
  - On Schedule 13-1, lines 11 through 14 of Ms. Jenkins' direct testimony, she presented what purportedly were the actual heating degree days through the date MGE had to make a decision for the following month, as well as the number of heating degree days forecasted through the end of the month. For every winter month, these figures were incorrect in her direct testimony and Ms. Jenkins made representations in her direct testimony relying upon these incorrect figures (see, e.g., p. 22, ll. 13-16). While Ms. Jenkins corrected these figures in her supplemental direct testimony, she never disclosed that these figures were incorrect in her direct testimony or attempted to clarify and revise her direct testimony for this error.
  - On Schedule 13-1, line 16, columns (d) and (e) of Ms. Jenkins' direct testimony, she made an adjustment to MGE's end-of-month TSS storage balance for November 2000. As presented on Schedule 13-1, Ms. Jenkins increased the end-of-month storage balance shown in column (d) by 500,000 MMBtu to account for MGE's interruptible storage contract (the adjusted balance is shown in column (e)). However, in the workpapers supporting Ms. Jenkins' supplemental direct testimony, she changed her approach and made no such adjustment in the calculation of her "revised" storage utilization disallowance. Again, Ms. Jenkins did not explain this change in her supplemental direct testimony or advise that her Schedule 13-1 of her direct testimony was adjusted, and that it had an impact on her "revised" storage disallowance.

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## Q. DID MGE ASK MS. JENKINS ABOUT THESE ADDITIONAL ADJUSTMENTS TO THE WORKPAPERS OF HER SUPPLEMENTAL TESTIMONY?

Yes. When asked in her October 30<sup>th</sup> deposition about these additional adjustments, Ms. Jenkins acknowledged making them in her supplemental direct testimony, but admitted that she did not address these adjustments in her supplemental direct testimony because she assumed that MGE would find them, and that the Commission would not want this level of detail. Specifically, in reference to the adjustment to the end-of-month storage balance discussed above, Ms. Jenkins stated the following at the October 30<sup>th</sup> deposition:

1 2		Q. So you figured that somebody would find it, even though you didn't indicate that you had made the change?							
3		A. I figured you'd [i.e., MGE] find it because I highlighted it, and I labeled the column differently.							
5		******							
6 7 8 9		Q.	But you made a judgment determination, as I understand your previous answer, to not discuss this in your [supplemental direct] testimony, even though it makes a change in the result, because you didn't consider it to be important?						
10 11 12 13 14		A. I didn't include any of these tables, the former Schedule 13, in my [supplemental direct] testimony. In my judgment, it wasn't adding to anybody's understanding, other than the company, as to what was going on. I did provide this information to the company. I didn't feel that it was adding any value to what the Commissioners had. So I chose not to include it in there.							
16 17 18			cation added) (Deposition of Lesa Jenkins, Case No. GR-2001- ectober 30, 2003, p. 44, ll. 13-17 and p. 45, line 16 to p. 46, line 1.)						
19	Q.	WITH ALI	. OF THE ADJUSTMENTS SHE HAS MADE IN HER						
20		SUPPLEME	NTAL DIRECT TESTIMONY, IS MS. JENKINS' "REVISED						
21		SUPPLEME	NTAL" STORAGE UTILIZATION PROPOSAL NOW AN						
22		APPROPRIA	TE WAY OF EVALUATING MGE'S STORAGE UTILIZATION						
23		FOR THE W	INTER OF 2000/2001?						
24	A.	Absolutely no	ot. Even if one were to assume that MGE agreed with Ms. Jenkins'						
25		approach for e	evaluating storage (which MGE adamantly does not), Ms. Jenkins' analysis						
26		remains fraug	ht with error, even after all of the adjustments that Ms. Jenkins has made to						
27		her "revised s	supplemental" analysis. Specifically, Ms. Jenkins' "revised supplemental"						
28		storage utiliz	ation proposal suffers from two critical fatal flaws, and as such, the						
29		Commission s	should ascribe no value to her analysis and proposed disallowance.						

### "REVISED SUPPLEMENTAL" ANALYSIS - FATAL FLAW NO. 1

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- Q. WHAT IS THE FIRST FATAL FLAW WITH MS. JENKINS' "REVISED"
   STORAGE UTILIZATION APPROACH?
- A. The first fatal flaw with Ms. Jenkins' "revised supplemental" storage utilization proposal 4 is that her proposal assumes MGE should only plan to utilize 79% of its contracted 5 6 storage capacity in a normal winter. Even though MGE has purchased 17.8 Bcf of storage capacity for the benefit of its customers, Ms. Jenkins' "revised supplemental" 7 storage utilization is based on the assumption that MGE should only plan on utilizing 8 14.0 Bcf of that capacity in a normal winter. This means that her proposed storage plan 9 10 presumes that MGE should plan to leave nearly 3.4 Bcf of storage, or over 21% of its purchased storage capacity, completely unutilized in a normal winter. Fundamentally, 11 the basis of Ms. Jenkins' "revised supplemental" storage utilization approach simply does 12 not make sense. There is absolutely no reason that MGE would contract for 17.8 Bcf of 13 storage capacity to provide operational, reliability and financial benefits to its customers, 14 yet intentionally plan to underutilize over 21% of the capacity that it had purchased. 15 While all of MGE's storage inventory may ultimately not be cycled in any particular year 16 due to factors such as weather conditions, natural gas prices, and pipeline and distribution 17 system issues, MGE certainly does not purchase storage capacity that it never intends to 18 utilize under normal winter conditions. 19
- Q. HAVE YOU SUMMARIZED MS. JENKINS' "REVISED SUPPLEMENTAL"

  STORAGE UTILIZATION PROPOSAL AND HIGHLIGHTED THE PROBLEM

  WITH HER EVALUATION FRAMEWORK?

Yes. Schedule MTL-40 attached to my testimony provides a summary of Ms. Jenkins' "revised supplemental" storage utilization proposal. This summary is based on the workpapers that she used to develop her supplemental direct testimony, and which are presented in their entirety on Schedule MTL-39.3 As can be seen on Schedule MTL-40, Ms. Jenkins has proposed that, in a normal winter, MGE should schedule 37,399,382 MMBtu of flowing supplies and withdraw 13,984,207 MMBtu of storage inventory. As discussed earlier, Ms. Jenkins has calculated these figures based upon her proposal that MGE should plan for flowing supplies in each winter month to at least cover "warmest month" demand, with the difference between total normal demand and the "warmest month" demand met by storage withdrawals. The fatal flaw with Ms. Jenkins' evaluation framework, however, is that she proposes storage withdrawals of 13,984,207 MMBtu in a normal winter when she is fully aware that MGE has purchased 17,767,629 Dth of storage capacity. Therefore, Ms. Jenkins' framework suggests that, in a normal winter, MGE should plan to leave over 21% of its purchased storage capacity unutilized. In other words, Ms. Jenkins has proposed a framework for evaluating the prudence of MGE's storage utilization for the winter of 2000/2001 that is based on a completely illogical premise. As a result, the Commission should ascribe no value to Ms. Jenkins' storage utilization analysis and her proposed disallowance.

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Q. MS. JENKINS' WORKPAPER THAT YOU HAVE ATTACHED AS SCHEDULE
MTL-39 SEEMS TO SHOW THAT HER "REVISED EXPECTED STORAGE

The details of Ms. Jenkins' flawed storage utilization proposal are not specifically set forth in her supplemental direct testimony or its accompanying schedules, but rather are set forth in the workpapers provided with her supplemental testimony. The (i) normal monthly demand; (ii) first-of-month flowing supplies based on "warmest month" demand; and (iii) the resulting storage withdrawals, for each winter month as shown (cont.)

WITI	HDRAWAL	S" TOTAI	. 16.4 BC	cf. Wi	HAT IS	THE DIF	FEREN	CE BET	WEEN
THIS	S AND THE	14.0 BCI	THAT	YOU	HAVE	REFLEC	CTED O	N SCHE	DULE
MTI.	-402								

A. On Schedule MTL-39, page 1, line 19, column (F), Ms. Jenkins has calculated Staff's "REVISED Expected Storage Withdrawals" to be 16,408,184 MMBtu for the winter of 2000/2001. However, it is important to understand that Ms. Jenkins' storage utilization framework, which is presented on pages 6, 7 and 8 of Schedule MTL-39 and has been summarized on Schedule MTL-40, has been developed for a **normal** winter. In other words, Ms. Jenkins has developed an approach to how MGE should have scheduled storage and flowing supplies under <u>normal winter conditions</u>. For her evaluation of the winter of 2000/2001, Ms. Jenkins then applies her storage and flowing supply framework to MGE's actual 2000/2001 winter experience in order to calculate what her expected storage withdrawals for that winter would have been. Thus, the important distinction is that Ms. Jenkins has proposed storage withdrawals of 14.0 Bcf under <u>normal winter conditions</u> (as reflected on Schedule MTL-40) and has proposed storage withdrawals of 16.4 Bcf for the winter conditions of 2000/2001 (as reflected on Schedule MTL-39, p. 1).

Q. DID MGE ACTUALLY WITHDRAW MORE GAS FROM STORAGE IN THE WINTER OF 2000/2001 THAN MS. JENKINS IS GIVING MGE CREDIT FOR IN HER ANALYSIS?

21 A. Yes. In the winter of 2000/2001, MGE actually withdrew 16,856,032 MMBtu of natural 22 gas from storage for the benefit of its customers. However, Ms. Jenkins' "revised

on Schedule MTL-40 are presented in Ms. Jenkins' workpaper (i.e., spreadsheet) that has been provided as Schedule MTL-39, specifically on pages 4 and 7.

supplemental" storage utilization analysis only gives MGE credit for 16,408,184 MMBtu, or 447,848 MMBtu less than MGE actually withdrew from storage. Ms. Jenkins is basically calculating a proposed disallowance on an expected level of storage withdrawals that is far less than the level of storage that MGE actually withdrew during the winter of 2000/2001 for the benefit of its customers. It is simply not reasonable, nor does it make sense, for Ms. Jenkins to develop a storage utilization approach that does not even give MGE the full credit for the level of its actual storage withdrawals for the winter of 2000/2001.

A.

### "REVISED SUPPLEMENTAL" ANALYSIS - FATAL FLAW NO. 2

## Q. WHAT IS THE SECOND FATAL FLAW WITH MS. JENKINS' "REVISED SUPPLEMENTAL" STORAGE UTILIZATION APPROACH?

The second fatal flaw with Ms. Jenkins' "revised supplemental" storage utilization approach is that she has relied upon inaccurate "warmest month" demand estimates that she herself has created. As noted earlier, one of the changes that Ms. Jenkins has made to the storage utilization analysis in her supplemental direct testimony is that she has developed new "warmest month" demand estimates. Specifically, Ms. Jenkins has estimated "warmest month" demand based upon a regression of (i) actual monthly heating degree day data and (ii) MGE's actual monthly demand, for the period July 1998 through June 2000.<sup>4</sup> The problem is that these "warmest month" demand estimates are inaccurate.<sup>5</sup>

From her regression of these two years of data, Ms. Jenkins calculates a baseload and heatload factor. She calculates baseload demand by multiplying the baseload factor by the number of days in each month, and calculates heatload demand by multiplying the heatload factor by the "warmest month" heating degree days, i.e., the lowest number of heating degree days for each month in the past forty years. She then sums the

## Q. HAVE YOU DETERMINED THE EXTENT TO WHICH MS. JENKINS' ESTIMATIONS OF DEMAND ARE INACCURATE?

Yes. Schedule MTL-41 highlights the inaccuracy of Ms. Jenkins' demand estimates that she utilizes to calculate her "revised" storage disallowance. Schedule MTL-41 presents a comparison of MGE's <u>actual demand</u> for each winter month over the past five years versus the <u>estimated demand</u> that would be produced by Ms. Jenkins' regression (i.e., the baseload and heatload factors) applied to the actual heating degree days that occurred in each of those months. Page 1 of Schedule MTL-41 summarizes the variations between MGE's actual demand in each of the twenty-five months (i.e., five years of five winter months) and the demand that would result from Ms. Jenkins' regression equation. Page 2 of Schedule MTL-41 provides the supporting information on how the demand for each of the months was developed using Ms. Jenkins' baseload and heatload factors from her regression equation. It should be noted that the demand estimates were developed using Ms. Jenkins' exact estimation model as reflected in her supplemental direct workpaper titled "MGE Regression using MTL-14 and DR146", which I have attached as Schedule MTL-42.

A.

#### O. PLEASE EXPLAIN THE RESULTS OF SCHEDULE MTL-41.

baseload and the heatload demand for each month to estimate the "warmest month" demand, which is utilized in her storage utilization disallowance proposal.

It is important to note that MGE is not stating that the use of regression analysis is an inappropriate means of estimating baseload and heatload demand. Rather, Ms. Jenkins' demand estimates are inaccurate due to her misapplication of the regression analysis. For example, Ms. Jenkins only utilized a short data series (i.e., two years of data), and her approach was simplistic in that it calculated a single baseload and heatload factor for all twelve months even though it would have been more accurate to calculate a separate heatload factor for each month or at least each season since each month (or season) has a different level of heatload demand.

As shown on Schedule MTL-41, page 1, there are five months that have been shaded (i.e., January 1998, February 1998, November 1998, November 1999 and November 2001). These months have been shaded to highlight the fact that, in these months, Ms. Jenkins' regression equation would have estimated a level of demand that varied from MGE's actual demand by 10% or more. This demonstrates that, not only is there a problem with the magnitude of the inaccuracy of her demand estimates (i.e., the actual demand versus estimated demand varies by more than 10%), but the frequency of her inaccurate estimates is also significant (i.e., five of the twenty-five months, or 20% of the time, her regression would have produced significantly inaccurate results). In other words, the regression that Ms. Jenkins has developed and utilized in her "revised" disallowance proposal simply is not accurate and does not do a reasonable job of estimating demand. In fact, three of the five months in which her estimate of demand varies from actual demand by more than 10% are for the month of November. This highlights the point I have stressed in my previous testimony that November is the most variable winter month in terms of demand and is very difficult to estimate or predict, and therefore, requires the high degree of operating flexibility that MGE's November storage utilization plan provides.

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Furthermore, as shown in the shaded boxes on page 1 of Schedule MTL-41, specifically in column (g), <u>Ms. Jenkins' estimation of demand is the most inaccurate when the weather was the most extreme</u>, i.e., when the actual monthly heating degree days varied significantly from the normal monthly heating degree days. Considering that Ms. Jenkins has attempted to estimate "warmest month" demand for her storage utilization proposal,

she has attempted to estimate the demand in those months in which the weather is the most extreme. However, as shown on Schedule MTL-41, Ms. Jenkins' demand estimation process is the most inaccurate when the weather is the most extreme, therefore, this only exacerbates the problems with Ms. Jenkins' "warmest month" demand estimates.

A.

## Q. ON SCHEDULE MTL-41, PAGE 1, THERE ARE SOME NOTATIONS IN COLUMN (H). COULD YOU PLEASE EXPLAIN WHAT IS MEANT BY THOSE NOTATIONS?

Yes. As noted above, Ms. Jenkins calculated her "warmest month" demand estimates in her workpaper that I have attached to my testimony as Schedule MTL-42. In that workpaper, Ms. Jenkins calculated the "warmest month" demand using monthly data from July 1998 through June 2000, and calculated the estimated demand assuming "no customer growth" and "with customer growth". For her demand estimates, she grossed up her estimated demand by one year of customer growth (i.e., 0.75% per year based on MGE's figures) even though her baseload and heatload factors were based on two years of data, which appears inconsistent. Therefore, rather than add to the confusion and the potential error of how she accounted for customer growth, I have reflected the estimated demand on Schedule MTL-41 that would have been produced by Ms. Jenkins' proposed approach on an unadjusted basis, meaning that the demand has not been adjusted upward in those months that precede the winter of 2000/2001 or downward in those months that are after the winter of 2000/2001. The demand is presented in this manner to reflect the exact demand that would be produced by Ms. Jenkins' demand estimation equation

without attempting to replicate the manner in which Ms. Jenkins accounted for customer growth. However, because I have shown the demand on an unadjusted basis, I have made a notation on Schedule MTL-41, page 1, in column (h) to reflect how the variation between actual demand and Ms. Jenkins' estimated demand would be affected if customer growth were accounted for in the analysis. Since MGE's load growth is relatively modest, the differences reflected in column (f) would not change significantly. However, as shown in the shaded boxes in column (h), three of the five months in which Ms. Jenkins' analysis was most inaccurate would actually get even worse if the analysis accounted for customer growth.

A.

## Q. DID MS. JENKINS PERFORM ANY OF HER OWN STUDIES OR ANALYSES TO TEST THE ACCURACY OF HER "WARMEST MONTH" ESTIMATION PROCESS?

- No. In her supplemental direct testimony and in her October 30<sup>th</sup> deposition, Ms. Jenkins stated that her analysis was correct and reasonable since the adjusted R-squared of the two years of monthly heating degree day and demand data was over 0.90. However, Ms. Jenkins did absolutely no analysis or review to test whether her regression equation was good, average or poor at estimating MGE's demand that had <u>actually occurred</u> in the past. In fact, Ms. Jenkins admitted in her October 30<sup>th</sup> deposition that she had conducted no such studies to determine the reasonableness of her proposed estimates:
  - Q. Did you do any checks to determine whether this line fit works in other months?
  - A. What I looked at was just I mean, I compared it to what the actuals were. I mean, this plot shows actuals and estimated for that period of time. No, that's the amounts that I looked at.

1 2 3 4		Q.	Okay. So the answer to my question is, you didn't try to apply this approach to other months to determine whether the result that shows up in your Schedule 3-1 only works in these months or whether it's good for other months; is that right?
5 6		A.	I didn't - I didn't see how that's appropriate, because the Company
7 8		Q.	Well, I'm not asking whether it's appropriate or not. I'm asking if you did it.
9		<b>A.</b>	<u>No</u> .
10 11 12 13		Q.	Okay. If I understand correctly, then, the disallowance that you're now supporting in this case rests upon, among other things, the number that appears in line 25, column (c), the 5,114,047 decatherms; is that right?
14 15		A.	That's the number that I used for the check. I wouldn't say it solely relies on that number.
16 17 18		Q.	Well, but that number goes into – that number or the disallowance that you are proposing rests, in part, on your use of that number, does it not?
19		A.	Yes.
20 21		Q.	And that is a number that you got from your regression analysis; is that true?
22		A.	Yes.
23 24		Q.	Now, you are – that is supposed to reflect an estimate of the warmest month requirement for November of 2000, is that correct?
25		A.	Yes.
26 27 28		` .	asis added) (Deposition of Lesa Jenkins, Case No. GR-2001-382, er 30, 2003, p. 49, line 17 to p. 50, line 24.)
29	Q.	SHOULD N	MS. JENKINS HAVE BEEN AWARE THAT THERE WAS
30		SOMETHIN	G WRONG WITH HER "WARMEST MONTH" DEMAND
31		ESTIMATIO	ON PROCESS?
32	A.	Yes. A point	that highlights the arbitrary and inaccurate nature of Ms. Jenkins' analysis
33		is that she has	s proposed a level of "warmest month" demand for November of 5,114,047
34		MMBtu. Hov	wever, Ms. Jenkins is fully aware that the warmest November in the past 40

years actually occurred in November 1999, and that MGE experienced a total demand of 4,414,515 MMBtu in that month. Therefore, Ms. Jenkins' demand estimation produced a "warmest month" for November that was nearly 16% higher than the <u>actual</u> "warmest month" demand that had occurred only the year before the winter that is at issue in this proceeding. Moreover, Ms. Jenkins estimated a "warmest month" demand for March of 6,454,007 MMBtu, even though she is fully aware that MGE's <u>actual</u> demand for March 2000 was 6,042,011 MMBtu, or again, her "warmest month" estimate was *higher* than the <u>actual</u> demand. These facts alone should have indicated to Ms. Jenkins that her "warmest month" estimation process was faulty. If nothing else, Ms. Jenkins should not have estimated "warmest month" demand when she had actual "warmest month" demand available.

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Α.

# Q. DO YOU HAVE ANY ADDITIONAL COMMENTS REGARDING MS. JENKINS' "REVISED SUPPLEMENTAL" STORAGE UTILIZATION ANALYSIS?

Yes, I have one further issue that I would like to point out for the Commission. As discussed in my previous testimony in this proceeding, Ms. Jenkins' "original" analysis included a proposal that MGE schedule 181,265 MMBtu/day of first-of-month flowing supplies. As shown on Schedule MTL-15 of my direct testimony, I illustrated how the amount of first-of-month flowing supply that Ms. Jenkins had proposed for November would result in a significant number of days in which MGE did not need the amount of supply that it had scheduled, and which could have a negative financial and/or operational impact on MGE. In her "revised supplemental" testimony, although Ms. Jenkins has now changed her proposed first-of-month flowing supply amount for

November to 165,468 MMBtu/day, the same problem still exists. I have updated Schedule MTL-15 to reflect Ms. Jenkins' "revised supplemental" analysis, which is now presented as Schedule MTL-43.

As can be seen in the table at the bottom of Schedule MTL-43, Ms. Jenkins' "revised supplemental" storage utilization plan would have resulted in MGE having excess scheduled flowing supplies for 19 days in November 1999 (63% of the time) and 22 days in November 2001 (73% of the time). In other words, Ms. Jenkins' "revised supplemental" analysis does little to fix the problem that existed in her "original" analysis that MGE would likely have excess flowing supplies for a significant amount of November under her proposed plan.

Α.

# Q. WOULD YOU PLEASE SUMMARIZE YOUR POSITION WITH REGARD TO MS. JENKINS' STORAGE UTILIZATION DISALLOWANCE PROPOSALS?

This review of Ms. Jenkins testimony shows clearly that her "revised supplemental" disallowance is not truly based on either "distribution of normal heating degree days" or the actual "warmest month" data, but is based on a fabricated analysis that is new and only now being put in the record in this proceeding. As established in the scope for the supplemental portion of this proceeding, the purpose of this portion of the proceeding was specifically to review "(i) MGE's 1999/2000 heating season delivered natural gas volumes; and (ii) the use of those volumes in the spreadsheet developed by Ms. Jenkins." Instead, Ms. Jenkins has made wholesale changes to the data on which her calculations

are based in order to arrive at Staff's new proposed disallowance. The Commission should reject this out of hand.

As I have demonstrated in all of my filed testimony in this proceeding, and as has been discussed by MGE Witness Reed, MGE's utilization of its storage inventory in the winter of 2000/2001 was well within the range of reasonable and prudent conduct. Furthermore, Ms. Jenkins' analyses continue to be fraught with errors. As such, Ms. Jenkins has clearly not demonstrated that her "original" storage utilization proposal, her "revised original" original storage utilization proposal, or her "revised supplemental" storage utilization proposal, and the various disallowance levels each of those produced, are a reasonable, appropriate or correct way in which to evaluate MGE's conduct for the winter of 2000/2001.

#### JENKINS' REVISED HEDGING DISALLOWANCE

- 15 Q. IN ADDITION TO THE CHANGES THAT MS. JENKINS HAS MADE TO HER
  16 STORAGE UTILIZATION ANALYSIS, HAS SHE ALSO CHANGED HER
  17 PROPOSED HEDGING DISALLOWANCE?
- 18 A. Yes. In her direct testimony, Ms. Jenkins claimed that MGE did not meet Staff's
  19 minimum monthly hedging level of 30% for the months of January and March 2001, and
  20 as a result, proposed a disallowance of \$614,365. In her supplemental direct testimony,
  21 Ms. Jenkins has significantly revised her disallowance downward to \$130,137 based on
  22 MGE not meeting Staff's minimum monthly hedging level only for March 2001. Under

her revised analysis, Ms. Jenkins has claimed that MGE met Staff's proposed minimum monthly hedging level in all other winter months.

A.

# 4 Q. DO YOU AGREE WITH MS. JENKINS' ADJUSTMENT TO HER PROPOSED 5 HEDGING DISALLOWANCE?

No. Ms. Jenkins adjusted her proposed hedging disallowance based upon the same fatally flawed regression equation she utilized to develop her "warmest month" demand estimates that I discussed earlier and are reflected in Schedule MTL-42. In addition to estimating "warmest month" demand, Ms. Jenkins also utilized the regression equation to estimate normal demand. It is these revised normal demand estimates upon which she has based her revised hedging disallowance.

Regardless of the fact that her revised hedging disallowance is based on inaccurate estimates, MGE still maintains that Ms. Jenkins' original disallowance is unsupported and unreasonable and that there should be no disallowance for hedging based on the detailed direct, rebuttal and surrebuttal testimony that MGE has filed in this proceeding. In fact, prior to her revised hedging proposal, I testified that MGE hedged over 38% of its volumes for the winter of 2001/2002 (see my direct testimony at p. 45). Under her revised proposal, the amount that MGE hedged for the winter is even higher. Specifically, the total of the financially and physically hedged volumes for the winter of 2000/2001 equaled 20,333,341 MMBtu, or nearly 40% of Ms. Jenkins revised normal requirements, clearly exceeding 30% of normal requirements.

- 1 Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL REBUTTAL TESTIMONY?
- 2 A. Yes, it does.

# NP

NP

# HC

Schedule MTL-37, pages 1-5 Are Highly Confidential

HC

	Α	В	С	D	Е	F	G	H	I I	J
1	Missouri Gas	Energy	<u> </u>	-	-					
	GR-2001-382	•								
3										
	Table 4. First of	Month Maminations on Duk	a must be med	a 6 huainana a	tava bafasa E(	OM Co Stoff	raviawad daa	isiana mada		
		Month Nominations on Duk 2/00, 12/21/00, 1/24/01, an		e o pusiness (	days belore FC	JIVI. 30, SIAII	reviewed dec	asions made		
	011 10/24/00, 11/2	2300, 12/21/00, 1/24/01, all	u 2/2 //01.							
5		1 0/	40/04/0000	44/00/0000	<b>i</b> !	40/04/0000		410410004	0104/0004	1
	Information Kno		10/24/2000 Oct-00	11/22/2000 Nov-00		12/21/2000 Dec-00		1/24/2001	2/21/2001 Feb-01	ł
	From Storage An	and and storage inj & w/d	10/23/2000			12/20/2000	Rev 12/20	Jan-01 1/23/2001	2/20/2001	ł
	entered for actual		10/23/2000	11/21/2000		12/20/2000	to include	1/23/2001	2/20/2001	
8	entered for actual	i i ibb anough.					12/31.4			
	Actual HDD throu	igh this date	256	838		1,368	1,368	1,076	956	
		for remainder of month	<u>77</u>	<u>246</u>		514	<u>553</u>	254	231	
		ed HDD for month	333	1,084		1,882	1,921	1,330	1,187	
	•	y HDD as % of normal	entra en la supressa de rec	165.0%	İ	175.4%	179.0%	109.2%		j.
12		this - not in report)								
		we where both a good	alone the replacement wilder	Market of the market commence of the commence			den Selek Adalam i in se nyaéta	തുതഷം.ആസം ഗതരും	- successor · · · · · · · · · · · · · · · · · · ·	'
1					Revised Nov-		Rev 12/20			
			İ		00 to include		to include			
13	EOM Storage Ba	lances			ISS <sup>3</sup>		12/31 4			
14	TSS		14,948,357	10,708,780	11,208,780	4,227,928	4,112,139	3,927,321	1,637,647	
15	FSS		1,121,968	1,121,952	1,121,952	1,041,777	1,041,777	1,041,777	1,041,777	
16	PEPL/WS		<u>1,453,926</u>	<u>1,009,107</u>	1,009,107	<u>598,035</u>	<u>591,696</u>	<u>372,676</u>	<u>169,435</u>	ĺ
17	Total Storage In	nventory	17,524,251	12,839,839		5,867,740		5,341,774	2,848,859	
18	% of MSQ		98.6%	72.3%	75.1%	33.0%	32.3%	30.1%	16.0%	
19		ining to be filled 1	243,378							
	From Company F		Nov-00	Dec-00		Jan-01	i	Feb-01	Mar-01	
—	Forecasted Dema		7 400 204	40.075.405		40,000,404		44 040 407	2 400 470	
22		Year Normal Weather	7,400,361 5,587,935			13,868,421		11,213,497	8,423,472	İ
23 24			9,140,788			10,077,482 16,186,584		8,819,953 13,732,070		ł
_	Historical HDD da	ota:	Nov-00	Dec-00		Jan-01		Feb-01	Mar-01	İ
-	warmest month F		398	763		841		646	529	1
	normal month HD		657	1,073		1,218	İ	946	691	ĺ
	coldest month HD		877	1,606		1,629		1,274	1,057	l
	Using Company I	heatload & baseload	• :					·		1
1	factors in Reliabil	ity Report w/ historical						:		
	HDD		Nov-00	Dec-00		Jan-01		Feb-01	Mar-01	
	Number of days i		30			31		28	31	1
		d w/ warmest HDD	5,591,673			10,273,551		8,090,819		
		id w/ normal HDD	8,301,101			14,217,391		11,229,153		
		d w/ coldest HDD	10,602,546			18,516,908		14,660,398		1
	From Company S Normal Monthly [	Supply/Demand Summary:	Nov-00	Dec-00 12.400.465		Jan-01		Feb-01	Mar-01	1
	Daily Average De		247,512			13,893,421 448,175		11,238,497 401,375	8,448,472 272,531	
		et w/ storage w/d <sup>2</sup>	241,012	400,015		440,1/3		401,373	2/2,531	1
38		et wr Storage W/U	138,333	91,935		49,355		70.014	C1 11E	1
39	FSS		136,333			49,355		79,914 0	61,115 n	1
40			4,272	_		6,615		6,994	4,120	1
41		v/d	142,605			55,970		86,908	65,235	
	Fuel Requiremen		2,715		1	13,036		10,426	6,810	
		nd still to be met (with	107,622			405,241		324,893		
43	flowing or ?)	•						.,_,_		
44	Less Planned Flo	owing Supplies	107,622	289,650		405,241		304,893	189,106	
45	Daily Avg Demar	nd still to be met with	0	20,000		0		20,000	25,000	
	From DR28 resp		Nov-00	Dec-00		Jan-01		Feb-01	Mar-01	1
		Storage Withdrawals	4,150,166	3,454,240	i	3,464,251		3,162,867	2,247,507	1
48			,,		•		. '	-,,	_,_ ,_ ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	ı
49										

A   B   C   D   E   F   G   H   J				S	chedule	MTL-3	7									
Table 2: Storage Inventory - Actuals		A	В					G	Н ]		J					
Table 2: Storage Inventory - Actuals	1	Missouri Gas	Energy						·							
EOM Storage Inventory - Actuals   Sep-80   Cet-90   Normal   Nor																
EOM Storage Inventory - Actuals   Sep-40																
Sep-00		Table 2: Starage	Inventory Actuals	1		FOM Charac			ı							
Williams SA-0014 (TSS)	51	Table 2. Storage	inventory - Actuals	Son 00	Oct 00			lon O1	Fob 01	Mor 01	1					
Given the information known when decisions were made regarding first-of-month nominations, Staff believes that the FOM nominations would have been higher to allow storage to be reserved for the normally colder months of December and January and to assure that the Company had sufficient withdrawal capabilities to cover a possible late winter cold snap.  Storage alances and FOM nominations for this option is presented below:  Storage distribution is based on the percentage of normal HDD  Monthly Distr.  Storage  Normal HDD  Monthly Distr.  Storage  Normal HDD  Monthly Distr.  Storage distribution is based on the percentage of normal HDD occurring in that month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the storage with the month times the storage with the month times the storage with the month times the total storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month with the storage with the month times the winter than month times the winter than month times the storage with the month times the winter than month times the storage with the month times the storage with the month times	52		Williams SA-0014 (TSS)													
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Given the information known when decisions were made regarding first-of-month nominations, Staff believes that the FOM nominations would have been higher to allow storage to be reserved for the normally colder months of December and January and to assure that the Company had sufficient withdrawal capabilities to cover a possible late winter cold snap.  Storage alances and FOM nominations for this option is presented below:  Storage distribution is based on the percentage of normal HDD  Monthly Distr.  Storage  Normal HDD  Monthly Distr.  Storage  Normal HDD  Monthly Distr.  Storage distribution is based on the percentage of normal HDD occurring in that month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the storage with the month times the storage with the month times the storage with the month times the total storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month with the storage with the month times the winter than month times the winter than month times the storage with the month times the winter than month times the storage with the month times the storage with the month times	56		Total	16,041,508	17,766,565	12,093,008		5,194,775								
Given the information known when decisions were made regarding first-of-month nominations, Staff believes that the FOM nominations would have been higher to allow storage to be reserved for the normally colder months of December and January and to assure that the Company had sufficient withdrawal capabilities to cover a possible late winter cold snap.  Storage alances and FOM nominations for this option is presented below:  Storage distribution is based on the percentage of normal HDD  Monthly Distr.  Storage  Normal HDD  Monthly Distr.  Storage  Normal HDD  Monthly Distr.  Storage distribution is based on the percentage of normal HDD occurring in that month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the total storage with the month times the storage with the month times the storage with the month times the storage with the month times the total storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month times the storage with the month with the storage with the month times the winter than month times the winter than month times the storage with the month times the winter than month times the storage with the month times the storage with the month times	57	[														
Given the information known when decisions were made regarding first-of-month norminations, Staff believes that the FOM norminations would have been higher to allow storage to be reserved the normally colder months of Decomber and January and to assure that the Company had sufficient withdrawal capabilities to cover a possible late winter cold snap.  Storage balances and FOM norminations for this option is presented below:  60 61 62 63 Table 3-1: Storage withdrawals expected based on distribution of normal HDD 64	58	į														
have been different - November FOM nominations would have been higher to allow storage to be reserved for the normally colder months of December and January and to assure that the Company had sufficient withdrawal capabilities to cover a possible late winter cold snap. Storage stances and FOM nominations for this option is presented below:    1	59			•												
December and January and to assure that the Company had sufficient withdrawal capabilities to cover a possible late winter cold snap.  Storage balances and FOM nominations for this option is presented below:  81		Given the informa	ation known when decision:	s were made re	garding first-of	f-month nomin	ations, Staff b	elieves that the	he FOM nomina	tions would						
Storage balances and FOM nominations for this option is presented below:																
Solidar   Soli							Dinues to cove	a possible i	ate winter cold s	пар.						
Storage   Stor	60	Otorage balances	and I OW Hommadons for	ппа орцоп та рг	esented belov	••										
Storage withdrawals expected based on distribution of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage distribution is based on the percentage of normal HDD   Storage would not be normal HDD   Storage with the main times the total storage inventory. For November, would use the total storage inven		]														
Storage   Storage distribution is based on the percentage of normal HDD   Monthly Distr.		<u></u>														
Set	63	Table 3-1: Stora	ge withdrawals expected b	ased on distribu		1										
55   Nov-00   657   14.3%   2.474.335   storage inventory. For November, would use the total of Dec-00   1.073   23.4%   4.122.699   MSQ less 500,000 allowed by Company for injections in Nov if weather is warmer than normal. For Dec-189   Feb-01   946   20.5%   3.634.737   Mar, Company would know the beginning balance at 189   MsQ less 500,000 allowed by Company for injections in Nov if weather is warmer than normal. For Dec-189   MsQ less 501,000 allowed by Company for injections in Nov if weather is warmer than normal. For Dec-189   MsQ less 501,000 allowed by Company for injections in Nov 189   MsQ less 501,000 allowed by Company for injections in Nov 189   MsQ less 501,000 allowed by Company for injections in Nov 189   MsQ less 501,000 allowed by Company for injections in Nov 189   MsQ less 501,000 allowed by Company for injections in Nov 189   MsQ less 501,000 allowed by Company for injections in Nov 189   MsQ less 501,000			Storage Inventory - Actuals													
Section		Nov. 00														
Feb-01   946   20.6%   3.634,737   Mar, Company would know the beginning balance at start of November, so adjust accordingly - including start of Nove additional 150,000 lSS allowed in Nov.    Total																
Base   Feb-01	_								•							
69   Mar-01   691   15.1%   2,677,578   start of November, so adjust accordingly - including additional 150,000 ISS allowed in Nov.				<del></del>												
Total																
Check: Oct end-of-month inv = 17,766,565   17,739,170		Total	4,585					_	•							
Table 3-2: Staff's calculation of expected storage withdrawal and flowing supplies for Company planned normals						che										
Table 3-2: Staffs calculation of expected storage withdrawal and flowing supplies for Company planned normals   Nov-00				to	tal expected s	torage if adjus	t Nov by 150,6	000 from ISS	17,739,170							
To   Nov-00   Nov-00   Rev   Dec-00   Dec-00   Rev   Jan-01   Feb-01   Mar-01   Feb-01   Feb-01   Mar-01   Feb-01   Fe		L														
To   Normal Monthly Demand   T,425,361   T,425,361   T,425,361   T,425,361   T,420,465   T,400,465   T,400,465   T,400,465   T,400,465   T,400,465   T,400,465   T,401,375	74	Table 3-2: Staff:	s calculation of expected st	orage withdraw												
77   Daily Average Demand   247,512   247,512   400,015   400,015   448,175   401,375   272,531     78   Daily Demand to be met w/ storage w/d   82,478   132,990   150,962   129,812   86,373     79   plus storage w/d allowed for ISS in Nov   5,000     80   less storage for excess from prior month   (24,726)   (108,830)   47,544   16,145     81   Subtotal of daily storage w/d   87,478   108,076   108,264   90,393   42,132   177,356   102,518     82   Daily Fuel Requirements   2,715   2,715   7,909   7,909   13,036   10,426   6,810     83   Expected Daily Flowing Supplies   162,749   142,151   299,660   4317,531   419,079   234,445   176,823     84   (includes fuel)   35.0%   43.2%   26.5%   22.2%   9.1%   43.1%   36.7%     85   supplies (includes fuel)   65.0%   56.8%   73.5%   77.8%   90.9%   56.9%   63.3%     85   supplies (includes fuel)   65.0%   56.8%   73.5%   77.8%   90.9%   56.9%   63.3%     86   Company numbers for low-case)   71   715		Normal Monthly (	Jomand													
This is the warm weather requirements (used Company numbers for low-case)   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would allowed for ISS in Nov   S,000   Storage wid allowed for ISS in Nov   S,000   Storage wid allowed for ISS in Nov   S,000   Storage wid allowed for ISS in Nov   S,000   Storage wid allowed for ISS in Nov   S,000   Storage wid allowed for ISS in Nov   S,000   Storage wid allowed for ISS in Nov   S,000   Storage wid allowed for ISS in Nov   S,000   Storage wid allowed for ISS in Nov   S,000   Storage wid allowed for ISS in Nov   S,000   Storage wid not pulled in Nov   S,000   Storage wid not pulled in Nov   S,000   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Storage would need to be adjusted prior to making nominations based on expected end-of-month   Storage would need to be adjusted prior to making nominations   Storage would need to be adjusted pri																
Reside the company numbers for low-case   South House to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   South House to be terminated with storage wide to be terminated with storage wide to the company numbers for low-case   South House the low-case   South House the low-cas					247,512		400,015									
Solution   Solution					7.11	102,000		100,002	125,512	00,010						
Subtotal of daily storage w/d   87,478   108,076   108,264   90,393   42,132   177,356   102,518		1		-1		(24,726)		(108,830)	47,544	16,145						
82 Daily Fuel Requirements 2,715 2,715 7,909 7,909 13,036 10,426 6,810  83 Expected Daily Flowing Supplies 162,749 142,151 299,660 4317,531 419,079 234,445 176,823  % of planned normal met with storage (includes fuel)  % of planned normal met with flowing 85 supplies (includes fuel)  Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case)  86 Company numbers for low-case)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Did not adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of				87,478	108,076		90,393									
83 Expected Daily Flowing Supplies  162,749 142,151 299,660 4317,531 419,079 234,445 176,823  % of planned normal met with storage (includes fuel)  % of planned normal met with flowing 85 supplies (includes fuel)  Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less 150,000 for ISS in Nov  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Did not adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of				2,715		7,909	7,909	13,036								
84 (includes fuel)  % of planned normal met with flowing supplies (includes fuel)  Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less any excess storage w/d not pulled in Nov  B88  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Did not adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of	83							419,079	234,445							
% of planned normal met with flowing supplies (includes fuel)  Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less 150,000 for ISS in Nov  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Did not adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of			mal met with storage	35.0%	43.2%	26.5%	22.2%	9.1%	43.1%	36.7%						
Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Did not adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of	84							· · · · · · · · · · · · · · · · · · ·		<del>\</del>						
Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less 150,000 for ISS in Nov  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Did not adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of				65.0%	/ 56.8%	73.5%		90.9%	56.9%	63.3%						
warm weather requirements (used Company numbers for low-case)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less 150,000 for ISS in Nov excess storage w/d not pulled in Nov  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Did not adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of	85	det in a Million to a	an and the same to be a second to the con-		{/			and the second								
86 Company numbers for low-case)  87  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  88  89  This is the warm weather requirement less 150,000 for ISS in Nov excess storage w/d not pulled in Nov  Did not adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of				147,151		317,531	<b>V</b>	325,080	314,998	220,824						
storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Expected end-of-month inventory for previous month  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Storage would need to be adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of	0,0															
storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Expected end-of-month inventory for previous month  This is the warm weather requirement less any excess storage w/d not pulled in Nov  Base and the warm weather requirement less any excess storage w/d not pulled in Nov  Storage would need to be adjust for Feb & Mar - not as much of an issue in Feb and Mar since most of winter has past and have better handle on storage volumes available to meet requirements for the rest of		Company nur	mbers for low-case)		<b>-</b> /	****										
adjusted prior to making nominations based on expected end-of-month inventory for previous month  adjusted prior to making nominations based on expected end-of-month inventory for previous month  requirement less 150,000 requirement less any excess storage w/d not pulled in Nov  better handle on storage volumes available to meet requirements for the rest of	101	1	etorage would need to be	This is the	arm waathar	This is the	ungan was all .	†	Did not not not							
nominations based on expected end-of-month inventory for previous month  88  89  nominations based on excess storage w/d not pulled in Nov  excess storage w/d not pulled in Nov  pulled in Nov  better handle on storage volumes available to meet requirements for the rest of																
expected end-of-month inventory for previous month pulled in Nov winter has past and have better handle on storage volumes available to meet requirements for the rest of																
inventory for previous better handle on storage volumes available to meet requirements for the rest of	1			101 100 111 140	•											
88 wolumes available to meet requirements for the rest of						paned in 140	· <del>-</del>									
89 requirements for the rest of	20															
	89	1		I		L		l	1							
		1														

Normal Daily Avg   Daily Flowing   Supplies   Normal Daily Avg   Daily Flowing   Supplies   Suppl																					
3   1   Table 3-3: Effect of revised daily flowing supplies on expected end-of-month (EOM) storage inventory   92   Information Known As Of:   11/2/2/2000   12/2/2/2001   1/24/2001   2/21/2001	J	Н	G	F	E	D	C	В	A												
19   Table 3-3   Effect of revised daily flowing supplies on expected end-of-month (EOM) storage inventory								Energy	Missouri Gas	1 [											
Second Description   Second								•													
Second Description   Second										$\Box$											
92   Information Known As Of:									<b>-</b>												
93   From Storage Analysis Report.   Nov-00   Dec-00   Jan-0-1   Feb-01			,																		
Forecasted demand and storage in & wid   11/21/2000   12/20/2001   1																					
94 entered for actual HOD throught:   838   1,388   1,076   956       95   Actual HDD through this date   838   1,388   1,076   956       96   Forecasted HDD for remainder of month   246   553   254   231       97   Known & expected HDD for month   1,084   1,921   1,330   1,187       Expected monthly HDD as % of normal   165.0%   179.0%   109.2%   125.5%       98   HDD (calculated this - not in report)   98   Revised Expected EOM Storage Balances   13,339,839   5,745,612   1,035,870   1,035,																					
SEA   Actual HIDD through this date   838   1,338   1,3076   956				2/20/2001	1/23/2001	12/20/2000	11/21/2000	• • •		1											
166   Forecasted HDD for remainder of month   1,084   1,921   1,330   1,187				250	1.070	4 000	200														
197   Known & expected HDD for month   1,084   1,921   1,330   1,187     Expected monthly HDD as % of normal   165.0%   179.0%   109.2%   125.5%     98   Revised Expected EOM Storage Balances:   13,339,839   5,745,612   1,903,870								•													
Expected monthly HDD as % of normal   165.0%   179.0%   109.2%   125.5%																					
Nov-00   Service   Nov-00   Service   Nov-00   Supplies and   Nov-00   Supplies   No						7 4 7 1	f . 1			$\rightarrow$											
199   Revised Expected EOM Storage Balances:   13,339,839   5,745,612   5,341,774   2,848,859   100   EOM Storage Balances from above   13,339,839   1,900,181   2,329,159   3,56,615   1,900,181   2,329,159   3,56,615   1,900,181   2,329,159   3,56,615   1,900,181   2,329,159   3,56,615   1,900,181   2,329,159   3,56,615   1,900,181   2,329,159   3,56,615   1,900,181   2,329,159   3,56,615   1,900,181   2,329,159   3,56,615   1,900,181   2,329,159   3,56,615   1,900,181   2,329,159   3,56,615   1,900,181				125.5%	109.2%	179.0%	165.0%														
100   EOM Storage Balances from above   13,339,839   5,745,612   5,341,774   2,848,859   1,900,181   2,329,159   1,972,544   2,848,859   1,935,870   1,900,181   2,329,159   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,544   2,848,859   1,972,828   2,848,859   1,972,848   2,848,859   1,972,848   2,848,859					į																
101   Plus additional demand that would have been covered with flowing supplies instead   1,035,870   1,900,181   2,329,159   (1,972,544)																					
Plus additional demand that would have been covered with flowing supplies instead of storage w/d   14,375,709   7,645,793   7,670,933   3,205,474				2,848,859	5,341,774	5,745,612	13,339,839														
Deen covered with flowing supplies instead   14,375,709   7,645,793   7,670,933   3,205,474					1,900,181	1,035,870															
102   of storage w/d   14,375,709   7,645,793   7,670,933   3,205,474   104   Storage inv expected for normal weather   15,142,225   11,019,530   6,339,710   2,704,973   (500,501)   So need to recover any excess wid in next month (per day) or can w/d any additional storage   107   108   108   109   Table 3-4: Effect of revised daily flowing supplies on actual end-of-month storage inventory   100   108   12,093,008   5,365,298   5,194,775   2,726,825   910,533   16,856,032   Actual   111   Actual EOM Storage Balances   12,093,008   5,365,298   5,194,775   2,726,825   910,533   16,856,032   Actual   12,093,008   1,003,870   1,900,181   2,329,159   356,615   1,035,870   864,311   428,978   (1,972,544)   (380,773)   130   130   130   15   130   130   15   130   130   15   130   130   15   130   130   130   15   130   130   15   130   13				(1,972,544)	<u>428,978</u>	<u>864,311</u>	<u>1,035,870</u>			1											
14,375,709   7,645,793   7,670,933   3,205,474   2,704,973   760,933   3,205,474   2,704,973   760,516				- 1				h flowing supplies instead	been covered wit												
104   Storage inv expected for normal weather   15,142,225   11,019,530   6,339,710   2,704,973   (1,331,223)   (500,501)   Scoress from storage for colder weather month (per day) or can w/d any additional storage   24,726   108,830   (47,544)   (16,145)   (16,1								te inv expected for normal weather s from storage for colder weather ed to recover any excess w/d in next (per day) or can w/d any additional													
So need to recover any excess wid in next month (per day) or can wid any additional storage   108,830   (47,544)   (16,145)   (16,145)				3,205,474	7,670,933	7,645,793	14,375,709		سند موسو بورسون	103											
Total				2,704,973	6,339,710	11,019,530	15,142,225	cted for normal weather	Storage inv expe	104											
So need to recover any excess w/d in next month (per day) or can w/d any additional storage   108,830   (47,544)   (16,145)   (16,				(500,501)	(1,331,223)	3,373,737	766,516														
month (per day) or can w/d any additional storage   month (per day) or can w/d any additional storage   month (per day) or can w/d any additional storage   month (per day) or can w/d any additional   month (per day) and additional   month (per day) and additional   month (per day) and additional   month (per day) and any additional   month (per day) and any and additional   month (per day) and any and additional   month (per day) and any and additional   month (per day) and any and additional   month (per day) and any and additional   month (per day) and any and additional   month (per day) and any and additional   month (per day) and any and additional   month (per day) and any and any and additional   month (per day) and any and any and additional   month (per day) and any and any any and any any and any any and any any and any any any and any any any any any any any any any any				(16,145)	(47,544)		24,726														
107   108   109   Table 3-4: Effect of revised daily flowing supplies on actual end-of-month storage inventory   110   111   120   120   130   140   150   140				` 1	' '				month (per day)												
107   108   109   Table 3-4: Effect of revised daily flowing supplies on actual end-of-month storage inventory   110   111   120   120   130   140   150   140				1				•	storage	106											
108   109   Table 3-4: Effect of revised daily flowing supplies on actual end-of-month storage inventory   110   Nov-00   Dec-00   Jan-01   Feb-01   Mar-01   Total   111   Actual EOM Storage Balances   12,093,008   5,365,298   5,194,775   2,726,825   910,533   16,856,032   Actual   112   Plus additional inv from prior month(s)   1,035,870   864,311   428,978   (1,972,544)   (380,773)     190,181   2,329,159   356,615     1,901,812   2,329,159   3,901,812									<u> </u>												
Table 3-4: Effect of revised daily flowing supplies on actual end-of-month storage inventory   110																					
110																					
111   Actual EOM Storage Balances   12,093,008   5,365,298   5,194,775   2,726,825   910,533   16,856,032   Actual     112   Plus additional inv from prior month(s)   1,035,870   1,900,181   2,329,159   356,615     120   Plus additional demand that would have been covered with flowing supplies instead of storage w/d   13,128,878   7,265,479   7,523,934   3,083,440   886,375     115   Actual Expected Net Withdrawals   4,637,687   5,863,399   (258,455)   4,440,494   2,197,065   16,880,190   Expected     116   Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals     118   Company Planned Demand to be met with:   Staff revision: Expected storage withdrawals     118   Storage as   % of Daily Supplies as % of Daily Storage w/d Avg for Flowing Supplies as % of Daily Supplies as % of Daily Supplies as % of Daily Supplies as % of Daily Supplies as % of Daily Supplies for Month Supplies for Month Supplies for Month Supplies for Month Supplies for Month   120   Nov-00   250,227   107,622   43.0%   142,605   57.0%   142,151   56.8%   108,076   121   Dec-00   407,924   289,650   71.0%   98,274   24.1%   317,531   77.8%   90,393   16,856,032   Actual   Actual   Actu								t of revised daily flowing su													
112   Plus additional inv from prior month(s)	<u></u>							B. 1													
Plus additional demand that would have been covered with flowing supplies instead of storage w/d   13,128,878   7,265,479   7,523,934   3,083,440   886,375     115   Actual Expected Net Withdrawals   4,637,687   5,863,399   (258,455)   4,440,494   2,197,065   16,880,190   Expected   116     117   Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals	032 Actual	16,856,032	T-				12,093,008	· •	ļ												
113 of storage w/d   13,128,878   7,265,479   7,523,934   3,083,440   886,375   115   Actual Expected Net Withdrawals   4,637,687   5,863,399   (258,455)   4,440,494   2,197,065   16,880,190   Expected   116   117   Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals   Staff revision: Expected storage withdrawals   Staff revision: Expected storage withdrawals   Staff revision: Expected storage withdrawals   Staff revision: Expected storage withdrawals   Staff revision: Expected storage withdrawals   Staff revision: Expected storage withdrawals   Staff revision: Expected storage withdrawals   Staff revision: Expected storage withdrawals   Storage as   Flowing   Storage as   Storage as   Flowing   Storage w/d   Avg for   Flowing   Avg for   Flowing   Storage w/d   Avg for   Flowing			356,615	2,329,159	1,900,181	1,035,870		v from prior month(s)	Plus additional in	112											
been covered with flowing supplies instead of storage w/d   13,128,878   7,265,479   7,523,934   3,083,440   886,375     115   Actual Expected Net Withdrawals   4,637,687   5,863,399   (258,455)   4,440,494   2,197,065   16,880,190   Expected   116			(380,773)	(1,972,544)	<u>428,978</u>	<u>864,311</u>	<u>1,035,870</u>	emand that would have	Plus additional d												
113 of storage w/d   13,128,878   7,265,479   7,523,934   3,083,440   886,375     115   Actual Expected Net Withdrawals   4,637,687   5,863,399   (258,455)   4,440,494   2,197,065   16,880,190   Expected   116     117   Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals   Staff revision: Expected storage withdrawals   Staff revision: Expected storage withdrawals   Staff revision: Expected storage withdrawals   Storage as   Flowing   Supplies as   Storage as   Flowing   Supplies as   Storage as   Flowing   Supplies as   Storage as   Flowing   Supplies as   Storage w/d   Avg for   Flowing   Storage w/d   Avg for   Flowing   Storage w/d   Avg for   Flowing   Storage w/d   Avg for   Flowing   Storage w/d   Avg for   Flowing   Storage w/d   Avg for   Flowing   Storage w/d   Avg for   Flowing   Storage w/d   Avg for   Flowing   Storage w/d   Avg for   Flowing   Storage w/d   Avg for   Flowing																					
13,128,878   7,265,479   7,523,934   3,083,440   886,375     115   Actual Expected Net Withdrawals   4,637,687   5,863,399   (258,455)   4,440,494   2,197,065   16,880,190   Expected     116     117   Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals     118   Company Planned Demand to be met with:   Staff revision: Expected storage withdrawals     118   Company Planned Demand to be met with:   flowing supplies for Company planned not			- 1			-		ar norming doppings included													
115   Actual Expected Net Withdrawals   4,637,687   5,863,399   (258,455)   4,440,494   2,197,065   16,880,190   Expected			996 276	3 083 440	7 523 034	7 265 470	13 128 878		_												
Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals   Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals   Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals   Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals   Staff revision: Expected storage withdrawals	190 Expected	16 880 100						Net Withdrawals													
Table 3-5: Comparison of Company and Staff FOM planned flowing supplies and storage withdrawals    118	190]Expected	10,000,130	2,137,000	7,770,737	(230,433)]	3,003,333	1,00,1001	THE THEIR SHEET													
Company Planned Demand to be met with:   Staff revision: Expected storage withdraw flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies as % of Daily flowing flowing supplies as % of Daily flowing supplies as % of Daily flowing for Month flowing supplies as % of Daily flowing supplies as % of Daily flowing for Month flowing supplies as % of Daily flowing supplies as % of Daily flowing flowing supplies as % of Daily flowing supplies as % of Daily flowing supplies as % of Daily flowing supplies as % of Daily flowing supplies as % of Daily flowing supplies as % of Daily flowing supplies as % of Daily flowing supplies as % of Daily flowing supplies as % of Daily flowing flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies for Company planned not flowing supplies flowing supplies for Company planned not flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing supplies flowing s			_	*	allan and the	d 8 a	•# EON =!*=	andana of Communication & Co		-											
118   Company Planned Demand to be met with:   flowing supplies for Company planned not plan   flowing supplies for Daily   flowing supplies for Daily   flowing supplies for Daily   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowing supplies flowing   flowi				ge withdrawals	olies and storag	a nowing supp	aπ FOM planne	parison of Company and St	Table 3-5: Com	117											
Normal Daily Avg   Daily Flowing   Supplies as   % of Daily   Storage as   % of Daily   Storage w/d   Avg for   Month   Supplies   Month   Suppl																					
Normal Daily Avg   Daily Flowing   Demand + Fuel   Dec-00   407,924   289,650   T.10%   Supplies as   Supplies as   Daily Storage as   Storage as   Normal Daily Storage as   Storage as   Normal Daily Daily Storage as   Storage as   Normal Daily Daily Storage w/d   Normal Daily Avg for   Storage w/d   Avg for   Flowing   Storage w/d   Normal Daily Avg   Normal Daily Avg   Storage w/d   Normal Daily Avg   Storage w/d   Normal Daily Avg   Storage w/d   Normal Daily Avg   Storage w/d   Normal Daily Avg   Normal Daily Avg   Storage w/d   Normal Daily Avg   Normal Dai	ompany planned normals:	pplies for Comp	flowing su	et with:	mand to be me		Compan			118											
Normal Daily Avg   Daily Flowing   Supplies   Month   Month   Supplies   Month   Month   Supplies   Month   Mon																					
Normal Daily Avg   Daily Flowing   Avg for   Storage w/d   Avg for   Flowing   Storage w/d   Avg for		Flowing																			
Normal Daily Avg   Daily Flowing   Avg for   Storage w/d   Avg for   Month   Supplies   Month   Supplies   Month   Supplies   Month   Supplies   Month   Supplies   Month   Supplies   Storage w/d   Avg for   Month   Supplies   Month   Month   Supplies   Month			Daily	% of Daily																	
119         Demand + Fuel         Supplies         Month         6         Month         Supplies         for Month         6           120         Nov-00         250,227         107,622         43.0%         142,605         57.0%         142,151         56.8%         108,076           121         Dec-00         407,924         289,650         71.0%         98,274         24.1%         317,531         77.8%         90,393	wg   Storage w/d   Avg fo				Storage w/d																
120         Nov-00         250,227         107,622         43.0%         142,605         57.0%         142,151         56.8%         108,076           121         Dec-00         407,924         289,650         71.0%         98,274         24.1%         317,531         77.8%         90,393	h <sup>6</sup> Month		Supplies	Month	6			Demand + Fuel													
121 Dec-00 407,924 289,650 71.0% 98,274 24.1% 317,531 77.8% 90,393				57.0%	142,605		107,622	250,227													
								407,924													
			419,079	12.1%	55,970	87.9%	405,241	461,211		122											
123 Feb-01 411,801 304,893 74.0% 86,908 21.1% 234,445 56.9% 177,356							304,893		Feb-01	123											
124 Mar-01 279,341 189,106 67.7% 65,235 23.4% 176,823 63.3% 102,518								279,341													
	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		,																		
125 126										126											
The state of the s	**************************************	mana maganda sere i enciri. Emplicationida	auditativitation setting on appropria	manufacture of the second	and the same of th	an illustration and the minimum and	as our in incompany, with	· · · · · · · · · · · · · · · · · · ·	the second of the	120											
[127]										127											
127								18.00.		127											

	А	В	С	D	E	F	G	Н		J
1	Missouri Gas	Energy	<del>-</del> -							
2	GR-2001-382									
3										
۳	Company states	that wants to allow 500,00	00 so that if Nov	ember is war	mer than norm	nal, still have r	oom to inject:	Company also	stated in	
128		ge was fuller than anticipat							, , , , , , , , , , , , , , , , , , ,	
129		•					•			
	2 Storage w/d plar	nned for Nov-00 would incl	ude planned 4,0	000,000 TSS	+ 150,000 ISS	(or 138,333/d	lay) plus the F	EPL/WS w/d (1	28,160	
	•	mber compared to 150,166	•			,	•	•		
131										
ľ		ers in previous column sho	ows Oct 31 bala	nce as 15,09	3,505 which w	ould not include	de the ISS bal	ance of 500,000	) so TSS is	
	adjusted to accou	int for the ISS								
133	4	UDD ( the								
124		HDD for the remainder of I on Company rationale. Ad							aude	
	12/3 1/00 - 0a\$eu		2/31 demand is:			en IION 122	William 11au 55	100).		
135 136 137		These are taken fr			KN 107th 8	k Elm				
137		Analysis Report ar	nd are the same	(9,997	Served KP	oc				
1		each day for the fo	recasted dates	(25,835				WS and Dec		
138		of 12/21 - 12/30		(000 000		39/day from W	'S)			
139				(230,982	WNG Flow needed from	•				
138 139 140 141				110,709	Heenen HOIH	133				
	5 Company states	s that storage reports avails	able from Willia	ms about the	13th of the mo	inth for the pri	or month. So (	Company knew	actual prior	
		ance when nominations ma				, 10, 210 pm	J	zompony miew	cour prior	
143	· · · - · · · · · · · · · · · · · · · ·			•						
144	6 Recall that Nove	ember storage withdrawals	allow for 5,000	per day from	ISS					

# HC

Schedule MTL-37, page 10 Is Highly Confidential

HC

#### Missouri Gas Energy GR-2001-382

	NYMEX	
Month	Closing Price	Date
November, 2000	4.541	10/28/00
December, 2000	6.016	11/28/00
January, 2001	9.978	12/27/00
February, 2001	6.293	1/29/01
March, 2001	4.998	2/26/01

Source:

NYMEX closing prices taken from The Wall Street Journal

MGE Case No. GR-2001-387 Schedule B

Month of		Me	onth Hedged		
purchase	Nov-00	Dec-00	Jan 2001	Feb-01	Mar-01
Jun-00	4.312	4.388	4,376	4.138	3.898
Jul-00	4.048	4.136	4.129	3.942	3.758
Aug-00	4.520	4.591	4.557	4.308	4.063
Sep-00	5.240	5.340	5.298	5.028	4.752
Oct-00	5.139	5.177	5,166	4.959	4.724
Average	4.652	4.726	4,705	4.475	4.239

Source: Nymex closing prices simple average by month Date: March 22, 2002

June	6/1/00	6/2/00	6/5/00	6/6/00	6/7/00	6/8/00	6/9/00	6/12/00	6/13/00	6/14/00	6/15/00	6/16/00	6/19/00	6/20/00	6/21/00	6/22/00	6/23/00	6/26/00	6/27/00	6/2B/00	6/29/00	6/30/00	Avg
Nov-00	4.150	4.092	4,383	4.286	3.983	4.140	4.155	4.215	4.168	4.250	4.404	4.455	4.155	4.186	4.413	4.543	4.446	4.525	4.600	4.415	4.423	4.466	4.312
Dec-00	4.250	4.187	4.465	4.355	4.070	4.215	4.220	4.280	4.240	4.320	4.470	4,530	4.230	4.285	4.500	4.620	4.521	4.595	4.665	4.485	4.493	4.536	4.388
Jan-01	4.260	4.192	4.465	4.350	4.070	4.205	4.210	4.268	4.232	4.309	4.454	4.513	4.213	4.275	4.486	4.600	4.503	4.575	4.640	4.465	4.471	4.516	4.376
Feb-01	4.055	3.990	4.245	4,135	3.860	3.990	3.994	4.049	4.015	4.082	4.216	4.271	3.971	4.040	4.236	4.342	4.243	4.297	4.360	4.195	4.200	4.240	4.138
Mar-01	3.845	3.785	4.020	3.920	3.652	3.773	3.776	3.830	3.798	3.855	3.976	4.021	3,730	3.810	3.980	4.078	3.983	4.019	4.080	3.925	3.930	3.965	3.898

July	7/5/00	7/6/00	7/7/00	7/10/00	7/11/00	7/12/00	7/13/00	7/14/00	7/17/00	7/18/00	7/19/00	7/20/00	7/21/00	7/24/00	7/25/00	7/26/00	7/27/00	7/28/00	7/31/00	Avg
Nov-00	4.166	4.100	4.302	4.290	4.306	4.101	4.218	4.205	4.064	4.085	3.955	3.932	3.907	3.810	3.760	3.890	3.951	3.956	3.906	4.048
Dec-00	4.236	4,185	4.390	4,385	4.400	4.195	4.305	4.295	4.150	4.165	4.043	4.015	3,987	3.892	3.843	3.975	4.050	4.061	4.020	4.136
Jan-01	4.216	4.180	4.380	4,380	4.395	4.191	4.295	4.280	4.138	4.150	4.034	4.005	3.979	3.890	3.841	3.970	4.04B	4.060	4.019	4.129
Feb-01	3.95	3.945	4,145	4.150	4.175	3.981	4.090	4.090	3.963	3.975	3.866	3.842	3,819	3.735	3.696	3.810	3.888	3,905	3.869	3.942
Mar-01	3.7	3.705	3,905	3.920	3.955	3.786	3.895	3.900	3.788	3.802	3.702	3.682	3.659	3.585	3.553	3.660	3.738	3.753	3.719	3.758

August	8/1/00	8/2/00	8/3/00	8/4/00	8/7/00	8/8/00	8/9/00	8/10/00	8/11/00	8/14/00	8/15/00	8/16/00	8/17/00	8/18/00	8/21/00	8/22/00	8/23/00	8/24/00	8/25/00	8/28/00	8/29/00	8/30/00	8/31/00	Avg
Nov-00	4.080	4.297	4.342	4,360	4.390	4.437	4.455	4.488	4.495	4.371	4.299	4.474	4.491	4.530	4.800	4.590	4.652	4.602	4.683	4.736	4.697	4.850	4.840	4.520
Dec-00	4.180	4.395	4,442	4,440	4.450	4.483	4.505	4.538	4.550	4.445	4.373	4.535	4.575	4,618	4.862	4.665	4.720	4.670	4.750	4.800	4.770	4.920	4.910	4.591
Jan-01	4.175	4.385	4,432	4.425	4.425	4.460	4.477	4.510	4.522	4.422	4.353	4.505	4.540	4.579	4.810	4.625	4.667	4.620	4.696	4.744	4.720	4.861	4.850	4.557
Feb-01	4.005	4.190	4.227	4.205	4.180	4,200	4.212	4.245	4.258	4,177	4.120	4.249	4,284	4.324	4.540	4.368	4.399	4.352	4.432	4.480	4.465	4.590	4.580	4.308
Mar-01	3.840	3.995	4.022	3,990	3.938	3.948	3.955	3.986	4.001	3.942	3.895	4.000	4,035	4.074	4.267	4.110	4.133	4.089	4.162	4.213	4.205	4.323	4.315	4.063

Septen	nber	9/1/00	9/5/00	9/6/00	9/7/00	9/8/00	9/11/00	9/12/00	9/13/00	9/14/00	9/15/00	9/18/00	9/19/00	9/20/00	9/21/00	9/22/00	9/25/00	9/26/00	9/27/00	9/28/00	9/29/00	gvA
	v-00	4.905	5.030	5.157	5.100	4.999	5.135	5.105	5.157	5.312	5.300	5.394	5.477	5.433	5.402	5.266	5.412	5.450	5.447	5.124	5.186	5.240
De	c-00	4.975	5.104	5.233	5.187	5.100	5.235	5.209	5.260	5.412	5.400	5.495	5.585	5.548	5.517	5.383	5.525	5.565	5.562	5.231	5.281	5.340
Jai	1-01	4.915	5.043	5,172	5.140	5.070	5.203	5.178	5.225	5.367	5.355	5.445	5.525	5.495	5.470	5.350	5.485	5.525	5.522	5.222	5.256	5.298
Fel	b-01	4.640	4.763	4.884	4.865	4.815	4.938	4.913	4.955	5.088	5.075	5.152	5.228	5.210	5.203	5.100	5.225	5.260	5.257	4.971	5.026	5.028
	r-01	4.365	4.483	4.597	4.580	4.540	4.661	4.636	4.675	4.799	4.785	4.855	4.930	4.923	4.923	4.840	4.960	4.990	4.988	4.727	4.778	4.752

October	10/2/00	10/3/00	10/4/00	10/5/00	10/6/00	10/9/00	10/10/00	10/11/00	10/12/00	10/13/00	10/16/00	10/17/00	10/18/00	10/19/00	10/20/00	10/23/00	10/24/00	10/25/00	10/26/00	10/27/00	10/30/00	10/31/00	Avg
Nov-00	5.352	5.348	5.290	5.152	5.008	5.150	5.134	5.508	5.630	5.537	5.364	5.439	5.228	4.951	4.937	5.072	4.820	4.659	4.664	4.541			5.139
Dec-00	5.435	5.438	5.383	5.248	5.113	5.250	5.236	5.599	5.728	5.649	5.492	5.553	5.349	5.071	5.055	5.193	4.940	4.771	4.753	4.652	4,485	4,490	5.177
Jan-01	5,400	5.398	5.348	5.215	5.085	5.217	5.211	5.511	5.693	5.624	5.475	5.535	5.344	5.081	5.062	5.200	4.960	4.795	4.777	4.677	4.520	4.531	5.166
Feb-01	5.160	5.158	5,118	5.000	4.881	5.007	5.001	5.301	5.442	5.377	5.242	5.295	5.121	4.891	4.875	5.000	4.780	4.612	4.597	4.497	4.352	4.381	4.959
Mar-01	4.905	4.903	4.864	4,765	4.658	4.769	4.764	5.058	5.180	5.122	4.991	5.040	4.877	4.658	4.646	4.757	4.555	4.400	4.382	4.287	4.157	4.191	4.724

MGE Case No. GR-2001-382
Calculation of capacity release adjustment
Sources:MGE Capacity Release Commodity Rate Comparison and Staff's KPC adjustment workpaper

	WNG	fuel	fuel	CO	mmodity			
	Williams	KPC vs WNG	difference	dif	ference	Total Fuel &		
	FOM index	% difference	\$	KPC	vs WNG	Commodity		
July, 2000	4.20	1.28%	\$0.0538		\$0.0440	\$0.0978		
August, 2000	3.69	1.28%	\$0.0472		\$0.0440	\$0.0912		
September, 2000	4.50	1.28%	\$0.0576		\$0.0440	\$0.1016		
October, 2000	5.19	1.28%	\$0.0664		\$0.0440	\$0.1104		
November, 2000	4.43	1,28%	\$0.0567		\$0.0440	\$0.1007		
December, 2000	5.90	1.28%	\$0.0755		\$0.0440	\$0.1195		
January, 2001	9.98	1.28%	\$0.1277		\$0.0440	\$0.1717		
February, 2001	6.29	1.28%	\$0.0805		\$0.0440	\$0.1245		
March, 2001	5.03	1.28%	\$0.0644		\$0.0440	\$0,1084		
April, 2001	5.34	1.28%	\$0.0684		\$0.0440	\$0.1124		
May, 2001	4.82	1.28%	· · · · · · · · · · · · · · · · · · ·		\$0.0440	\$0.1057		
June, 2001	3.66	1.28%	\$0.0468		\$0.0440	\$0.0908		
Source for index: In								
				KPC				
Production Area Co	mmodity Rat	e	0.0124	n/a				
Market Area Comm	•		0.0061		0.0625			
Total Commodity Ra	•		0.0185		0.0625			
Production Area Fu	el Rate		1.64%	n/a				
Market Area Fuel R			0.69%		3.61%			
Total Fuel Rate			2.33%		3.61%			
7010,7 00.71210								
								Non-reca
				V	/illiams	Williams	Williams	Relea
		Monthly		Res	servation	Reservation	Total	Cred
		Volumes			/larket	Production	Reservation	75% ma
July, 2000	46,332	1436292		\$	3.0848	\$ 5.77	\$8.86	307,77
August, 2000	46,332	1436292		\$	3.0848	\$ 5.77	\$8.86	307,7
September 2000	46.332	1389960		Ś	3.0848	\$ 5.77	\$8.86	307,7

callable Unit Total fuel Net non-recall offset fuel & commodity Release ease offset Credit edit & commodity nax rt. \$140,411.91 167,359.99 771.89 \$0.0978 771.89 \$0.0912 \$131,035.79 176,736.10 166,551.96 307,771.89 \$0.1016 \$141,219.94 September, 2000 46,332 1389960 \$8.86 307,771.89 \$0.1104 \$158,612.60 149,159.29 5,77 46,332 1436292 3.0848 \$ October, 2000 149,244.18 \$8.79 305,408.96 \$0.1124 \$156,164.79 \$ 3.0168 \$ 5.77 46,332 1389960 April, 2001 305,408.96 \$0.1057 153,598,64 \$8.79 \$151,810.32 46,332 1436292 \$ 3.0168 \$ 5.77 May, 2001 \$0.0908 1389960 3.0168 \$ 5.77 \$8.79 305,408.96 \$126,275.09 179,133.87 46,332 June, 2001 1,141,784.03

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Schedule MTL-38, pages 1-5 Are Highly Confidential

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$\vdash$	A	B]	<u> </u>	D	E		G_	<u> </u>	<u> </u>	
	· -	Energy								
2	GR-2001-382									
3	eratala da Eras de	Marita Marita (Company)		a C huataaa		NA Ca Out		بالمعمر ووعاءات		
		Month Nominations on Duk		e o Dusiñess (	ays before FC	JM. So, Staff	reviewed ded	usions made		
4	on 10/24/00, 11/2	2/00, 12/21/00, 1/24/01, an	a 2/21/01.							
5										
6	Information Kno	wn As Of:	10/24/2000	11/22/2000		12/21/2000		1/24/2001	2/21/2001	
7	From Storage An	alysis Report:	Oct-00	Nov-00		Dec-00		Jan-01	Feb-01	
	Forecasted dema	ind and storage inj & w/d	10/23/2000	11/21/2000		12/20/2000	Rev 12/20	1/23/2001	2/20/2001	
]	entered for actual	HDD through:					to include			
8							12/31 4		_	
9	Actual HDD throu	igh this date	256	838	ļ i	1,368	1,368	1,076	956	
10	Forecasted HDD	for remainder of month	<u>77</u>	<u>246</u>		<u>514</u>	<u>553</u>	254	231	
11	Known & expecte	ed HDD for month	333	1,084		1,882	1,921	1,330	1,187	
	Expected monthly	y HDD as % of normal		165.0%	1	175.4%	179.0%	109.2%	125.5%	
		this - not in report)							l	
	, , , , , , , , , , , , , , , , , , , ,			was to see any or a way to		* * * * * * · ·	. TOTAL	is with the company and the second	and an address of the second	
					Revised Nov		Rev 12/20			
1	l				00 to include		to include			
140	EOM Stares D.	lances			ISS <sup>3</sup>		12/31 4			
	EOM Storage Ba	ances	14 040 267	10 700 700		4 227 020		2 007 204	4 607 647	
14		Ì	14,948,357 1,121,968		11,208,780	4,227,928	4,112,139	3,927,321	1,637,647	
15	PEPL/WS	]			1,121,952	1,041,777	1,041,777	1,041,777	1,041,777	
16		aventon.	1,453,926		1,009,107	<u>598,035</u> 5,867,740	591,696	372,676 5 341 774	169,435	
17	Total Storage In % of MSQ	iventory	17,524,251	12,839,839 72.3%	13,339,839 75.1%	33.0%		5,341,774	2,848,859	
18		ining to be filled 1	98.6%	12.3%	15.1%	33.0%	32.3%	30.1%	16.0%	
19		ining to be filled 1	243,378	2 22	ļ					
	From Company F		Nov-00	Dec-00		Jan-01		Feb-01	Mar-01	
21			7 400 001	40.0== 455	Ì	40.000.404		44 040 45	0.450.455	
22		Year Normal Weather	7,400,361			13,868,421		11,213,497	8,423,472	
23	<del></del>		5,587,935		•	10,077,482		8,819,953	6,845,539	
)		for Nov and Dec (from	4,414,515	9,843,466	[	10,077,482	<u>'</u>	8,819,953	6,845,539	
1	Company Sche	dule MTL-14, Langston								
24					]					
25			9,140,788			16,186,584	•	13,732,070		
_	Historical HDD da		Nov-00			Jan-01		Feb-01	Mar-01	
27			398			841		646	529	
	normal month HD		657	1,073		1,218		946	691	
29	coldest month HI	סכ	877	1,606	]	1,629		1,274	1,057	
		heatload & baseload								
1		lity Report w/ historical		ł	ì	<b>\</b>				
30	HDD		Nov-00	Dec-00		Jan-01		Feb-01	Mar-01	
	Number of days i	n month	30		1	31		28	31	
		nd w/ warmest HDD	5,591,673		}	10,273,551	1	8,090,819	7,009,684	
	estimated deman		8,301,101			14,217,391		11,229,153		
		d w/ coldest HDD	10,602,546			18,516,908		14,660,398		
_		Supply/Demand Summary:	Nov-00	Dec-00	}	Jan-01		Feb-01	Mar-01	
	Normal Monthly I		7,425,361		1	13,893,421		11,238,497	8,448,472	
<del></del>	Daily Average De		247,512		1	448,175		401,375	272,531	
		et w/ storage w/d 2			1	,,,,	}	121,0.0		
39			138,333	91,935	1	49,355		79,914	61,115	
40			750,000	91,933	1	49,555		13,314	01,113	
41			4,272	1	{	6,615	<b> </b>	6,994	4,120	
42		v/d	142,605		1	55,970		86,908		
_	Fuel Requiremen		2,715			13,036		10,426		
+-3		nd still to be met (with	107,622			405,241		324,893		
1 44	flowing or ?)	IO OTHER MAINT	107,022	309,000	7	1 703,241	]	324,093	214,100	
		nuina Cunalias	407.000	000 050	1	405.000		004 000	400 40-	
_	Less Planned Flo		107,622	<u>289,650</u>	1	405,241	Į	304,893	<u>189,106</u>	
46		nd still to be met with	0	20,000	1	0	l	20,000	25,000	
47			Nov-00	Dec-00	]	Jan-01		Feb-01	Mar-01	
48	Planned Normal	Storage Withdrawals	4,150,166	3,454,240	]	3,464,251	]	3,162,867	2,247,507	l
49			<del></del>		=		-			-
50	<u> </u>									

			S	chedule	MTL-3	8				
	Α	В	C	D	Ε	F	G	H		J
1	Missouri Gas	Energy								
_	GR-2001-382	•								
3										
-	Table 2: Storogo	Inventory - Actuals			FOM Stores	5			I	
51 52	Table 2. Storage	inventory - Actuals	Sep-00	Oct-00	EOM Storage Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	
53	1	Williams SA-0014 (TSS)	14,122,908		9,966,153	3,747,983	3,784,819	2,515,613	870,709	
54		Williams SA-0072 (FS)	975,369	1,121,952	1,121,952	1,041,777	1,041,777	41,777	0,0,703	
55		PEPL WS-012626	778,088	0	0	0	0	0	Ŏ	
56		PEPL WS-012627	<u>165,143</u>	-	1,004,903	575, <u>538</u>	368,179	<u>169,435</u>	39,824	
57		Total	16,041,508		12,093,008	5,365,298	5,194,775	2,726,825	910,533	
58	•		<u> </u>							
59										
\ '		ition known when decisions								
		nt - November FOM nomin								
		nuary and to assure that the				bilities to cove	r a possible la	ate winter cold	snap.	
60	Storage balances	and FOM nominations for	this option is pr	esented below	<i>t</i> :					
61										'
62										!
	Table 3-1: Stora	ge withdrawals expected ba	ased on distribu	tion of normal	HDD					
$\Box$				Storage		ribution is bas	ed on the per	rcentage of		
64		Normal HDD	Monthly Distr.	Distr.		occurring in				
65	Nov-00	657	14.3%	2,474,336		entory. For No				
66	Dec-00	1,073	23.4%	4,122,699		ess 500,000 a				
67	Jan-01	1,218	26.6%	4,679,820		Nov if weather		-		
68	Feb-01	946	20.6%	3,634,737		lar, Company				
69	Mar-01	691	15.1%	2,677,578				t accordingly -		
70 71	Total	4,585	100.0%	17,589,170		ditional 150,0				
72			to	tal avageted a	cne torage if adjus	ck: Oct end-of		17,766,565 17,739,170		
73	•		i.O	iai expecteu s	waye ii adjus	LINOV DY 150,	000 11011 133	11,135,110		
	Table 3-2: Staffs	calculation of expected st	orage withdraw	al and flowing	supplies for C	omnany olani	ed normals			
75	125.0 0 2. 0.0.7.	GOLOGICA OF CAPOLICA OF	Nov-00	Nov-00 Rev		Dec-00 Rev	Jan-01	Jan-01 Rev	Feb-01	Mar-01
	Normal Monthly [	Demand	7,425,361	7,425,361	12,400,465	12,400,465		13,893,421		8,448,472
	Daily Average De		247,512	247,512	400,015	400,015	448,175	448,175	401,375	272,531
78	Daily Demand to	be met w/ storage w/d	82,478		132,990		150,962		129,812	86,373
		allowed for ISS in Nov	5,000							
		xcess from prior month			(4,793)		(84,104)		63,964	16,146
	Subtotal of daily		87,478	87,478	128,197	85,600	66,858	52,027	193,776	102,519
	Daily Fuel Requir		2,715	2,715	7,909	7,909	13,036	13,036	10,426	6,810
83	Expected Daily F		162,749		279,727	<b>▲</b> 322,324	394,353		218,025	
۰.		mal met with storage	35.0%	35.0%	31.4%	21.0%	14.5%	11.3%	47.1%	36.7%
04	(includes fuel)	mal mot with flowing	65.09/	65.09/	59.69/	70.00/	05.50/	99.70	F2 00/	62.20/
) pE	supplies (include:	mal met with flowing	65.0%	65.0%	68.6%	79.0%	85.5%	88.7%	52.9%	63.3%
100	though the same of	e diameter e de Menter	1 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	umar ∮est rumuru	242 754	ran en en en en en en en	000 000	le reference air e cai		202.25
1		ned daily flowing covers	147,151	1 1	317,531	l <i>1</i>	325,080	l /	314,998	220,824
1	-	r requirements (used https://doi.org/ https://doi.org/ requirements/		1 1		17		1/	//	
00	Nov & Dec; s			1 1		11		1/	J / /	
86	. weren	The second of the second			ses e du co marro s	Har a market teaso	W &		Supple state was a first	S DESCRIPTION OF THE PROPERTY.
87	1	ommendation uses:				V		Y	<u>.</u>	
1		ned daily flowing covers	186,265	1 /	341,694	1	325,080		314,998	220,824
l		r requirements (used)	l	l <i>I</i>	[ /	l	[ /	l	[ ]	
1	Reliability Re	nbers for low-case from		11	1		1		] ]	
88	renability Re	POLIT	<u> </u>	Ц	L <i></i>	<u> </u>		<u> </u>		
89			T at ===	<u></u>				<del></del>		
Į	l	storage would need to be	Since FOM e			uch storage		nuch storage	Did not adjus	
1	ì	adjusted prior to making	warmest more			in Nov, this is		in Dec, this is	1	
1		nominations based on expected end-of-month	requirement, have adjuste		warm weath excess w/d	•	warm wear	•	issue in Feb	
		inventory for previous	nave adjuste	a FOM.	excess w/a	in Nov.	excess w/o	ı in Dec.	since most of	
1	ļ	Imonth					Į.		past and hav	
1	ļ	mona)	İ				1		handle on sto	
1							1		meet require	
									the rest of the	
90 91 92	ł	L	<u> </u>		<u> </u>		<u> </u>			
91										
. 4/	1									

				<del>Jiicaaic</del>	INIT-3	<u> </u>				
$\Box$ I	Α	В	C	D	E	F	G	Н	1	J
1 1	Missouri Gas	Energy								
_	GR-2001-382									
3										
_		t of revised daily flowing sur					/			
	nformation Know		11/22/2000	12/21/2000	1/24/2001	2/21/2001				
	From Storage An		Nov-00	Dec-00	Jan-01	Feb-01				- 1
		and and storage inj & w/d	11/21/2000	12/20/2000	1/23/2001	2/20/2001				
	entered for actua									
	Actual HDD throu		838	1,368	1,076	956				1
		for remainder of month	<u>246</u>	<u>553</u>	<u>254</u>	<u>231</u>				
99	Known & expecte	ed HDD for month	1,084	1,921	1,330	1,187				1
		y HDD as % of normal	165.0%	179.0%	109.2%	125.5%				
100	HDD (calculated	this - not in report)	[			· i				
		d EOM Storage Balances:								
102	EOM Storage Ba	lances from above	13,339,839	5,745,612	5,341,774	2,848,859				l
103	Plus additional in	v from prior month(s)		1,653,810	2,666,704	2,788,937				
		emand that would have	1,653,810	1,012,894	122,233	(2,432,304)				4
	been covered wit	th flowing supplies instead								
	of storage w/d	· · · ·								
105	•		14,993,649	8,412,316	8,130,711	3,205,492				i
_	Storage inv expe	cted for normal weather	15,142,225	11,019,530	6,339,710					
		age for colder weather	148,576	2,607,214	(1,791,001)	(500,519)				i
		er any excess w/d in next	4,793	84,104	(63,964)	(16,146)				ì
		or can w/d any additional	-,, 55	04,104	(00,004)	(10,140)				
[	storage	or can wid any additional				Į				į
109										
110										ļ
111	Table 3-4: Effec	t of revised daily flowing su	oplies on actual	end-of-month	storage inven	itory				
112			Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Total	•	· ·
113	Actual EOM Stor	age Balances	12,093,008	5,365,298	5,194,775	2,726,825	910,533	16,856,032	Actual	1
114	Plus additional in	v from prior month(s)		1,653,810	2,666,704	2,788,937	356,633		'	- 1
_		' ',	1,653,810	1,012,894	122,233	(2,432,304)	(380,804)			
		emand that would have					1==1===			1
		th flowing supplies instead								ĺ
_	of storage w/d									ļ
116	<del></del>	·	13,746,818	8,032,002	7,983,712	3,083,458	886,362			
$\overline{}$	Actual Expected	Net Withdrawals	4,019,747	5,714,816	48,290	4,900,254	2,197,096	16,880,203	Expected	
118										1
119	Table 3-5: Comp	parison of Company and St	aff FOM planne	d flowing supp	olies and stora	ge withdrawal:	s			
							Staff revis	ion: Expected	storage withd	rawal and
120			Compan	v Planned De	mand to be me	et with:		oplies for Com	•	
		<u> </u>	<u></u>	Flowing			9 30	Flowing	,, p.eoc	
- 1				Supplies as		Storage as		Supplies as		Storage as
Ì		]		% of Daily	Daily	% of Daily	Daily	% of Daily	Daily	% of Daily
. [		Normal Daily Avg	Daily Flowing	Avg for	Storage w/d	Avg for	Flowing	Avg for	Storage w/d	Avg for
121		Demand + Fuel	Supplies	Month	6	Month	Supplies	Month	6	Month
122	Nov-00	250,227	107,622		142,605		162,749	65.0%	87,478	
123	Dec-00	407,924	289,650		98,274		322,324	79.0%		
124	Jan-01	461,211	405,241		55,970		409,184	88.7%		11.3%
125	Feb-01	411,801	304,893		86,908		218,025	52.9%		
126	Mar-01	279,341	189,106		65,235		176,822	63.3%		
	Mai-01	213,341	109,100	07.778	00,200	23.470	170,022	03.3%	102,319	30.7%
127										
128				*******						
129		— which is a sub-dimensional distriction of the sub			****	•	Supplement - State , South		HIS. 1496 OF SHIP WORKSTON'S CAU	ì

	А	В	C	D	E	F	G	Н			J
1	Missouri Gas I	Energy									
2	GR-2001-382										
3											
Ť	1 Company states	that wants to allow 500,0	100 so that if Nove	emher is warn	er than norm	at still have ro	nom to inject:	Company also	n stated in		
130	, ,	e was fuller than anticipa					•		0 0.0.00		
131		,	,				, , , , , , , , , , , , , , , , , , , ,				
	<sup>2</sup> Storage w/d plan	ned for Nov-00 would ind	dude planned 4.0	00.000 TSS +	150,000 ISS	(or 138.333/d.	av) plus the f	PEPL/WS w/d	(128.160		
		nber compared to 150,16	•						(		
133	•	•									
		ers in previous column st	nows Oct 31 balar	nce as 15,093	,505 which w	ould not includ	le the ISS ba	lance of 500,0	00 so TSS i	s	
	adjusted to accour	nt for the ISS									
135											
		IDD for the remainder of	•	•					nclude		
		on Company rationale. A	dditional demand I2/31 demand is:		433,822 (tak	en from 12/2 v	vhich had 39	HDD).			
137 138		These are taken		433,822	KN 107th &	Elm					
139		Analysis Report a	~	, , ,	Served KP						
-		each day for the f					like it include:	s WS and Dec	,		
140		of 12/21 - 12/30		1		9/day from W					
141				(230,982)	WNG Flow	ng					
140 141 142 143				115,789	needed from	TSS					
143	le .										
		that storage reports avail			3th of the mo	nth for the pric	r month. So	Company knei	w actual prid	or.	
		nce when nominations m	nade for following	month.							
145	e	mbor atorago withdrawal	o allow for E 000	nor day from l	ee						
140	rvecan mar Nove	mber storage withdrawal	DUU,C IOI WOIIB C	per day from	33						

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#### Missouri Gas Energy GR-2001-382

	NYMEX	
Month	Closing Price	Date
November, 2000	4.541	10/28/00
December, 2000	6.016	11/28/00
January, 2001	9.978	12/27/00
February, 2001	6.293	1/29/01
March, 2001	4.998	2/26/01

Source:

NYMEX closing prices taken from The Wall Street Journal

MGE Case No. GR-2001-387

Month of		Mo	nth Hedge	j	
purchase	Nov-00	Dec-00	Jan 2001	Feb-01	Mar-01
Jun-00	4.312	4.388	4.376	4.138	3.898
Jul-00	4.048	4.136	4.129	3.942	3.758
Aug-00	4.520	4.591	4.557	4.308	4.063
Sep-00	5.240	5.340	5.298	5.028	4.752
Oct-00	5.139	5.177	5.166	4.959	4.724
Average	4.652	4.726	4,705	4.475	4.239

Source: Nymex closing prices simple average by month Date: March 22, 2002

June	6/1/00	6/2/00	6/5/00	6/6/00	6/7/00	6/8/00	6/9/00	6/12/00	6/13/00	6/14/00	6/15/00	6/16/00	6/19/00	6/20/00	6/21/00	6/22/00	6/23/00	6/26/00	6/27/00	6/28/00	6/29/00	6/30/00	Avg
Nov-00	4.150	4.092	4.383	4.286	3.983	4.140	4.155	4.215	4.168	4.250	4,404	4.455	4.155	4.186	4,413	4.543	4.446	4.525	4.600	4.415	4,423	4.466	4.312
Dec-00	4.250	4.187	4.465	4.355	4.070	4.215	4.220	4.280	4.240	4.320	4.470	4.530	4.230	4.285	4.500	4.620	4.521	4.595	4.665	4.485	4.493	4.536	4.388
Jan-01	4.260	4.192	4.465	4.350	4.070	4.205	4.210	4.268	4.232	4.309	4.454	4.513	4.213	4.275	4.486	4.600	4.503	4.575	4.640	4.465	4.471	4.516	4.376
Feb-01	4.055	3.990	4.245	4.135	3.860	3.990	3.994	4.049	4.015	4.082	4.216	4.271	3.971	4.040	4.236	4.342	4.243	4.297	4.360	4.195	4.200	4.240	4.138
Mar-01	3.845	3.785	4.020	3.920	3.652	3,773	3.776	3.830	3.798	3.855	3.976	4.021	3.730	3.810	3.980	4.078	3.983	4.019	4.080	3.925	3.930	3.965	3.898

July	7/-	5/00	7/6/00	7/7/00	7/10/00	7/11/00	7/12/00	7/13/00	7/14/00	7/17/00	7/18/00	7/19/00	7/20/00	7/21/00	7/24/00	7/25/00	7/26/00	7/27/00	7/28/00	7/31/00	Avg
Nov-0	0 4	166	4.100	4.302	4.290	4.306	4.101	4.218	4.205	4.064	4.085	3.955	3.932	3.907	3.810	3.760	3.890	3.951	3.956	3.906	4.048
Dec-0	0 4.	236	4.185	4.390	4,385	4.400	4.195	4.305	4.295	4.150	4.165	4.043	4.015	3.987	3.892	3.843	3.975	4.050	4.061	4.020	4.136
Jan-0	1 4.	216	4.180	4.380	4.380	4.395	4.191	4.295	4.280	4.138	4.150	4.034	4.005	3.979	3.890	3.841	3.970	4.048	4.060	4.019	4.129
Feb-0	1	3.95	3.945	4.145	4.150	4.175	3.981	4.090	4.090	3.963	3.975	3.866	3.842	3.819	3.735	3.696	3.810	3.888	3.905	3.869	3.942
Mar-0	1	3.7	3.705	3.905	3.920	3.955	3.786	3.895	3.900	3.788	3.802	3.702	3.682	3.659	3.585	3.553	3.660	3.738	3.753	3.719	3.758

August	8/1/00	8/2/00	8/3/00	8/4/00	8/7/00	8/8/00	8/9/00	8/10/00	8/11/00	8/14/00	8/15/00	8/16/00	8/17/00	8/18/00	8/21/00	8/22/00	8/23/00	8/24/00	8/25/00	8/28/00	8/29/00	8/30/00	8/31/00	Avg
Nov-00	4.080	4.297	4.342	4.360	4.390	4.437	4.455	4.488	4.495	4.371	4.299	4.474	4.491	4.530	4.800	4.590	4.652	4.602	4.683	4.736	4.697	4.850	4.840	4,520
Dec-00	4.180	4.395	4.442	4.440	4.450	4.483	4.505	4.538	4.550	4.445	4.373	4.535	4.575	4.618	4.862	4.665	4.720	4.670	4.750	4.800	4.770	4.920	4.910	4,591
Jan-01	4.175	4.385	4.432	4.425	4.425	4.460	4.477	4.510	4.522	4.422	4.353	4.505	4.540	4.579	4.810	4.625	4.667	4.620	4.696	4,744	4.720	4.861	4.850	4,557
Feb-01	4.005	4.190	4.227	4.205	4.180	4,200	4.212	4.245	4.258	4.177	4.120	4.249	4.284	4.324	4.540	4.368	4.399	4.352	4.432	4.480	4.465	4.590	4.580	4.308
Mar-01	3.840	3.995	4.022	3.990	3.938	3.948	3.955	3.986	4.001	3.942	3.895	4.000	4.035	4.074	4.267	4.110	4.133	4.089	4.162	4.213	4.205	4.323	4.315	4.063

September	9/1/00	9/5/00	9/6/00	9/7/00	9/8/00	9/11/00	9/12/00	9/13/00	9/14/00	9/15/00	9/18/00	9/19/00	9/20/00	9/21/00	9/22/00	9/25/00	9/26/00	9/27/00	9/28/00	9/29/00	Avg
Nov-00	4.905	5.030	5.157	5.100	4.999	5.135	5.105	5.157	5.312	5.300	5.394	5.477	5,433	5.402	5.266	5.412	5.450	5.447	5.124	5.186	5.240
Dec-00	4.975	5.104	5.233	5.187	5.100	5.235	5.209	5.260	5.412	5.400	5.495	5.585	5.548	5.517	5.383	5.525	5.565	5.562	5.231	5.281	5.340
Jan-01	4.915	5.043	5.172	5.140	5.070	5.203	5.178	5.225	5.367	5.355	5.445	5.525	5,495	5.470	5.350	5.485	5.525	5.522	5.222	5.256	5.298
Feb-01	4.640	4.763	4.884	4.865	4.815	4.938	4.913	4.955	5.088	5.075	5.152	5.228	5.210	5.203	5.100	5.225	5.260	5.257	4.971	5.026	5.028
Mar-01	4.365	4.483	4.597	4.580	4.540	4.661	4.636	4.675	4.799	4.785	4.855	4.930	4.923	4.923	4.840	4.960	4.990	4.988	4.727	4.778	4.752

October	10/2/00	10/3/00	10/4/00	10/5/00	10/6/00	10/9/00	######	10/11/00	10/12/00	10/13/00	10/16/00	10/17/00	10/18/00	10/19/00	10/20/00	10/23/00	10/24/00	10/25/00	10/26/00	10/27/00	10/30/00	10/31/00	Avg
Nov-00	5.352	5.348	5.290	5.152	5.008	5.150	5.134	5.508	5.630	5.537	5.364	5.439	5.228	4.951	4.937	5.072	4.820	4.659	4.664	4.541			5.139
Dec-00	5.435	5.438	5.383	5.248	5.113	5.250	5.236	5.599	5.728	5.649	5.492	5.553	5.349		5.055	5.193	4.940	4.771	4.753	4.652	4.485	4.490	5.177
Jan-01	5.400	5.398	5.348	5.215	5.085	5.217	5.211	5.511	5.693	5.624	5.475	5.535	5.344	5.081	5.062	5.200	4.960	4.795	4.777	4.677	4.520	4.531	5.166
Feb-01	5,160	5.158	5.118	5.000	4.881	5.007	5.001	5.301	5.442	5.377	5.242	5.295	5.121	4.891	4.875	5.000	4.780	4.612	4.597	4.497	4.352	4.381	4.959
Mar-01	4.905	4.903	4,864	4.765	4.658	4.769	4.764	5.058	5.180	5.122	4.991	5.040	4.877	4.658	4.646	4.757	4.555	4.400	4.382	4.287	4.157	4.191	4.724

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_	A	В	С	D.	E	F		T G	GН
1	Missouri Gas					<del>' -</del>	_	<u>.                                     </u>	<u> </u>
ž	GR-2001-382	47							
	ļ								
		Month Nominations on Duk		e 6 business o	lays before FC	M. So, Staff i	evie	wed deci	wed decisions made on
_		0, 12/21/00, 1/24/01, and 2/							
5	lugamasi 14	A- Of	40040000	44107:400	1	40004:	1		1000
	Information Know From Storage An		10/24/2000 Oct-00	11/27/2000 Nov-00		12/21/2000 Dec-00			1/24/2001 Jan-01
•		nd and storage inj & w/d	10/23/2000	11/26/2000		12/20/2000	Rev 12/20	-	1/23/2001
	entered for actual	• •		=			to include		]
8	A st. of UDD Above	- L AL - A-A-	959	700			12/31 4		
	Actual HDD throu	gh this date for remainder of month	256 <u>77</u> .	728 104		854 5 <u>14</u>	854 553		796 301
	Known & expecte		333	832		1,368	5 <u>553</u> 1,407	l	1,097
	•	HDD as % of normal	ar of Name (1999)	126.6%	į	127.5%	131.1%	'n	90.1%
12	HDD (calculated t		ham. To Manager and a second					١	
	]	and the state of t		TO A PER TRANSPORT THEFT	No Revision	months. The will be	Rev 12/20	ľ	· · · · · · · · · · · · · · · · · · ·
	L				to Nov-00 for		to include		
	EOM Storage Bal	ances	14 040 257	10 507 000	ISS 3	4.00= 505	12/31 4	$\vdash$	
14 15			14,948,357 1,121,968	10,587,206 1,121,952	10,587,206 1,121,952	4,227,928	4,112,139		3,927,321 1,041,777
16			1,121,968 1,453,926	1,121,932	1,121,952	1,041,777 <u>598,035</u>	1,041,777 591,696		1,041,777 <u>372,676</u>
17		ventory	17,524,251	12,718,265		5,867,740	5,745,612		5,341,774
18	% of MSQ		98.6%	71.6%	71.6%	33.0%	32.3%		30.1%
19		ning to be filled 1	243,378						
	From Company F		Nov-00	Dec-00		Jan-01		ـــــــــــــــــــــــــــــــــــــــ	Feb-01
22	Forecasted Dema Base Case - 30	ro: Year Normal Weather	7,400,361	12,375,465		13,868,421		_	11,213,497
		ev (Uses Nov - Mar bif and	7,686,797	11,857,776		13,298,119		_	10,480,179
		ion of Jul 98 - Jun 00 data					l		, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
23	with normal wea	ather, plus growth						L	
24			5,587,935	10,592,504		10,077,482			8,819,953
		(Uses Nov - Mar bif and	5,114,047	8,778,422		9,553,228		ĺ	7,500,159
	I 141 - I.a	sion of Jul 98 - Jun 00 data conth HDD, plus growth							
25		onar ribb, pius glowiti	0.140.700	47 000 CC0		40 400 501			10 700 070
26 27	High Case Historical HDD da	ata:	9,140,788 Nov-00	17,896,663 Dec-00		16,186,584 Jan-01		ŀ	13,732,070 Feb-01
	warmest month H		398	763	1	841		H	646
29	normal month HD	D	657	1,073	]	1,218		l	946
30	coldest month HD		877	1,606		1,629		L	1,274
		heatload & baseload						ĺ	
31	HDD	ity Report w/ historical	Nov-00	Dec-00		lan:04			5ah 01
	Number of days in	n month	30	31		Jan-01 31		ŀ	Feb-01 28
	estimated demand		5,591,673	9,457,584		10,273,551		H	8,090,819
	estimated demand		8,301,101	12,700,529		14,217,391		Γ	11,229,153
	estimated demand		10,602,546	18,276,302		18,516,908		Ĺ	14,660,398
	Normal Monthly D	Supply/Demand Summary: Demand	7,425,361	Dec-00 12,400,465		Jan-01 13,893,421		<u> </u>	Feb-01 11,238,497
	Daily Average De		247,512	400,015	{	448,175			401,375
	Demand to be me		,_,_		1	,,,,,			401,010
40	TSS	<del>-</del>	138,333	91,935		49,355			79,914
41			0	.0		0			0
42 43		da.	4,272	6,339		6,615			6,994
_	Total Storage w Fuel Requirement		142,605 2,715	98,274 7,909		55,970 13,036			6,908
<del>'''</del>		d still to be met (with	107,622	309,650		13,036 405,241			0,426 4,893
45	flowing or ?)		,	200,000		400,241		32	4,000
	Less Planned Flo		<u>107,622</u>	289,650		405,241		304,	893
_		d still to be met with	0	20,000	}	0	}		000
	From DR28 respo		Nov-00	Dec-00	}	Jan-01		Feb-01	
		Storage Withdrawals	4,150,166	3,454,240	)	3,464,251	j į	3,162,8	67
50									
51	<u> </u>								

78   Normal Monthly Demand   7,686,797   7,686,797   11,857,776   11,857,776   13,298,119   13,298,119   10,480,179   10,480,179   8,063,218   8,063, 79   Daily Average Demand   256,227   256,227   382,509   382,509   428,972   428,972   374,292   374,292   260,104   260, 80   Daily Demand to be met w/ storage w/d   82,478   132,990   150,962   129,812   86,373   81   19   19   19   19   19   19   19							2 IAI I I									
2   3   2   2   2   2   2   2   2   2		A	В	С	D	Ε	F	G	Н	ī	J	К	Ļ			
2	1															
32 Jable 2: Storage Inventory - Antius's Sept-00 Det-00 Nov-00 Sept-00 Nov-00 Sept-00 Nov-00			Life.gy													
Section   Page   Properties   Page   Properties   Page   Page   Properties   Page	┝╧╌	GK-2001-302														
Seption   Sept	3	ĺ														
Seption	52	Table 2: Storage	Inventory - Actuals			EOM Storag	se inventory 5		ļ							
Section   Sect		\	ŕ	Sep-00	Oct-00				Feb-01	Mar-01	ļ					
Section   Picture   Pict	54	1 1	Williams SA-0014 (TSS)								1					
PPPL WS-01267   155.143   105.1108   1064.933   275.535   388.72   156.425   395.234	55	1 1									]					
PPE, WS-07a027   155,143   1.064.050   1.7760.055   1.064.050   1.7760.055   1.064.050   1.7760.055   1.064.050   1.7760.055   1.064.050	56	<b>f</b>														
Total 16,041,008   17,709,565   12,093,008   5,365,298   5,194,775   2,726,825   910,533    Total 16,041,508   17,709,565   12,093,008   5,365,298   5,194,775   2,726,825   910,533    Total 16,041,508   17,709,565   12,093,008   5,365,298   5,194,775   2,726,825   910,533    Total 16,041,508   17,709,565   12,093,008   5,365,298   5,194,775   2,726,825   910,533    Total 16,041,508   17,709,565   12,093,008   12,093,0	57	i i			- 1	_		1 7	_	_	ĺ					
50   10   10   10   10   10   10   10	58	1														
Given the information known when decisions were made regarding first-of-month nominations, Staff believes that the FDM nominations would have been higher to allow storage to be reserved for the normally coder mornts of the property of the control of the property of the normal coder mornts of the property of the normal coder mornts of the property of the property of the normal coder mornts of the property of the property of the property of the property of the normal coder mornts of the property of the prop	50	į L	Total	10,041,508	17,700,303	12,093,000	2,300,296	3,134,713	2,720,623	310,000	l					
Given the information known when decisions were made regarding first-of-morth nominations, Staff believes that the FCM nominations would have been different. November FCM nominations would have been different in November FCM nominations would have been higher to allow storage to be reserved for the normally coder morths of December and Junary and to assure that the Conseque highways application of the percentage of December and Junary and to assure that the Conseque highways are possible late whiler cod since. Storage little with code area. Storage little with code area. Storage little with code area. Storage of Storage in the code in the percentage of Storage with the code area. Storage in the code in the percentage of Storage in the code in the percentage in the total storage in the code in the percentage in the code in the percentage in the code in the percentage in the code in the percentage in the code in the percentage in the code in the percentage in the code in the percentage in the percentage in the percentage in the percentage in the percentage in the percentage in the percentage in the percentage in the percentage i	23	{														
Green the information known when decisions were made regarding first-of-morth normalisations, Staff believes that the FCM informations would have been different. November FCM rominations would have been different. November FCM rominations would have been different withdrawell capabilities to cover a possible later winter cold anney. Storage balances and FCM norminations for this option is presented below.  8		1														
have been different. November FOM nonimitations would have been higher to allow storage to be reserved for the normally colder months of December and January and to assure that the Company had sufficient withdrawal capabilities to cover a possible late winter cold snap. Slorage Balances and FOM nominations for this option is presented below.  53 Table 3-1: Storage withdrawals expected based on distribution of normal HDD  55 Table 3-1: Storage withdrawals expected based on distribution of normal HDD  56 Normal HDD   Monthly Distr. Distr.    57 Nov-00   667   14.3%   2,474.356   storage inventory. For November, would use the total storage inventory. For November	181	}	dia a benevia i iban danisiana		ardian Sant of			lianna abadaba	FOM possission							
December and January and to assure that the Company had sufficient withdrawal capabilities to cover a possible late winter cold anap. Storage balances and FOM nominations for this option is presented below:    144	1															
Start   Storage withdrawais expected based on distribution of normal HDD   Normal HDD   Monthly Distr.   District   Storage distribution is based on the percontage of Normal HDD   Normal HDD   Normal HDD   Storage distribution is based on the percontage of Normal HDD   Normal HDD   Normal HDD   Storage distribution is based on the percontage of Normal HDD   Normal HDD   Storage (Inventory Company for injections in Normal HDD   1,278   2,34%   4,1269   MSC less \$500,000 allowed by Company for injections in Normal HDD   1,278   2,34%   4,1269   MSC less \$500,000 allowed by Company for injections in Normal HDD   Normal HDD	1															
Table 3-1: Storage withdrawals expected based on distribution of normal HDD   Nor						idrawai capab	lities to cover	a possible late	e winter cold snap	. Storage						
63   64   65   7able 2-1: Storage withdrawals expected based on distribution of normal HDD   Storage   S	62	balances and FOR	vi nominations for this optio	n is presented t	oelow:											
Straige withdrawals expected based on distribution of normal HDD   Storage distribution is based on the percentage of Normal HDD   Monthly Distr.   Storage distribution is based on the percentage of Normal HDD   Normal HDD   Monthly Distr.   Storage distribution is based on the percentage of Normal HDD   Normal HD		1														
Straple 3-1: Storage withdrawais expected based on distribution of normal HDD   Mornal HDD   M																
Storage   Normal HDD   Monthly Distr   Normal HDD   Nor			ne withdrawals expected he	sed on distribu	tion of pocasal	нпп										
Society   Normal HDD   Monthly Distr   Distr   Nor-00   657   143%   244/438   Sat Specimentry, For November, would use the total	103	Table 3-1: Stole	de wininiawaia exheciso ne	acci on distribu			rihution is hos	ed on the sec-	rentane of							
10	20	, ,	Namai HDD	Monthly Diet-		-			-							
Be   Dec-00																
Section   1,216   26.6%   4.679.820   Nov if weather is warmer than normal. For Dec. Mar.   To Feb-01   946   20.6%   3.584.737   November, so adjust accordingly - including additional   15.76   1.769.170   November, so adjust accordingly - including additional   17.769.565   17.769   17.																
Feb-01   946   20.6%   3,634.737   17		<del></del>														
Mar-01													1			
Total																
Total expected storage if adjust Nov by 150,000 from ISS   17,739,170									sing additional							
Table 3-2: Staff's calculation of expected storage withdrawal and flowing supplies for Company planned normals   17,739,170   17			4,585	100.0%	17,589,170	-			13 300 640							
To   Table 3-2: Staff's calculation of expected storage withdrawal and flowing supplies for Company planned normals   Nov-90																
Table 3-2; Staffs calculation of expected storage withdrawal and flowing supplies for Company planned normals   Nov-00		total expected storage if adjust Nov by 150,000 from ISS 17,739,170														
Nov-00   N																
To   Normal Monthly Demand   7,686,797   7,686,797   11,857,776   11,857,776   13,298,119   13,298,119   10,480,179   8,063,218   8,063, 79   Daily Average Demand   256,227   256,227   382,509   382,509   428,972   428,972   374,292   374,292   280,104   260, 280, 280, 280, 280, 280, 280, 280, 28		Table 3-2: Staffs	s calculation of expected st													
79   Daily Average Demand   256,227   256,227   382,509   382,509   428,972   428,972   374,292   260,104   260, 80   201	_	<u> </u>											Mar-01 Rev			
80 Daily Demand to be met will storage w/d allowed for ISS in Nov   5,000   150,962   129,812   86,373   81 plus storage w/d allowed for ISS in Nov   5,000   120 liss storage for excess from prior month   83 Subtotal of daily storage w/d   87,478   93,474   110,778   85,031   62,553   35,430   175,053   162,096   89,759   62, 82,000   83,000   83,000   84,000									13,298,119			8,063,218	8,063,218			
Bit   plus storage wid allowed for ISS in Nov   5,000   5,00					256,227		382,509		428,972		374,292		260,104			
82   less storage for excess from prior month   (22,212)   (98,409)   45,241   3,386   33   45   45   45   45   45   45   45						132,990	<u></u>	150,962		129,812	L	86,373				
83 Subtotal of daily storage w/d   87,478   93,474   110,778   85,031   52,553   35,430   175,053   152,096   89,759   62,	81	plus storage w/d a	allowed for ISS in Nov	5,000				i								
Bel Daily Fluel Requirements   2.715   2.715   7.909   7.909   13,036   13,036   10,426   10,426   6,810   6,85	82	less storage for e	xcess from prior month			(22,212)		(98,409)		45,241		3,386				
85   Expected Daily Flowing Supplies   171,464   165,468   279,640   4305,387   389,455   406,578   209,665   222,622   177,155   204,	83	Subtotal of daily s	torage w/d	87,478	93,474	110,778	85,031	52,553	35,430	175,053	162,096	89,759	62,106			
% of planned normal met with storage   33.8%   36.1%   28.4%   21.8%   11.9%   8.0%   45.5%   42.1%   33.6%   22	84	Daily Fuel Requir	ements	2,715	2,715	7,909	7,909	13,036	13,036	10,426	10,426	6,810	6,810			
Solution   Solution	85	Expected Daily FI	owing Supplies	171,464	165,468	279,640	<b>▲</b> 305,387	389,455	406,578	209,665	222,622	177,155	204,808			
So of planned normal met with flowing   So   So   So   So   So   So   So   S	$\Gamma$	% of planned nor	mal met with storage	33.8%	36.1%	28.4%	21.8%	11,9%	8.0%	45.5%	42.1%	33.6%	23.3%			
supplies (includes fuel)  Check if planned daily flowing covers warm weather requirements (see Table 1) Plus storage over/under from prior month  Plus storage over/under from prior month  Prior Staff Recommendation uses. Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case from Reliability Report)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  This is the warm weather requirement less 150,000 for ISS in Nov  Since too much storage was pulled in Nov, this is warm weather plus excess wid in Nov.	86	(includes fuel)		<u>                                      </u>				<u> </u>		ì	<b></b>					
Supplies (includes fuel)  Check if planned daily flowing covers warm weather requirements (see Table 1) Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage over/under from prior month Plus storage would need to be adjusted prior to making norminations based on expected end-of-month inventory for previous month  This is the warm weather requirement less 150,000 for ISS in Nov  swarm weather plus excess w/d in Nov.  Plus storage would need to be adjusted prior to making norminations based on expected end-of-month inventory for previous month  This is the warm weather weather requirement less 150,000 for ISS in Nov  swarm weather plus excess w/d in Nov.		% of planned non	mal met with flowing	66.2%	63.9%	71.6%	78.2%	88.1%	92.0%	54.5%	57.9%	66.4%	76,7%			
Check if planned daily flowing covers warm weather requirements (see Table 1) Plus storage over/under from prior minth 990 Prior Staff Recommendation uses: Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case from Reliability Report)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Check if planned daily flowing covers No No No No No No No No No No No No No	87	supplies (includes	fuel)	[ ]	1 1		1 /		•		l ·	1				
warm weather requirements (see Table 1) Plus storage over/under from prior month  90 Prior Staff Recommendation uses: Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case from Reliability Report)  91  Storage would need to be adjusted prior to making norminations based on expected end-of-month inventory for previous month  93  94		<b>-</b>	a server and the serv	170 469	i sir " siina - utunada - era	283 175	Tressure amounts	ั้วกัด โดยไ	· parties pp\$25 Manager angles agre	267 RE3	i	์ วักติ เอลี	TOTAL TRANSPORT			
Plus storage over/under from prior month  Yes  No  No  No  No  No  No  No  No  No  N	1	I		( I	[ ]	200,110	11	] 550,155		237,003	1	200, 134				
Prior Staff Recommendation uses. Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case from Reliability Report)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Since too much storage was pulled in Nov, this is warm weather plus excess w/d in Nov.	188	-	' ' '	i i	1	<b>.</b>	П			l	l	١				
Prior Staff Recommendation uses: Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case from Reliability Report)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Since too much storage was pulled in Nov, this is warm weather plus excess w/d in Nov.	1	_	errunger from phor month	Yes	-   -	No	H	No		No		l No				
Check if planned daily flowing covers warm weather requirements (used Company numbers for low-case from Reliability Report)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Since too much storage was pulled in Nov, this is warm weather plus excess w/d in Nov.	89	4	ger name to the territorial section as			This was also be continued in the	1	<u> </u>	The control of the co	***************	l	ERMONE A	Jir milyengersensenskriver			
warm weather requirements (used Company numbers for low-case from Reliability Report)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Since too much storage was pulled in Nov, this is warm weather plus excess w/d in Nov.	90	Prior Staff Ro	ecommendation uses:	{	1		V	]		[						
warm weather requirements (used Company numbers for low-case from Reliability Report)  Storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Since too much storage was pulled in Nov, this is warm weather requirement less 150,000 for ISS in Nov excess w/d in Nov.	$\Gamma$	Check if plant	ned daily flowing covers	186,265	1 1	341,694	I	325,080		314,998	ŀ	220,824				
Company numbers for low-case from Reliability Report)  92    storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month   Since too much storage was pulled in Nov, this is warm weather plus excess w/d in Nov.	1			' ' '	]		1	,								
91 Reliability Report)  92 storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  93 94	1			} \	1 1	l i	P.	] }		Ì	]	}				
storage would need to be adjusted prior to making nominations based on expected end-of-month inventory for previous month  Since too much storage was pulled in Nov, this is warm weather plus excess w/d in Nov.	1	D-11-1-114 - D-1			1		1			l	ļ					
storage would need to be adjusted prior to making norminations based on expected end-of-month inventory for previous month  This is the warm weather requirement less 150,000 for ISS in Nov same weather plus excess wild in Nov.			<del></del>	<u> </u>	<del> </del> -	·	L				L	<u> </u>				
adjusted prior to making nominations based on expected end-of-month inventory for previous month   93	192	4 .	laterna a manda a mada m	Th:- '- ''	1	L				1		1				
nominations based on expected end-of-month inventory for previous month for ISS in Nov warm weather plus excess w/d in Nov.	1	[	-					ĺ		1						
expected end-of-month excess wild in Nov.	1	1						1		l						
inventory for previous month  93 94	1	1	)	101 122 IU NO	19					•		ŀ				
93 94	1	i '		1		excess w/d	III NOV.	ነ		ì		1				
93				1				1		J						
94	1		month	1				ĺ								
94																
94		month														
94				]								ł				
95	93															
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	Missouri Gas	Energy										
2	GR-2001-382											
3												
<u> </u>	Table 3-3: Effect	of revised daily flowing sup	plies on expec	ted end-of-mor	nth (EOM) stor	age inventory						
	Information Knows		11/27/2000	12/21/2000	1/24/2001							
	From Storage Ana		Nov-00	Dec-00	Jan-01	Feb-01						
		nd and storage inj & w/d	11/26/2000	12/20/2000	1/23/2001	2/20/2001						
99	entered for actual	• •	= . =									
	Actual HDD throug		728	854	796	691						
101	Forecasted HDD f	or remainder of month	104	<u>553</u>	<u>301</u>	248						
102	Known & expected	d HDD for month	832	1,407	1,097	939						
П		HDD as % of normal	126.6%	131.1%	90.1%	99.3%						
103	HDD (calculated ti		[	ļ								
		EOM Storage Balances:										
	EOM Storage Bala		12,718,265	5,745,612	5,341,774	2,848,859						
		from prior month(s)		1,735,380	2,223,227	2,264,674						
	Plus additional de	mand that would have	1,735,380	487,847	41,447	(2,303,588)						
	been covered with	flowing supplies instead										
	of storage w/d			: ]	ſ	. 1						
108	l	manage : strangury = no Caratrianon -	14,453,645	7,968,839	7,606,448	2,809,945						
109	Storage inv expec	ted for normal weather	15,142,225	11,019,530	6,339,710	2,704,973						
110		ge for colder weather	688,580	3,050,691	(1,266,738)	(104,972)						
		er any excess w/d in next	22,212	98,409	(45,241)	(3,386)						
	month (per day) o	r can w/d any additional		.								
1111	storage											
112			·				ı					
113	4											
	1	of revised daily flowing sup	unlies on actual	end-of-month	storage invest	ion/						
115		Or revised daily illowing sup	Nov-00	Dec-00	Jan-01	Feb-01	Mar-01	Total	Ī			
	Actual EOM Stora	nge Balances	12,093,008	5,365,298	5,194,775	2,726,825	910,533	16,856,032	Actual			
_	1	from prior month(s)	.2,000,000	1,735,380	2,223,227	2,264,674	(38,914)	.0,000,002	,			
<del>  '''</del>	1		1,735,380	487,847	41,447	(2,303,588)	486,762					
1		mand that would have	1,130,000	401,047	31,747	12,000,000)	400,702					
1.		n flowing supplies instead	:									
$\overline{}$	of storage w/d						ĺ					
119		Subtotal	13,828,388	7,588,525	7,459,449	2 <u>,687</u> ,911	1,358,381		•			
	Actual Expected N	Net Withdrawals	3,938,177	6,239,863	129,076	4,771,538	1,329,530	16,408,184	Expected			
121												
122	Table 3-5: Comp	parison of Company and Sta	off FOM planne	d flowing supp	lies and storag	e withdrawals	<u>.                                    </u>					
	] `	, ,						n: Expected storage	e withdrawal	and flowing		
123	1		Compar	ny Planned Dei	mand to be me	et with:		olies for Company				
				Flowing				[				
1	]	, and the second second second second second second second second second second second second second second se	ļ	Supplies as	l i	Storage as		1	ļ	Storage as		
1	j i			% of Daily	Daily	% of Daily	Daily	Flowing Supplies		% of Daily		
	i i	Normal Daily Avg	Daily Flowing	Avg for	Storage w/d	Avg for	Flowing	as % of Daily	Storage w/d	Avg for		
124	<u> </u>	Demand + Fuel	Supplies	Month	6	Month	Supplies	Avg for Month	6	Month		
125	Nov-00	258,942	107,622	41.6%	142,605	55.1%	165,468	63.9%	93,474	36.1%		
126		390,418	289,650	74.2%	98,274	25.2%	305,387	78.2%	85,031	21.8%		
127		442,008	405,241	91.7%	55,970		406,578	92.0%		8.0%		
128		384,718	304,893	79.3%	86,908		222,622	57.9%	162,096	42.1%		
129	Mar-01	266,914	189,106	70.8%	65,235	24.4%	204,808	76.7%	62,106	23.3%		
130												
131	1											
		<del></del>										

	Α	В	C _	D	E	F	G		Н			J	К	L
$\Box$	Missouri Gas	Energy	•											
2	GR-2001-382													
3_											-			
132	1 -													
l		that wants to allow 500,00							iny aiso st	ated in				
$\overline{}$		e was fuller than anticipat	u,uud pevam pel	100 to 3n 155 c	contract to and	M TOL MONE	moer injection	15						
134	_			<b></b>										
1		ned for Nov-00 would incl					Vday) plus the	PEPLM	/S w/d (12	8,160				
		nber compared to 150,166	o noted as norma	al w/a in the U	<28 response	,								
136				45 000	FOF Elek see	فالما وما المال		-1						
1		ers in previous column sho at start of November to us												
138		at start or November to us	e ioo storage pi	er Company p	ans. End of N	Overnoer D	alances are it	om Com	party Stora	iye				
130	1.	HDD for the remainder of	Dec is only thro	uah 12/30/00:	to the HDD :	and the eta	mae halance	c are arti	ustad to in	clude 12/3	1/00			
139		any rationale. Additional de						s arc auj	usted to m	Guue 12/3	1,00			
140			2/31 demand is:	433,822	abacca acom	<b>52</b> Willow 11	ab 00 11212).							
141	1	These are taken fr	rom the	(51,219)	KN 107th 8	Elm								
140 141 142	1	Storage Analysis I	Report and are	(9,997)	Served KP	OC OC								
		the same each da	y for the	(25,835)	Served PEI	L (this loo	ks like it includ	des WS a	ind Dec					
143	•	forecasted dates of	of 12/21 -		plan is 6,33	9/day from	WS)							
144	Ì	12/30		(230,982)	WNG Flow	•								
143 144 145 146	ĺ			115,789	needed from	TSS								
146	l.													
1		that storage reports avail-			3th of the mor	th for the p	nior month. Se	o Compa	ny knew a	ctual prior				
		nce when nominations ma	ade for following	month.										
148	4				••									
149	Recall that Nove	mber storage withdrawals	allow for 5,000	per day from I	55									

# HC

Schedule MTL-39, page 10 Is Highly Confidential

HC

Missouri Gas Energy GR-2001-382

	NYMEX	
Month	Closing Price	Date
November, 2000	4.541	10/28/00
December, 2000	6.016	11/28/00
January, 2001	9.978	12/27/00
February, 2001	6.293	1/29/01
March, 2001	4.998	2/26/01

Source:

NYMEX closing prices taken from The Wall Street Journal

MGE Case No. GR-2001-387

Month of		Mo	onth Hedged	j	
purchase	Nov-00	Dec-00	Jan 2001	Feb-01	Mar-01
Jun-00	4.312	4.388	4.376	4.138	3.898
Jul-00	4.048	4.136	4.129	3.942	3.758
Aug-00	4.520	4.591	4.557	4.308	4.063
Sep-00	5.240	5.340	5.298	5.028	4.752
Oct-00	5.139	5.177	5.166	4.959	4.724
Average	4.652	4.726	4.705	4.475	4.239

Source: Nymex closing prices simple average by month Date: March 22, 2002

June	6/1/00	6/2/00	6/5/00	6/6/00	6/7/00	6/8/00	6/9/00	6/12/00	6/13/00	6/14/00	6/15/00	6/16/00	6/19/00	6/20/00	6/21/00	6/22/00	6/23/00	6/26/00	6/27/00	6/28/00	6/29/00	6/30/00	Avg
Nov-00	4.150	4.092	4.383	4.286	3.983	4.140	4.155	4.215	4.168	4.250	4.404	4.455	4.155	4.186	4.413	4.543	4.446	4.525	4.600	4.415	4.423	4.466	4.312
Dec-00	4.250	4.187	4.465	4.355	4.070	4.215	4.220	4.280	4.240	4.320	4.470	4.530	4.230	4.285	4.500	4.620	4.521	4.595	4.665	4.485	4.493	4.536	4.388
Jan-01	4.260	4.192	4.465	4.350	4.070	4.205	4.210	4.268	4.232	4.309	4.454	4.513	4.213	4.275	4.486	4.600	4.503	4.575	4,640	4.465	4.471	4.516	4,376
Feb-01	4.055	3.990	4.245	4.135	3.860	3.990	3.994	4.049	4.015	4.082	4.216	4.271	3.971	4.040	4.236	4.342	4.243	4.297	4.360	4.195	4.200	4.240	4.138
Mar-01	3,845	3.785	4.020	3.920	3.652	3.773	3.776	3.830	3.798	3.855	3.976	4.021	3.730	3.810	3.980	4.078	3.983	4.019	4.080	3.925	3.930	3.965	3.898

Ju	ly	7/5/00	7/6/	00	7/7/00	7/10/00	7/11/00	7/12/00	7/13/00	7/14/00	7/17/00	7/18/00	7/19/00	7/20/00	7/21/00	7/24/00	7/25/00	7/26/00	7/27/00	7/28/00	7/31/00	Avg
	Nov-00	4.166	4.1	00	4.302	4.290	4.306	4.101	4.218	4.205	4.064	4.085	3.955	3.932	3.907	3.810	3.760	3.890	3.951	3.958	3.906	4.048
	Dec-00	4.236	4.1	85	4.390	4.385	4.400	4.195	4.305	4.295	4.150	4.165	4.043	4.015	3.987	3.892	3.843	3.975	4.050	4.061	4.020	4.136
	Jan-01	4.216	4.1	80	4.380	4.380	4.395	4.191	4.295	4.280	4.138	4.150	4.034	4.005	3.979	3.890	3.841	3.970	4.048	4.060	4.019	4.129
	Feb-01	3.95	3.9	45	4.145	4.150	4.175	3.981	4.090	4.090	3.963	3.975	3.866	3.842	3.819	3.735	3.696	3.810	3.888	3.905	3.869	3.942
	Mar-01	3.7	3.7	05	3.905	3.920	3.955	3.786	3.895	3.900	3.788	3.802	3.702	3.682	3.659	3.585	3.553	3.660	3.738	3.753	3.719	3.758

August	8/1/00	8/2/00	8/3/00	8/4/00	8/7/00	8/8/00	8/9/00	8/10/00	8/11/00	8/14/00	8/15/00	8/16/00	8/17/00	8/18/00	8/21/00	8/22/00	8/23/00	8/24/00	8/25/00	8/28/00	8/29/00	8/30/00	8/31/00	Avg
Nov-00	4.080	4.297	4.342	4.360	4.390	4.437	4.455	4.488	4.495	4.371	4.299	4.474	4.491	4.530	4.800	4.590	4.652	4.602	4.683	4.736	4.697	4.850	4.840	4.520
Dec-00	4.180	4.395	4.442	4.440	4.450	4.483	4.505	4.538	4.550	4,445	4.373	4.535	4.575	4.618	4.862	4.665	4.720	4.670	4.750	4.800	4.770	4.920	4.910	4.591
Jan-01	4,175	4.385	4.432	4.425	4.425	4.460	4.477	4.510	4.522	4.422	4.353	4.505	4.540	4.579	4.810	4.625	4.667	4.620	4.696	4.744	4.720	4.861	4.850	4.557
Feb-01	4.005	4.190	4.227	4.205	4.180	4.200	4.212	4.245	4.258	4.177	4.120	4.249	4.284	4.324	4,540	4.368	4.399	4.352	4.432	4.480	4.465	4.590	4.580	4.308
Mar-01	3.840	3.995	4.022	3.990	3.938	3.948	3.955	3.986	4.001	3.942	3.895	4.000	4.035	4.074	4.267	4.110	4.133	4.089	4.162	4.213	4.205	4.323	4.315	4.063

September	9/1/00	9/5/00	9/6/00	9/7/00	9/8/00	9/11/00	9/12/00	9/13/00	9/14/00	9/15/00	9/18/00	9/19/00	9/20/00	9/21/00	9/22/00	9/25/00	9/26/00	9/27/00	9/28/00	9/29/00	Avg
Nov-00	4.905	5.030	5.157	5.100	4.999	5.135	5.105	5.157	5.312	5.300	5.394	5.477	5.433	5.402	5.266	5.412	5.450	5.447	5.124	5.186	5.240
Dec-00	4.975	5.104	5.233	5.187	5.100	5.235	5.209	5.260	5.412	5.400	5.495	5.585	5.548	5.517	5.383	5.525	5.565	5.562	5.231	5.281	5.340
Jan-01	4.915	5.043	5.172	5.140	5.070	5.203	5.178	5.225	5.367	5.355	5.445	5.525	5.495	5,470	5.350	5.485	5.525	5.522	5.222	5.256	5.298
Feb-01	4,640	4.763	4.884	4.865	4.815	4.938	4.913	4.955	5.088	5.075	5.152	5.228	5.210	5.203	5.100	5.225	5.260	5.257	4.971	5.026	5.028
Mar-01	4.365	4.483	4.597	4.580	4.540	4.661	4.636	4.675	4.799	4.785	4.855	4.930	4.923	4.923	4.840	4.960	4.990	4.988	4.727	4.778	4.752

October	10/2/00	10/3/00	10/4/00	10/5/00	10/6/00	10/9/00	10/10/00	10/11/00	10/12/00	10/13/00	10/16/00	10/17/00	10/18/00	10/19/00	10/20/00	10/23/00	10/24/00	10/25/00	10/26/00	10/27/00	10/30/00	10/31/00	Avg
Nov-00	5.352	5.348	5.290	5,152	5.008	5.150	5.134	5.508	5.630	5.537	5.364	5.439	5.228	4.951	4.937	5.072	4.820	4.659	4.664	4.541		l	5.139
Dec-00	5.435	5.438	5.383	5.248	5.113	5.250	5.236	5.599	5.728	5.649	5.492	5.553	5.349	5.071	5.055	5.193	4.940	4.771	4.753	4.652	4.485	4.490	5.177
Jan-01	5.400	5.398	5.348	5.215	5.085	5.217	5.211	5.511	5.693	5.624	5.475	5.535	5.344	5.081	5.062	5.200	4.960	4.795	4.777	4.677	4.520	4.531	5.166
Feb-01	5.160	5.158	5.118	5.000	4.881	5.007	5.001	5.301	5.442	5.377	5.242	5.295	5.121	4.891	4.875	5.000	4.780	4.612	4.597	4.497	4.352	4.381	4.959
Mar-01	4.905	4.903	4.864	4.765	4.658	4.769	4.764	5.058	5.180	5.122	4,991	5.040	4.877	4.658	4.646	4.757	4.555	4.400	4.382	4.287	4.157	4.191	4.724

### Summary of Jenkins' Proposed Storage Utilization - Normal Winter

Line No.	Description	Source	Nov	Dec	Jan	Feb	Mar	Total
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1	Normal Monthly Demand (Jenkins Estimate)	[1]	7,686,797	11,857,776	13,298,119	10,480,179	8,063,218	51,386,089
2	"Warmest Month" Demand (Jenkins Estimate)	[2]	5,114,040	8,778 <u>,</u> 425	9,553,239	7,500,164	6,454,014	37,399,882
3	Proposed Storage Withdrawals	[3]	2,572,757	3,079,351	3,744,880	2,980,015	1,609,204	13,986,207
4	MGE's Total Storage Capacity	[4]						17,767,629
5 6	Unutilized Storage in Normal Winter Under Jenkins' Proposal % of Jenkins' Proposed Unutilized Storage Capacity to Total Capacity	[5] [6]					ļ	3,781,422 <b>21.3</b> %

NOTE: All figures above were taken from Jenkins' Supplemental Direct Workpaper entitled "MGE Scenario for REV Base Case and Low Case from Regression" that is presented as Schedule MTL-39 and which she used to develop her storage utilization disallowance proposal. The specific tabs in that spreadsheet from which the data above was sourced are noted below.

#### Source:

- [1] Tab "FOM Plans- REV", Table 3-2, line 78, columns C, E, G, I and K.
- [2] Tab "FOM Plans- REV", Table 3-2, line 91, columns C, E, G, I and K.
- [3] Line 1 minus Line 2.
- [4] Tab "Normals & Forecasted EOM", Total MSQ all storage contracts (Note no line or column numbers were provided on this tab of the Workpaper).
- [5] Line 4 minus Line 3.
- [6] Line 3 divided by Line 5.

# Inaccuracy of Ms. Jenkins' Regression at Estimating MGE's Demand

		From Schedule MTL-14			Estimated Demand Produced by Jenkins'	% Difference between Actual Demand	% HDD is Above/	if Demand Growth is Considered, Demand Variance	
Line No.	Description	Actual HDD	Normal HDD	Actual Demand	Regression (No Growth)	and Estimated Demand	(Below) Normal	Would be Slightly	
	(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	
1	Nov-97	710	657	7,923,099	8,152,126	3%	8%		
2	Dec-97	978	1073	11,478,932	10,832,857	-6%	-9%		
3	Jan-98	945	1218	11,443,336	10,507,495	-8%	-22%	WORSE	
4	Feb-98	662	946	8,431,917	7,602,079	-10%	-30%	WORSE	
5	Mar-98	797	691	9,774,280	9,048,296	-7%	15%		
6	Total			49,051,564	46,142,853				
7	Nov-98	503	657	5,509,211	6,111,219	11%	-23%	BETTER	
8	Dec-98	940	1073	10,788,379	10,458,198	-3%	-12%		
9	Jan-99	1145	1218	13,190,277	12,479,386	-5%	-6%		
10	Feb-99	674	946	7,913,473	7,720,392	-2%	-29%		
11	Mar-99	666	691	7,885,820	<u>7,75</u> 6,707	-2%	-4%		
12	Total			45,287,160	44,525,902				
13	Nov-99	391	657	4,414,515	5,006,961	13%	-40%	SAME	
14	Dec-99	888	1073	9,843,466	9,945,506	1%	-17%		
15	Jan-00	1052	1218	11,490,604	11,562,457	1%	-14%		
16	Feb-00	685	946	8,165,749	7,828,846	-4%	-28%		
17	Mar-00	537	691	6,042,011	6,484,838	7%	-22%		
18	Total			39,956,345	40,828,608				
19	Nov-00	833	657	8,899,925	9,364,839	5%	27%		
20	Dec-00	1445	1073	16,074,078	15,437,222	-4%	35%		
21	Jan-01	1113	1218	12,718,983	12,163,883	-4%	-9%		
22	Feb-01	996	946	11,009,323	10,895,136	-1%	5%		
23	Mar-01	764	691	8,348,578	8,722,934	4%	11%		
24	Total			57,050,887	56,584,014				
25	Nov-01	398	657	4,317,691	5,075,977	18%	-39%	WORSE	
26	Dec-01	844	1073	9,996,257	9,511,690	-5%	-21%		
27	Jan-02	974	1218	10,624,016	10,793,419	2%	-20%		
28	Feb-02	756	946	8,404,975	8,528,867	1%	-20%		
29	Mar-02	759	691	8,465,251	8,673,637	2%	10%		
30	Total			41,808,190	42,583,590				

In 5 of the past 25 months, Ms. Jenkins' demand estimate would vary from the actual demand by 10% or more

# Estimation of MGE's Monthly Winter Demand Using Jenkins' Supplemental Direct Testimony Regression

(All demand figures below produced using the demand estimation model reflected in Jenkins' Supplemental Direct Workpaper titled "MGE Regression Using MTL-14 and DR 146")

			No. of Days in Month	Estimated Demand (in MMBtu)			
Line		Actual				Total	
No.	Description	HDD		Baseload	Heatload	(No Growth)	
	(a)	(p)	(c)	(d)	(e)	(f)	
1	Baseload Factor = 38,397.13						
2	Heatload Factor = 9,859.45						
3	Nov-97	710	30	1,151,914	7,000,212	8,152,126	
4	Dec-97	978	31	1,190,311	9,642,546	10,832,857	
5	Jan-98	945	31	1,190,311	9,317,184	10,507,495	
6	Feb-98	662	28	1,075,120	6,526,959	7,602,079	
7	Mar-98	797	31	1,190,311	7,857,985	9,048,296	
8	Total			5,797,967	40,344,886	46,142,853	
9	Nov-98	503	30	1,151,914	4,959,305	6,111,219	
10	Dec-98	940	31	1,190,311	9,267,887	10,458,198	
11	Jan-99	1145	31	1,190,311	11,289,075	12,479,386	
12	Feb-99	674	28	1,075,120	6,645,272	7,720,392	
13	Mar-99	666	31	1,190,311	6,566,396	7,756,707	
14	Total		•	5,797,967	38,727,935	44,525,902	
15	Nov-99	391	30	1,151,914	3,855,047	5,006,961	
16	Dec-99	888	31	1,190,311	8,755,195	9,945,506	
17	Jan-00	1052	31	1,190,311	10,372,146	11,562,457	
18	Feb-00	685	28	1,075,120	6,753,726	7.828.846	
19	Mar-00	537	31	1,190,311	5,294,527	6,484,838	
20	Total		•	5,797,967	35,030,641	40,828,608	
21	Nov-00	833	30	1,151,914	8,212,925	9,364,839	
22	Dec-00	1445	31	1,190,311	14,246,911	15,437,222	
23	Jan-01	1113	31	1,190,311	10,973,572	12,163,883	
24	Feb-01	996	28	1,075,120	9,820,016	10,895,136	
25	Mar-01	764	31	1,190,311	7,532,623	8,722,934	
26	Total		•	5,797,967	50,786,047	56,584,014	
27	Nov-01	398	30	1,151,914	3,924,063	5,075,977	
28	Dec-01	844	31	1,190,311	8,321,379	9,511,690	
29	Jan-02	974	31	1,190,311	9,603,108	10,793,419	
30	Feb-02	756	28	1,075,120	7,453,747	8,528,867	
31	Mar-02	759	31	1,190,311	7,483,326	8,673,637	
32	Total		•	5,797,967	36,785,623	42,583,590	
	Source: [1]	[2]		[3]	[4]	[5]	

#### Sources 5 4 1

<sup>[1]</sup> Baseload and heatload factors from Jenkins' Supplemental Direct workpaper entitled "MGE Regression Using MTL-14 and DR 146".

<sup>[2]</sup> Actual HDD from Schedule MTL-14.

<sup>[3]</sup> Baseload demand calculated as Baseload Factor times No. of Days.

<sup>[4]</sup> Heatload demand calculated as Heatload Factor times Actual HDD.

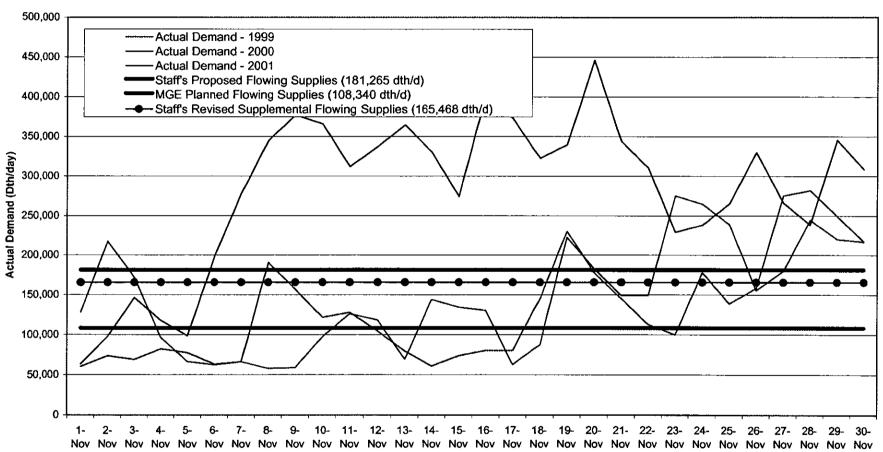
<sup>[5]</sup> Column (d) plus column (e).

# HC

Schedule MTL-42 Is Highly Confidential

HC

### Comparison of MGE's Planned Flowing Supplies versus Staff's "Original" and "Revised Supplemental" Proposals Based on Actual Daily Demand for Novemer 1999, 2000 and 2001



	1999	2000	2001	Total	
No. of Days Demand < 108,340	10	3	14	27	
No. of Days Demand < 181,265	21	5	24	50	
No. of Days Demand < 165,468	19	5	22	46	