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John P. Hester, Senior Vice President/Regulatory Affairs & Energy Resources

February 18, 2011

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VIA ELECTRONIC MAIL
AND REGULAR MAIL

Commissioner Sandra D. Kennedy
Arizona Corporation Commission
1200 West Washington Street
Phoenix, AZ 85007
Email address: skennedy@azcc.gov

Re: *Southwest Gas Corporation's Response to Natural Gas Outages in Tucson and Sierra Vista, Arizona from February 3 through February 8, 2011*

Dear Commissioner Kennedy:

I am in receipt of your letter dated February 7, 2011, requesting Southwest Gas Corporation respond to the natural gas outage referenced above. Southwest Gas appreciates the opportunity to address your concerns and provides responses to your questions in the attached document. We further offer to meet individually with you to elaborate on the attached responses, and look forward to participating in any open meetings the Commission may convene on the matter.

If you have any questions on the attached response, please do not hesitate to contact me at 702-876-7381.

Sincerely,

John P Hester

John P. Hester, Senior Vice President
Regulatory Affairs & Energy Resources

Arizona Corporation Commission
DOCKETED
FEB 22 2011
DOCKETED BY

JPH/kt
Enclosures

cc via electronic mail and/or regular mail:

Gary Pierce, Chairman
Bob Stump, Commissioner
Paul Newman, Commissioner
Brenda Burns, Commissioner
Honorable Russell Pearce, President of Arizona Senate
Honorable Kirk Adams, Speaker of Arizona House
Representative Peggy Judd
Representative David Stevens
Senator Gail Griffin
Representative Terri Proud
Representative Vic Williams
Senator Al Melvin
Representative Sally Ann Gonzales
Representative Macario Saldate
Senator Olivia Cajero Bedford
Representative Steve Farley
Representative Bruce Wheeler
Senator Paula Aboud
Representative Matt Heinz
Representative Daniel Patterson
Senator Linda Lopez
Representative David Gowan
Representative Ted Vogt
Senator Frank Antenori
Ernest G. Johnson, Executive Director
Janice Alward, Chief Counsel
Steve Olea, Utilities Division Director
Robert Miller, Chief of Pipeline Safety
Christina Arzaga-Williams, Advisor to Commissioner Kennedy
Phil Dion, UNS Gas
Cass Palazzari, El Paso Natural Gas
Shelley Corman, Transwestern Pipeline Company, LLC

Southwest Gas Corporation's Response to the Natural Gas Outages in Tucson and Sierra Vista, Arizona

1. In your opinion, what caused the outages to occur? Please provide as much detail as possible.

The Southwest Gas Corporation (Southwest Gas or the Company) customer outages of February 3rd and 4th were the culmination of a number of events that led to a decrease of available physical gas supply and deliverability in Southern Arizona, specifically Tucson and Sierra Vista.

The contributing events included extreme weather conditions and rolling power interruptions in Texas that eventually impacted the Permian Basin (Basin) where Southwest Gas procures natural gas supplies for its Arizona customers. Early in the day on February 2nd, the Basin production began to be impaired to the point of significant supply loss into various interstate transmission pipelines, including El Paso Natural Gas Company (El Paso), which transport natural gas to customers outside the Basin, and it became clear that available supplies would be prorated to customers like Southwest Gas. At the same time as these events in the Basin were unfolding, customers in Texas, New Mexico and Arizona were experiencing extreme cold weather and peak natural gas demand. Together, these two events caused pressure and deliverability issues across the southern portion of the western interstate pipeline system and outages occurred.

In both Tucson and Sierra Vista, where Southwest Gas' outages occurred, the weather event was the coldest in over 60 years causing extreme demands on both the local distribution systems and interstate pipeline facilities. Specifically, the lack of available supplies into the interstate pipeline, coupled with the extreme cold weather event, lead to pressures in the pipelines serving both Tucson and Sierra Vista to drop below design parameters. These conditions ultimately lead to customer outages.

2. Were the outages a surprise to your company or did your company have some advance warning that the impending situation could result in outages to retail customers?

In its operations monitoring and evaluation efforts, Southwest Gas maintains routine contact with its interstate pipelines and physical natural gas suppliers. Southwest Gas monitors weather forecasts multiple times per day and many days in advance in order to plan for the natural gas demands of its customers. Operating conditions of the upstream pipelines and within the local distribution system are monitored 24 hours per day. Because of these efforts, the Company had limited advanced warning that the situation could result in outages to retail customers. These efforts allow an opportunity to employ both reasoned judgment and preemptive actions regarding the operating condition of Southwest Gas' distribution system. While Southwest Gas understood that the confluence of factors noted in response to Question 1 were creating a precarious natural gas delivery system, from wellhead to burner-tip, Southwest Gas could not conclude that large numbers of customers would lose service until it received individual customer reports of lost service. Once isolated reports of lost service are received, Southwest Gas must quickly identify broader areas of service to discontinue in an effort to prevent a domino effect resulting in even more widespread customer service outages.

3. If your company did have advance warning, how much in advance of the outages was that warning and when did your company notify the Arizona Corporation Commission of the possibility of outages?

Southwest Gas received three notifications on February 2nd from El Paso that ranged from a Strained Operating Condition (SOC) warning at 7:24 am MST to declaration of a Critical Operating Condition (COC) at 11:52 am MST. These communications are standard communications, required by El Paso's interstate pipeline tariff. SOC and COC communications from the interstate suppliers need to be considered in the context of current distribution operating conditions and do not necessarily (or usually) predict a customer outage. The SOC notifications are received at various times throughout the year and are processed according to receipt. COC notices by nature are emergency communications, and while they require and receive a different level of response from Southwest Gas, they do not necessarily predict any system failure. These notices, including the COC notice, did not identify a system failure specific to a particular

region, but rather indicated that El Paso's entire system was being compromised, which would not necessarily result in an outage.

Southwest Gas processed these communications according to its internal protocol by notifying relevant individuals in its operating divisions in Arizona. When the emergency, or COC, was enacted, Southwest Gas' Tucson operations group convened a meeting of key management pursuant to the Winter Operations Guide and initiated heightened monitoring of the distribution system. Necessary field and office employees were deployed at approximately 10 pm as operating conditions on the interstate pipeline degraded and the need for intervention on the distribution system became a possibility. At 3:30 am, the Sierra Vista system reached critical low pressures and the Emergency Operations Center was opened. At this time the customer curtailment plan was invoked.

At 7:47 am on Thursday, February 3rd, Southwest Gas notified the Arizona Corporation Commission of its first reported customer outage.

4. Did your company have an emergency plan of some kind in place to deal with this type of situation? If no, why not?

Yes. Southwest Gas has an Emergency Plan Manual that identifies appropriate actions to take when experiencing a low pressure situation, outlines the process of isolating a portion of the system when required, and lists considerations for the restoration of service after an outage. The Southern Arizona Division's Winter Operation Guide lists activities that are undertaken to prepare for and respond to gas system issues that may occur during periods of peak demand, including the monitoring of pressures and the curtailment of customers.

5. If your company did have an emergency plan in place, how did that plan work in this situation? In other words, what parts of the plan worked as desired and what parts need improvement? For those parts that need improvement, please provide as much detail as possible.

Southwest Gas has an emergency response plan and the operation functions of the plan worked as designed. The functions of managing the low pressure incidents experienced, the curtailment of service and service restoration were all very successful. However, in hindsight we believe the communication portion of our emergency response plan should be reviewed and improved upon. Southwest Gas acknowledges that its communications with customers did not meet our customers' expectations. Southwest Gas is currently in the process of evaluating potential improvements in processes and technology enhancements in order to expedite and improve communications with affected customers in the future.

6. How were the aspects of the outage and how your company was dealing with restoring service communicated to your customers, in particular those customers that were directly impacted by the outages?

Southwest Gas implemented the following communication methods to reach customers:

- Issued news releases on Thursday, February 3rd, to the media, and initiated or responded to 376 media inquiries throughout the course of the outage.
- Posted Update Bulletins on Southwest Gas' website beginning on Thursday, February 3rd and updated multiple times per day throughout the course of the outage. Updates later included a map of the affected Tucson foothills area, and a letter from Gary Clark, Southern Arizona Division Vice President.
- Provided talking points to customer representatives, which were updated several times throughout the outage.
- Participated in three news conferences sponsored by Pima County Office of Emergency Management (PCOEM).
- Supported PCOEM's Emergency Operation Center with technical expertise and communications support on February 3rd and 4th.

- Worked with PCOEM to distribute "reverse 911" calls to 18,000 Pima County residents (this was a wider distribution than the actual outage area because the system is based on zip code).
- Updated messages on Southwest Gas' Interactive Voice Response system (call-waiting messages).
- Posted information on the Arizona Division of Emergency Management website.
- Provided daily telephone updates to various municipal, state and federal governmental and public safety entities, including elected officials.
- Provided regular updates with social service agencies.
- Responded to hundreds of direct telephone inquiries and emails from customers.
- Contacted numerous industrial and large commercial customers to warn of possible curtailment, or to officially notify of curtailment.
- Posted maps of outage area at all field command posts, and customer service supervisors stationed there to answer questions from area customers.

7. There is no natural gas storage in Arizona. If there would have been natural gas storage available to your company in Arizona, would that have mitigated the impact of the outages? Please provide as much detail as possible.

It is possible that having accessible natural gas storage in Arizona may have mitigated the extent of the outages. The configuration of storage-related pipeline facilities, location of the storage facility, and deliverability of those supplies to the distribution system facilities would all impact the potential outage mitigation referenced in this question. However, in general, natural gas storage in Arizona would certainly increase the reliability of supplies to Arizona natural gas customers.

8. Is your company working, either on its own or in conjunction with other entities, on establishing natural gas storage in Arizona? If no, why not? If yes, please provide as much detail as possible.

Yes. Southwest Gas is an active member of the Arizona Storage Coalition (Coalition) that was formed in December 2007 to evaluate and pursue natural gas storage opportunities in Arizona. The Coalition has been approached by several storage developers soliciting interest in a proposed salt cavern storage project in the Picacho Basin area. All storage proposals submitted by developers have been reviewed by the Coalition. Certain projects have been deemed to be very expensive in relationship to the benefits they may provide. To date, all projects have experienced difficulties in overcoming environmental issues pertaining to the disposal of mined salt/brine. One proposed project would dispose of the brine by injecting it back into a suitable geological formation that currently has water with a high concentration of salt. This brine disposal method has experienced opposition from the Arizona Department of Environmental Quality, due to concerns that this method could contaminate aquifers that could be potential potable water sources in the future. Other projects would store the mined brine in above ground evaporative ponds until the water concentration level in the brine decreases to a point that makes the brine suitable for disposal. The prospect of storing the brine in above ground evaporative ponds has not been well received by some area municipalities.

9. If your company is not working on establishing natural gas storage in Arizona, do you know of any entities that are working on this issue?

Please refer to the response provided to Question 8.

10. Are there any other measures (other than storage) that you are considering or have considered that would help mitigate such a situation in the future?

Yes. Southwest Gas will incorporate the February 3rd record weather event in its ongoing physical natural gas and interstate capacity planning process. This process includes a long-range forecast of customer demands, distribution system improvements, and communications with interstate suppliers. Future supply and transportation portfolio commitments, and distribution system engineering decisions, will be made accordingly.

11. Please provide any other information that you believe would be helpful to me and the other Commissioners in this inquiry.

Southwest Gas is proud of the efforts made by its operations employees to contain the extent of customer service outages resulting from the February 3rd extreme weather event and subsequently restore service to customers in a safe and efficient manner. The employee efforts mitigated the outages in Sierra Vista and Tucson, which could have had a more widespread effect. Southwest Gas brought in nearly 100 additional field personnel from Central Arizona, Southern Nevada, and Southern California operating divisions to assist the service restoration effort of our Southern Arizona employees. All employees worked tirelessly to restore service to customers impacted by the outage.

While service outages are generally infrequent in nature, they offer an opportunity to identify "lessons learned." Many customers expressed frustration with the availability of real-time information regarding the outage and service restoration effort. Southwest Gas acknowledges the need to identify additional communication tools to keep our customers better informed when such outages occur. Southwest Gas has already begun the review of measures that can be implemented to allow the Company to communicate more effectively and immediately with customers. The potential use of tools such as e-mail, text messaging, expanded web communications, as well as social media will be explored as options which may allow Southwest Gas to leverage automated mass forms of communications in order to better inform its customers. Southwest Gas will update the Commission as that review proceeds.