

The following are the comments of ONEOK Field Services Company (“Field Services”) to the unresolved issues discussed at Meeting 3:

(1) Provide comments on pros/cons of requiring the installation of continuous H<sub>2</sub>S monitors on the gas gathering systems.

- Field Services believes that in order to adequately protect the health and safety of delivery tap consumers, delivery tap points that have a risk of dangerous levels (even if those levels are short term H<sub>2</sub>S spikes) of H<sub>2</sub>S should be permanently disconnected.
- Continuous monitors located on the Hugoton field gathering system will not reduce or eliminate the risks associated with serving “delivery tap” consumers on rich, sour, wet gas gathering systems that were never intended to provide “distribution” type service. Gathering system monitors do not prevent the contamination of the gathering system or the contamination of consumer home piping with toxic and corrosive levels of H<sub>2</sub>S gas. A scenario is provided below in order to substantiate this point.
  - a. If a gathering system H<sub>2</sub>S monitor “alarms” on a system with hundreds of input wellhead points (with potential to have H<sub>2</sub>S spikes or upsets), how do you determine the source of H<sub>2</sub>S? The only alternatives are to immediately turn-off all delivery taps that might be affected on an emergency basis; or shut-in hundreds of wells at a time to prevent further contamination. However, these efforts would be too little too late as gathering system and possibly consumer piping contamination has already occurred. Furthermore:
    - i. Shutting-in this much well-head gas would then create another problem of disrupting gas flow to “delivery taps” that may not be affected by the H<sub>2</sub>S spike.
    - ii. Contaminated gas is now resting in tens if not hundreds of miles of gathering pipe. Once contaminants are in the gathering system they are nearly impossible to remove. This “resting” high H<sub>2</sub>S gas is still flowing to the very delivery tap consumers you are trying to protect from contamination. The consumer’s home/commercial piping is now contaminated.
- The most effective use of continuous monitors is to employ a more aggressive approach that prevents H<sub>2</sub>S from entering (and thus contaminating the gathering systems) or an approach that prevents H<sub>2</sub>S from getting into the house piping. Of these two approaches, **a monitor and automated shut-off valve located at the delivery tap meter is more economically feasible and effective in preventing house piping contamination.** These two approaches are described below:
  - a. A monitor on each well with an automatic shut-off would prevent contaminants from entering the gathering system. This approach would require the installation of hundreds of monitors at the expense of the producer.
  - b. To prevent gas consumers from getting contaminants delivered to their homes or businesses, a monitor with an automatic shut-off would be needed at each

meter point where gas is delivered. In comparison to wellhead monitors, this approach would result in installation of far fewer monitors. The cost of installation of the monitors could be recovered by the local distribution customer through a special tariff.

- (2) Provide comments on the need for and the frequency of mandatory reporting of H<sub>2</sub>S concentrations from producers.

This type of information would help provide additional knowledge as to the extent and degree of the H<sub>2</sub>S problem for each well in the Hugoton field. However, having that information would do little to solve the problem unless other viable economic alternatives become available to prevent H<sub>2</sub>S contamination.

- (3) Provide comments on whether or not the Corporation Commission should formally set the level for the maximum amount of H<sub>2</sub>S in gas provided to consumers.

The Corporation Commission has already formally set the level for the maximum amount of H<sub>2</sub>S in gas provided to consumers when it approved the H<sub>2</sub>S limits in the Midwest Gas tariff at 4 PPM. By approving the Midwest gas tariff, the Commission determined that the 4-PPM level was fair, just and reasonable. Without substantial evidence to the contrary, the 4-PPM limit is the standard approved by the Commission. The Commission has not approved that level in a formal rulemaking requiring all companies to adhere to the 4-PPM standard. Currently, the Commission allows each company to decide the appropriate level on a company-by-company basis. If the Commission decides to issue a rule requiring all companies to adhere to a maximum H<sub>2</sub>S level, that level should be very conservative in order to assure protection of the health and safety of the general public. The cost associated with conforming to a new rule should be recovered from the customers of the local distribution company that will be protected by the rule. If a level is established, monitors should be required at the consumers delivery point to assure levels are not exceeded by the supplying utility.

- (4) Provide comments on what safety factor controls the safety threshold: internal corrosion or concentration in ambient air.

Both. The physical integrity of the gathering system is very important to prevent corrosion of the system which could create a hazardous situation. Nevertheless, we cannot ignore the health and safety of end use customers connected to the system in setting a standard. You cannot ignore either one of these two criteria.

- (5) Provide comments on the necessity of developing a database of internal corrosion failures to track the affects of H<sub>2</sub>S on the integrity of the gathering system.

This information may be useful to regulators and system operators. The question becomes who pays for the additional cost of regulatory compliance on the gathering system. In view of the fact that there is a limited life expectancy of the Hugoton field remaining, any recovery of additional regulatory costs associated with the already significantly increasing gathering system investment as the field further depletes could be counterproductive.

- (6) Gas providers to take steps to educate first responders and emergency management on the dangers of H<sub>2</sub>S; possibly use Kansas One Call meetings to achieve this goal. Also refer to team comments.

This suggestion is a very excellent way to provide information to the public emergency personnel of the dangers of H<sub>2</sub>S and its potential effects on the public.

- (7) Provide comments on what other groups that should be made aware of H<sub>2</sub>S.

Field Services believes that the Team 3 report has adequately addressed the groups that should be made aware.

- (8) KCC staff to request providers of unprocessed natural gas to notify end-use consumers of the potential dangers of H<sub>2</sub>S by December 2005.

Field Services agrees that this time line is reasonable. Filed Services would, however, clarify that the notification of end-use consumers should be the responsibility of the appropriate local distribution company serving the consumer.

- (9) Provide comments on whether or not electronic versions of gas gathering maps should be available to the public.

No. For security reasons, electronic versions of gas gathering maps should not be available on the web for public review by persons that do not have a reason to have the information.

- (10) Provide comments on a proposed requirement that all wells be sampled for H<sub>2</sub>S at least annually and the results reported to KCC.

This information could provide information as to the extent of the H<sub>2</sub>S problem and help determine if the problem is growing over time.

- (11) Provide comments on the need for regulations to mandate action similar to that contained in RP 55 should H<sub>2</sub>S contamination reach 100 ppm.

This is a public policy decision that the Commission needs to consider since it is a Recommended Practice for operators.

- (12) Provide comments on the impact of sampling for H<sub>2</sub>S contamination and the impact complying with RP55 would have on small producers.

All new mandated requirements adopted by the Commission would have a cost associated with compliance. That is the reason we should carefully look at the cost/benefit of each new mandated requirement. All parties, whether they be small producers, gatherers, or LDC's, are trying to manage costs as best as possible. Ultimately, the public ends up paying the cost of additional regulation. Therefore, any new regulations adopted should have clear benefits to the public which should greatly exceed the cost of compliance.