



DEPT. OF TRANSPORTATION
DOCKETS

2008112 A 910

November 11, 2008

U.S. Department of Transportation
Docket Operations
M-30
West Building
Ground Floor
Room W12-140
1200 New Jersey Avenue SE
Washington, D.C. 20590-0001

Re: Docket No. PHMSA-2007-27954

Dear DOT Representative:

Atmos Energy Corporation ("Atmos Energy") is the country's largest natural gas only distributor, serving about 3.2 million natural gas distribution customers in more than 1,600 communities in 12 states from the Blue Ridge Mountains in the East to the Rocky Mountains in the West. Atmos Energy also provides natural gas marketing and procurement services to industrial, commercial and municipal customers primarily in the Midwest and Southeast and manages company-owned natural gas pipeline and storage assets, including one of the largest intrastate natural gas pipeline systems in Texas. Atmos Energy safely and reliably operates this vast transmission and distribution operation through a computer based supervisory control and data acquisition ("SCADA") system that has approximately 60,000 display points, and, therefore, has a significant interest in the proposed rulemaking. Atmos Energy takes this opportunity to recognize the Pipeline and Hazardous Materials Safety Administration's ("PHMSA") efforts in proposing a control room management rule and is pleased to have the opportunity to comment on the Notice of Proposed Rulemaking, 49 CFR Part 192, Pipeline Safety: Control Room Management / Human Factors.

There are many areas of concern that Atmos Energy expresses in these comments and Atmos Energy wishes to underscore its support for the joint industry letter filed by the American Gas Association, the American Public Gas Association, the American Petroleum Institute, the Association of Oil Pipe Lines, and the Interstate Natural Gas Association of America with PHMSA on October 8, 2008. This letter identifies some of the foundational issues that industry has with the proposed rule and suggests appropriate courses of action, including the withdrawal of the rule. While Atmos Energy is always willing to engage in constructive dialogue on a topic, Atmos Energy is concerned that the issues posed by this proposed rule are so great that the more reasoned approach is to withdraw the proposed rule and begin anew.

One of Atmos Energy's fundamental issues with the proposed rule is that it far exceeds the human factor management approach that Congress mandated in the 2006 PIPES Act. Also, while the PIPES Act goes on to reference the implementation of recommendations in an NTSB report, that NTSB report deals with liquids pipelines and the approaches and concepts in that report should not be shoe-horned into the one-size-fits-all-industries approach that PHMSA has used in this rulemaking.

Atmos Energy certainly stands hand-in-hand with PHMSA in the goal of enhancing public safety. There are many aspects of this proposed rule, however, that simply do not further that goal. For example, the definition of "controller" is so broad that it includes field personnel which will necessarily cause operators to ask themselves, "What operational checks and balances can I cease to perform that may keep these individuals from being designated as 'controllers'?" Similarly, the point-to-point verification proposals are so costly and onerous that small operators may simply cease SCADA system operations altogether and all operators will be forced to review their SCADA controller display points and eliminate all display points that provide useful but not critically essential information. Actions such as these will likely be a consequence of adoption of the proposed rule. Sadly, these consequences will negatively impact pipeline safety. Atmos Energy implores that PHMSA carefully and thoughtfully review these comments so that the end result of this rulemaking process is a rule that positively impacts pipeline safety.

For ease of reference, Atmos Energy's comments are presented below under the broad category of concepts of concern regarding compliance with Executive Order 12866 and DOT Policies and Procedures as well as with the Paperwork Reduction Act. Those discussions are followed by comments by specific proposed regulation.

Concepts of Concern

Executive Order 12866 and DOT Policies and Procedures

PHMSA recognizes that this proposed rule has economic impact but estimates that the cost will not exceed the \$100 million economic significance threshold. Atmos Energy conservatively estimates that implementation of the rule as proposed will result in costs of over \$14 million to Atmos Energy for the three year period following the effective date of the rule.¹ Applying this implementation cost figure to the approximately 2,500 natural gas and LNG facility operators identified by PHMSA results in rule implementation costs that far exceed the \$25 million and \$100 million annual

¹ Included in Atmos Energy's estimated costs over the three year period are costs associated with baseline point-to-point verification, plan development, review/modify systems for API RP-1165 compliance, leak notification to controllers, control room management including shift change handoffs, fatigue management, alarm management including weekly and annual reviews, change management, operating experience, training including program development, annual review, simulator / table tops, qualification including program development and annual qualification with observer, and electronic gas pipeline and liquid pipeline maps updated annually (for third party facility identification).

expenditure thresholds. Atmos Energy believes that PHMSA has significantly underestimated the economic impact of the proposed rule and recommends that PHMSA collaborate with various stakeholders to develop an analysis that is more indicative of the true cost of the rule's implementation.

Paperwork Reduction Act

Within the discussion of the Paperwork Reduction Act PHMSA utilizes an estimate of 3,420 controllers. Applying that controller count to the 2,500 operators PHMSA has identified yields a count of less than 2 controllers per operator. Atmos Energy questions the accuracy of such a low controller count.

In addition to the paperwork under-estimate caused by the low controller count, it is Atmos Energy's opinion that PHMSA has substantially understated the anticipated paperwork burden associated with the proposed rule through the assumption that records currently maintained meet the bulk of the rule. This assumption is flawed because the proposed rule contains many new requirements and layers of redundancy for which operators will have to implement recordkeeping in a manner that can demonstrate compliance with the rule. Further, many of the "controllers" will not physically work from a "control room" and there are currently very few, if any, records that are being maintained relative to the actions of the non-control room controllers that demonstrate compliance with requirements of the proposed rule.

Proposed Regulation Section-by-Section Comment

49 C.F.R. 192.3 – Definitions

The preamble states that the proposed rule adds the definitions of four key terms to improve the clarity of the proposed new requirements. In order to meet this objective Atmos Energy submits that the definitions of "alarm" and "controller" need to be revised. First of all, it must be understood that SCADA systems² are designed not just to provide alarms to controllers. The proposed definition must take into account this fact and limit "alarms" for purposes of this regulation to an indication from a SCADA system that requires the attention of a controller. Further, the definition of "controller" is so broad that it would include an individual operating a by-pass at a city gate or regulator station since those efforts could impact downstream equipment (such as a regulator station) for which the individual could not directly observe the equipment response. The application of this definition to actual operations will be the designation of "controller" on all operational personnel whose routine duties require day-to-day interaction with facilities such as valves, measuring equipment, compressors, storages, and wellheads.

² For ease of reference in these comments the phrase "SCADA system" means a SCADA or similar monitoring system.

Atmos Energy submits that the issues with the controller definition can be addressed by the use of the following definition:

A qualified individual whose function within a shift is to remotely monitor and/or control the operations of entire or multiple sections of pipeline systems via a SCADA system from a pipeline control room, and who has operational authority and accountability for the daily remote operational functions of pipeline systems as defined by the pipeline operator.

49 C.F.R. 192.631(b) – Roles and Responsibilities

Proposed subpart 192.631(b)(4) indicates that in all circumstances a controller is designated as the individual who is responsible for providing timely notification and coordination with the operator of another pipeline in a common corridor when a leak or failure is suspected including a call from the public concerning a suspected leak on an asset owned or operated by another company in the same corridor or right-of-way. The designation by rule of the controller as the leak information communicator with other operators shifts what should be a performance based standard to a prescriptive standard.

Atmos Energy submits that subpart (4) should be drafted similarly to proposed 192.631(b)(1-3) which provides for the operator to designate roles and responsibilities for the controller. Should an operator elect to designate a controller as the primary communicator with other operators for leakage matters, then that role and responsibility should be so designated. On the other hand, if an operator determines that the role and responsibility for leak communication with other operators is better placed with field operations personnel who may be in the best position to know who to contact in a leakage matter, then that role and responsibility should be designated in that manner.

49 C.F.R. 192.631(c) – Provide Adequate Information

Subpart (c)(1) proposes the incorporation into the regulation of API RP-1165 in its entirety unless an operator can adequately demonstrate that a provision of API RP-1165 is not applicable or is impracticable in the SCADA system used. PHMSA should recognize that there are SCADA systems that function well and provide clear, concise, and accurate information to controllers that do not meet all of the API RP-1165 standards. An operator with a well-designed and properly functioning SCADA system should not be forced to go through the exercise of “adequately demonstrating” that some provision of that standard is not applicable or is impracticable. Further, in the event that API RP-1165 is revised, all SCADA operators will again be placed in the position modifying their SCADA systems per the revision or attempting to comply with the “adequate demonstration” standard. Atmos Energy proposes that the reference to API RP-1165 be deleted.

Subpart (c)(2) concerns the validation of SCADA systems through a point-to-point baseline verification exercise. It is unclear from the proposed regulation whether the intent is to require verification of the SCADA display accuracy relative to the field equipment configuration or whether the intent is to expand the verification requirements beyond that which is displayed through SCADA. Further, the proposed requirement in (c)(2)(i) that 100% of SCADA system displays be point-to-point verified between the SCADA system and the field equipment is not only excessive but also creates significant manpower issues³ as not all SCADA system displays provide controllers with data required to safely operate the pipeline system.⁴

Moreover, the requirements of the point-to-point verification are also unclear. For example, while verification on the display end of the point-to-point verification is fairly straightforward, the verification on the transducer is ambiguous as this can be interpreted to mean one must verify the variable / parameters back to the process variable (i.e. pressure, temperature, flow, etc.) or verify that the transducer output signal with the associated value being seen on the SCADA display. Additionally, many alarm conditions (low, low/low, high, and high/high) are difficult to simulate in the field as the system operations at the time of the field verification will likely not be such that these conditions can be replicated. Likewise, sensors embedded within compressors and engines also generate SCADA display values and these values cannot be verified without major disruptions in system operations and, in some cases, shut-down and dismantling of equipment.

Atmos Energy is also perplexed by the language in the proposed regulation that the point-to-point verification include "proper equipment or software response to SCADA system values." If the intent of the proposed language is to have operators verify that pressure control valves, flow control valves, engine / compressor controls, etc. operate and respond accordingly when a command is sent via the SCADA system, then the practical result of such exercises will be the potential disruption of service as an operator, for example, demonstrates that a controller can remotely close a valve on a single feed system.

The three year cut-off for prior point-to-point verifications is also of concern to Atmos Energy. Our experience has been that over time very little drift or inaccuracy occurs on SCADA systems. Absent empirical evidence to the contrary, which is not mentioned in the preamble to the proposed regulation, all prior point-to-point verification for which there is documentation should meet the point-to-point verification requirement.

³ The timeframe contained in (c)(2)(i) to perform the point-to-point verifications is unrealistic. As Atmos Energy stated in the introductory paragraph, its operations encompass distribution and transmission operations in 12 states with over 60,000 SCADA display points. Taking into consideration the fact that these verifications will not likely be performed in the heating season due to system operation requirements and the fact that a minimum of two persons will be required to perform each verification, the seasonal constraints and manpower issues highlight the fact that 36 months is an insufficient period to perform the 60,000 plus point-to-point verifications.

⁴ Examples of SCADA system display points not related to safety system operation include ambient temperature, instrument building door indications, gas chromatograph data, and odorant storage tank alarms.

Atmos Energy therefore recommends that 192.631(c)(2)(i) be reworded giving consideration to the impracticality of verifying selected alarms, set points, equipment responses and software responses at a given point in time. Consideration should also be given to the impracticality of disrupting system operations in order to perform point-to-point verifications. Atmos Energy suggests that the point-to-point verifications be limited to only those display points that have the potential to influence a controller's decisions related to the safe operation of a pipeline system and that can be accessed without system disruption. Further, Atmos Energy recommends that the three year limitation on prior point-to-point verifications be deleted from the proposed regulation with language added that allows the use of all prior point-to-point verifications for which there is documentation.

Atmos Energy's final comment with respect to 192.631(c)(2) concerns subpart ii. This proposed requirement is that any time "any modification" is made to field equipment or applicable software a point-to-point verification must be made. While Atmos Energy agrees that this process is prudent if the field equipment or applicable software modification affects SCADA system displays used in the control room, the proposed regulation should be revised to limit the point-to-point verification requirement to that limited circumstance.

The proposed regulation places great emphasis on the perceived interplay of controllers and leaks. In this vein, 192.631(c)(4) provides that a circumstance when field personnel must notify the controller is the identification of a leak or a situation that could reasonably be expected to develop into an incident if left unaddressed. While there certainly should be communication between field personnel and the controller when there is a significant leak on a high-pressure distribution or transmission line, there is simply no need for a field personnel to contact the controller each and every time a leak occurs on a distribution system. In fact, to do so could arguably cause greater safety issues as time that could be spent addressing the leak at hand will be spent communicating the information to the controller and time the controller should spend monitoring the system will be spent noting a leak for which there is no system impact.

Likewise, the same analysis can be used with respect to situations that could develop into an incident if left unaddressed. For example, if a trackhoe cuts a service line, the situation could develop into an incident. There is simply no reason why field personnel should notify a controller of the situation as there is nothing the controller can do to effectively limit the flow of gas from the cut service line and instead of spending the time to make that ineffectual call, the time can be more wisely spent by field personnel taking action. On the other hand, if a situation occurs on a high-pressure distribution or transmission line that could result in an incident, a call to the controller could be appropriate. The bottom line is that a one size fits all approach of mandated leak and potential incident notification to controllers does not work and Atmos Energy proposes that this requirement be deleted from the proposed regulation with a performance based regulation substituted.

Proposed 192.631(c)(7) requires overlap of shifts for controllers in order to permit the exchange of necessary information. Atmos Energy suggests that rather than mandating shift overlap, the regulation should be performed based in nature and provide that the operator ensure a method be developed and in place for exchanging information between shifts personnel. Further, under the proposed definition of "controller", there are many field personnel that fall into the "controller" definition who will have no one with whom to perform the shift change information exchange.

192.631(d) - Fatigue Mitigation

Atmos Energy concurs that fatigue mitigation and fatigue awareness training is appropriate and a performance based standard that allows latitude to the operator should be established rather than the proposed prescriptive approach.

192.631(e) - Alarm Management

An operator cannot assure appropriate controller response to an alarm or notification. An operator can only provide a controller with the appropriate alarms and notifications and monitor actions of the controller. Therefore, Atmos Energy suggests that the first sentence of 192.631(e) be revised to provide, "Each operator using a SCADA system must assure appropriate alarms and notifications are provided to the controller." Further, Atmos Energy notes that several subparts in the alarm management section have little, if any, relationship to alarm management and should be moved elsewhere in the regulation or deleted. Atmos Energy further notes that the alarm management regulation includes several imprecise words such as "nuisance" and "excessive" that are too subjective for use in the regulation.

Atmos Energy suggests that the alarm management regulation be revised to provide:

- 192.631(e) Each operator using a SCADA system must assure appropriate alarms and notification are provided to the controller. An operator must:
- (1) Review SCADA operations within one week of any of the following:
 - (i) Known conditions that should have resulted in alarms or event indications that did not do so;
 - (ii) [Delete this subpart as it does not pertain to alarm management.]

- (iii) Identification of unexplained changes in the number of alarms or management of alarms;
- (iv) Known conditions which should not have resulted in alarms or event indications that did so;
- (v) Verification that the number of alarms received is appropriate for the known conditions;
- (vi) [Delete this subpart as it does not pertain to alarm management.]
- (vii) [Delete this subpart as it does not pertain to alarm management.]
- (viii) Identification of SCADA or control system maintenance issues;
- (ix) Identification of systemic SCADA or control system problems, server load, or communication problems, etc.
- (x) Identification of points that have been erroneously taken off scan or that have had forced or manual values for extended periods; and
- (xi) [Delete this subpart as it does not pertain to alarm management.]

Moreover, with respect to the SCADA configuration and alarm management operations review proposed in 192.631(e)(2), Atmos Energy comments that proposed subparts (iv) and (viii) do not concern SCADA configuration and alarm management operations and should not be included in the review.

192.631(f) – Change Management

Atmos Energy suggests that the proposed regulation be clarified to provide for field maintenance information to only be provided to controllers when that maintenance activity has a potential impact to a controller. For example, field maintenance information such as painting, odorant replenishment, valve lubing, etc. should not be provided to controllers.

Additionally, PHMSA should recognize that most SCADA modifications to not affect controllers and the training requirement proposed in 192.631(f)(2) should be limited to SCADA modifications that affect controllers. Proposed subpart 192.631(f)(3) provides

that an operator is to seek control room "participation" when pipeline hydraulic or configuration changes are being considered. Configuration and hydraulic changes are made every day in distribution systems, but the configuration and hydraulic changes resulting from the addition of service lines and the retirement of other service lines has absolutely no impact to controller. On the other hand, significant configuration changes to high-pressure, large volume facilities or a modification to compressors can impact the system and controllers should be aware of these changes as they are considered. The proposed "one size fits all" language, however, will not enhance either control room or field operations.

Proposed subpart 192.631(f)(4) concerns mergers and acquisitions. While Atmos Energy agrees that plans must be in place in order to successfully manage such events, the reality is that other provisions of the controller rulemaking require that only properly trained and experienced individuals function as controllers thus rendering the subpart duplicitous.

Proposed subpart 192.631(f)(5) contains a very specific and limited listing of change items that need to be conveyed to a controller. Atmos Energy submits that the subpart should be performance based and left to the operator to determine the notifications that are appropriate based upon that operator's unique operations rather than specific to three items. Also, Atmos Energy is unclear what the phrase "automated routine software" means in the context of this subpart insomuch as the phrase is not defined and is not a phrase that is in common use in the industry. Finally, Atmos Energy questions the specific requirement to advise controllers of relief valve set point changes. There are many relief valves that do not relate to SCADA system control room displays so advising controllers of these changes would not in any way enhance control room operations.

Lastly, subpart 192.631(f)(6) provides that an operator must thoroughly document and keep records for each of the change management occurrences outlined in subpart (f). Atmos Energy questions the requirement for "thorough" documentation as opposed to "regular" documentation and questions the requirement for both thorough documentation and recordkeeping.

192.631(g) – Operating Experience

PHMSA must recognize that the vast majority of incidents occur that bear no relationship to control room activities. Simply stated, the review of control room operations should only be required when an incident may have been caused by controller error and subpart 192.631(g)(1) should be revised accordingly. Subpart 192.631(g)(2) reflects a lofty goal, but even lofty goals need definitions of terms such as "close-call". Absent a workable definition that can be consistently interpreted and applied by operators, the subpart should be deleted. Further, subpart 192.631(g)(3) does not involve operating experience, which is the topic of this subpart, and should be deleted.

192.631(h) – Training

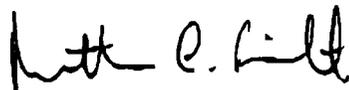
Atmos Energy recognizes and agrees that controllers need to be properly trained. Atmos Energy also recognizes that each operator's system is unique. This uniqueness limits the likelihood that any simulator can effectively train a new controller without cost prohibitive modifications. Under the proposed rule, this limits a controller's training to tabletop exercises, which, while a valuable tool to ensure that different work groups understand roles and responsibilities is a much less valuable tool when attempting to train an individual to monitor, interpret, and respond to computer system information and alarms. Likewise, on-site visits are helpful from a base information standpoint, but do not assist an individual whose job requires monitoring, interpretation, and response to computer system information and alarms. Atmos Energy submits that the entire 192.631(h) be revised to provide that an operator is to establish a performance based training program for new controllers that is designed to meet the training needs of individuals for the particular system(s) they are to control. Further, an operator should establish a performance based training program that addresses controllers assuming responsibility for monitoring different systems. Lastly, Atmos Energy again takes this opportunity to point out that controllers should not be across-the-board designated by regulation as the work group that has responsibility for communicating with public and emergency response personnel during an emergency situation.

192.631(j) – Qualification

The operator qualification program is based upon activities that meet a four part test. If controllers perform tasks that meet this test, then controllers are already subject to the operator qualification program. An extreme disservice to the entire operator qualification program will occur if a sub-set of the program is created that establishes different standards for qualification of controllers. Atmos Energy submits that, at most, the controller regulation should reinforce that to the extent controllers perform tasks that meet the four part operator qualification test, then only operator qualified controllers per Subpart N of the pipeline safety regulations should be performing those tasks.

In conclusion, Atmos Energy appreciates the opportunity to provide comments on this rulemaking and we look forward to PHMSA's thoughtful resolution of the issues raised in these comments. Through a continued spirit of cooperation we can continue to enhance pipeline safety in America.

Yours truly,



Matthew C. Frihart, P.E.
Vice President – Gas Control
Atmos Pipeline – Texas
Atmos Energy Corporation