

New Regulations Require Pipelines to Implement Control Room Management Programs

On December 3, 2009, the Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) issued a final rule adopting new regulations requiring gas and hazardous pipeline owners to develop and implement written control room management procedures. The new regulations apply if the pipeline has a controller in a control room who monitors and controls all or part of a pipeline facility through a supervisory and control data acquisition (SCADA) system. Pipeline operators must develop control room management procedures by August 1, 2011, and implement them by February 1, 2012. The new regulations do not apply to owners and operators of liquefied natural gas (LNG) facilities.

BACKGROUND

Control room management refers to the management of human factors, like fatigue, affecting pipeline employees who monitor pipeline parameters and remotely direct certain pipeline operations from control rooms. The new regulations adopted in the final rule require that operators establish written processes and procedures designed to reduce risks associated with human factors and ensure that the management of pipeline control room activities contributes to safe pipeline operations. The final rule responds to recommendations of the National Transportation Safety Board (NTSB) and congress's directives in the Pipeline Inspection, Protection, Enforcement, and Safety Act.

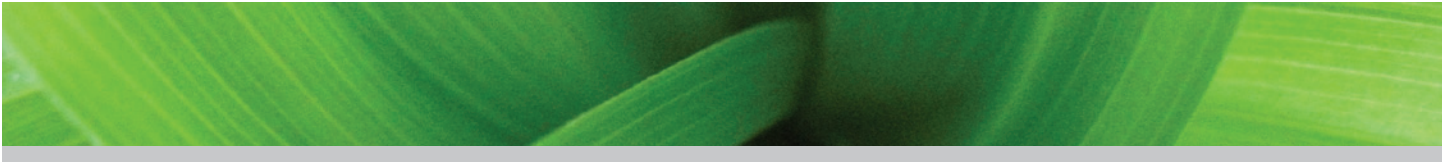
APPLICATION OF THE NEW REGULATIONS

Owners and operators of gas and hazardous liquid pipelines that are subject to PHMSA's pipeline safety regulations and that have a controller in a control room who monitors and controls all or part of a pipeline facility using SCADA systems must develop and implement control room management programs. In a change from the proposed rule, the final rule does not apply to operators of LNG facilities. Moreover, operators of gas distribution pipelines with less than 250,000 customers and operators of gas transmission systems without compressor stations are required to comply only with those provisions addressing fatigue mitigation, validation, and compliance and deviation.

REQUIREMENTS OF THE CONTROL ROOM MANAGEMENT RULE

Pipeline operators subject to the rule must develop and implement written control room management policies and procedures and integrate them into existing written procedures. The required procedures must address:

Roles and Responsibilities. Operators must define controllers' roles and responsibilities during normal, abnormal, and emergency operating conditions. Specifically, operators must define a controller's authority and responsibility to make decisions and take actions during normal operations, a controller's role during abnormal operation or an



emergency, including the controller's responsibility to take specific actions and to communicate with others, and a method of recording controller shift changes and any hand-over of responsibility between controllers.

Adequate Information. Operators must ensure controllers have the information, tools, processes and procedures necessary to perform their roles and responsibilities. Operators of hazardous liquid pipelines must comply with the American Petroleum Institute's Recommended Practice 1165 (API RP 1165) with respect to new, expanded, or replaced SCADA systems, unless the pipeline demonstrates that the standards are impractical. Gas pipeline operators must comply only with specified provisions of API RP 1165. While, existing SCADA displays are not required to comply with the API standard, operators must: (1) validate the accuracy of SCADA displays when field equipment is added or moved or when changes are made either to field equipment or SCADA display in a way that could affect pipeline safety; (2) test and verify their internal communication plan; and (3) test back-up SCADA systems to ensure that manual operation of the pipeline will be safe in the event of SCADA failure.

Shift Changes and Information Sharing. Operators must develop procedures for controller shift-changes and other circumstances where responsibility for pipeline operations is transferred from one controller to another. Operators must also specify the content of information to be exchanged between controllers during the turnover.

Fatigue Management. Operators must implement measures to prevent fatigue by: (1) establishing shift lengths and rotations that allow for eight hours of continuous sleep; (2) educating controllers and their supervisors on strategies to reduce fatigue; (3) training controllers and supervisors on recognizing effects of fatigue; and (4) setting a maximum limit on the amount of hours a controller may work, subject to deviations during emergencies.

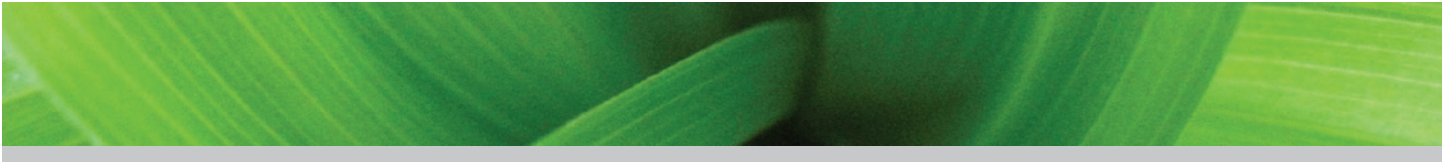
Alarm Management. Operators must develop written plans to facilitate effective responses to alarms. Operators must ensure alarms are accurate and support safe pipeline operations.

Change Management. Operators must ensure that changes that could affect control room operations, such as physical changes to pipeline equipment or configuration are coordinated with control room personnel and that adequate communication among control room personnel, management, and field personnel is established.

Learning from Operating Experience. Pipelines must incorporate lessons learned into control room management procedures and training. Operators must review all reportable incidents to determine if control room actions contributed to the event. If necessary, operators must correct deficiencies relating to controller fatigue, field equipment, operation of any relief device, procedures, and SCADA system configuration and performance. Operators are not required to review non-reportable events or close calls.

Training. Operators must establish formal controller training programs on their roles and responsibilities. Training must address how to recognize and respond to abnormal operating conditions, including controllers' communication responsibilities in an emergency. The training program must also utilize control room simulations and provide controllers with a working knowledge of the pipeline system.

Validation. Upon request, operators must submit their control room management procedures to PHMSA or the appropriate state regulatory agency for review.



Compliance and Deviations. Operators must maintain records showing compliance with the final rule's requirements, and must be able to show that any deviation from the final rule was necessary for pipeline safety.

IMPLICATIONS

PHMSA has long recognized the importance of human interactions to ensuring safe pipeline operations and, in particular, has emphasized the role of controllers in preventing and reducing risks. Control room errors can initiate or exacerbate an accident. On the other hand, controllers can be instrumental in preventing accidents or alleviating their consequences. For the first time, pipeline operators will be required to implement written control management plans that are designed to ensure that controllers have the tools, training, procedures, and management support they need to effectively assure safe pipeline operations. Operators must implement programs containing elements required in the new regulations no later than February 1, 2012, or be at risk for compliance penalties. PHMSA believes that the rule will reduce pipeline accidents and related societal costs, and estimates that, for those costs and benefits that can be quantified, the new regulations will have a present value of net benefits of about \$6 million over a ten-year period after all requirements are implemented.

FOR ADDITIONAL INFORMATION

Van Ness Feldman regularly counsels clients on issues related to pipeline construction, permitting, safety, and operation. Specifically, the firm has in-depth experience counseling clients on compliance with the Pipeline Safety Act and regulations. If you are interested in additional information regarding PHMSA's regulations, or any other energy-related federal activity, please contact Susan Olenchuk in our Washington D.C. Office at (202) 298-1800, or any member of the firm's Natural Gas practice group.

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