DEPARTMENT OF TRANSPORTATION
OFFICE OF THE CHIEF INFORMATION OFFICER

SUPPORTING STATEMENT

Pipeline Safety: Safety Standards for Increasing the Maximum Allowable Operating Pressure for Natural Gas Transmission Pipelines
Docket ID PHMSA-2005-23447
RIN 2137-AE25

INTRODUCTION

The Pipeline and Hazardous Materials Safety Administration (PHMSA) published a Notice of Proposed Rulemaking (NPRM) in the Federal Register [73 FR 13167] on March 12, 2008, entitled "Pipeline Safety: Safety Standards for Increasing the Maximum Allowable Operating Pressure for Natural Gas Transmission Pipelines." In this NPRM, Pipeline is proposing new regulations for gas transmission pipelines to allow higher operating pressures for stronger pipelines. It appears that a request for a new Information Collection / Request for a new Office of Management and Budget (OMB) Control Number was not submitted to OMB at that time. This is to request OMB approval for a new information collection entitled "Safety Standards for Increasing the Maximum Allowable Operating Pressure for Natural Gas Transmission Pipelines."

Part A. Justification

1. Circumstances that make collection of information necessary.

Gas transmission pipelines in the U.S. use steel pipe almost exclusively.[1] Under Federal pipeline safety regulations, steel transmission pipelines must use a maximum allowable operating pressure (MAOP) that is below the specified minimum yield strength (SMYS) of the steel pipe. Each pipeline class is based on population density, ranging from Class 1 (undeveloped, rural land) through Class 4 (densely populated urban areas) has a different MAOP.

Currently the pipeline MAOP and mileage is as follows:

- Class 1: 72% of SMYS, comprise 80%[2] to 90%[3] of transmission mileage.
- Class 2: 60% of SMYS, comprise 5%[4] to 10%[5] of mileage.
- Class 3: 50% of SMYS, comprise less than 5%[6] to 10%[7] of mileage.

[1] Howard J. Murphy, Jr., Energy Experts International, "Reconsideration of Maximum Allowable Operating Pressure: Costs and Benefits – A Macroeconomic View," PHMSA-2006-23447-35.
[2] Ibid.
[3] Richard B. Kuprewicz, Accufacts Inc., "Increasing MAOP on U.S. Gas Transmission Pipelines," a paper prepared for the Pipeline Safety Trust, PHMSA-2006-23447-50.
[4] Ibid
[5] Howard J. Murphy, Jr., Op.cit.
[6] Richard B. Kuprewicz, Op. cit.
[7] Howard J. Murphy, Jr., Energy Experts International, "Reconsideration of Maximum Allowable Operating Pressure: Costs and Benefits – A Macroeconomic View," PHMSA-2006-23447-35.

- Class 4: 40% of SMYS, comprise approximately 0.5% of mileage.[8]

Under 49 U.S.C. 60102(a), PHMSA has broad authority to issue safety standards for the design, construction, operation, and maintenance of gas transmission pipelines. Under 49 U.S.C. 60104(b), PHMSA may not require an operator to modify or replace existing pipeline to meet a new design or construction standard. Under 49 U.S.C. 60102(b), a gas pipeline safety standard must be practicable and designed to meet the need for gas pipeline safety and for protection of the environment. The Office of Pipeline and Hazardous Material Administration (PHMSA) of the U.S. Department of Transportation (DOT) must consider several factors in issuing a safety standard. These factors include the relevant available pipeline safety and environmental information, the appropriateness of the standard for the type of pipeline, the reasonableness of the standard, and reasonably identifiable or estimated costs and benefits. PHMSA considered both of these in the current regulation. The NPRM for permitting a greater maximum allowable operating pressure supports the Secretary of Transportation's priorities by improving performance and harnessing 21st Century technologies. Increasing operating pressure can ease supply constraints by boosting pipeline capacity by as much as 10 percent. Increasing capacity also enhances pipeline efficiency. This enhanced performance is made possible by technological advances in metallurgy and pipe manufacture, as well as by improved pipeline lifecycle management practices. Pipelines built with improved steel pipe and operated in compliance with improved lifecycle management practices can operate safely at higher internal pressures. Because revised regulations allowing increased capacity encourage the use of newer pipeline materials and associated safety standards, the result should have a net positive effect on overall pipeline safety.

In 1970, Federal regulators allowed pipelines that had operated successfully for many years at a stress level greater than 72 percent of SMYS to continue to operate at the higher stress level. Currently, approximately five thousand miles of gas transmission pipelines in the U.S. are operating at a stress level that is greater than 72 percent of SMYS because of grandfathering.[9] PHMSA's rulemaking grows out of the Agency's examination of the safety issues in allowing existing or proposed pipeline to operate at higher pressure. From a policy perspective, the experience with previously granted special permits has been very positive. One of the successful operators that obtained a special permit, Maritimes & Northeast Pipeline, plans to take advantage of the extra capacity allowed by the higher MAOP to redirect gas supply to the New York City metropolitan area, the most capacity-strained market in the nation.

Incorporating the special permit standards into PHMSA's regulations allows qualified pipelines to operate at higher pressure. The NPRM eases regulatory burdens, encourages the development of new infrastructure, improves regulatory certainty, and reduces Agency workload associated with granting individual applications.

The information collection associated with this new regulation will promote the US DOT's Safety and Environmental Strategic Goals. Notification requirements ensure

[8] Richard B. Kuprewicz, Op.cit.
[9] Richard B. Kuprewicz, Op.cit.

operators will assess pipeline new installations and upgrades to better protect both human and environmental resources.

2. How, by whom, and for what purpose is the information used.

Pipeline operators will contact PHMSA before implementing an alternative MAOP. Senior executive officers must sign the certification and send it to PHMSA at least 30 days before implementation. PHMSA will review the certification request to ensure that the new or uprated (replacement) pipelines are specified to accommodate the higher operating pressure.

Recordkeeping and reporting requirements are developed from pipeline industry standards and internal procedures previously used by pipeline operators to monitor, evaluate, control, and record functions relating to the operation and maintenance of their pipeline system. Without the information collection, PHMSA would not be guaranteed timely notification of alternative MAOP pipeline installation and would lack a method to proactively identify trends and avoid potential safety issues.

3. Extent of automated information collection.

Operators are permitted to keep records in any retrievable form. They may use the latest information technology to reduce the additional information-collection burden. Pipeline operators are encouraged to file submissions to PHMSA electronically. However, the Notification to use an alternative MAOP must include a signature from a pipeline senior executive officer. If the operator possesses digital signature capability, the operator can submit the notification via e-mail.

4. Efforts to identify duplication.

PHMSA is the only federal agency that collects information related pipeline operating pressures. No similar information is requested by the government or industry on distribution pipeline failures that occur between the point-of-sale to a distribution company and a customer's meter. Operators are only required to submit one notification for alternative MAOP implementation.

5. Efforts to minimize the burden on small businesses.

PHMSA expects impacted operators to be large and small businesses and therefore the requirement may impact small businesses and other entities.[10] However, since deciding to install an alternative MAOP is elective, operators will only make the choice if it is cost effective. Small operators can elect to continue with standard pipelines and operating pressures. PHMSA provides a guidance manual for operators of small gas systems.[11]

6. Impact of less frequent collection of information.

[10] Small businesses as defined by the Regulatory Flexibility Act (P.L. 96-354)

[11] See http://ops.dot.gov/regs/small_ng/SmallNaturalGas.htm

PHMSA would not be able to determine the location of newly installed alternative MAOP pipeline without the notification requirement. Operators would have the increased burden of filing a petition every time they seek an alternative MAOP and have to wait for PHMSA's review.

7. Special circumstances.

None of the conditions apply.

8. Compliance with 5 CFR 1320.8.

PHMSA published a Notice of Proposed Rulemaking (NPRM) on March 12, 2008 [73 FR 13167] requesting comments on the proposed rule, and providing a 60-day comment period. PHMSA received comments from 19 organizations in response to the NPRM. These included eleven pipeline operators, four trade associations and related organizations, three steel/pipe manufacturers, and one state pipeline safety regulatory agency. None of the comments pertained to recordkeeping or record retention. PHMSA received comments relating to pipeline materials, design, construction, operation and maintenance, threat assessment, as well as on the regulatory impact analysis. PHMSA covered all the comments individually and will provide a response to each of them in the final rule.

9. Payments or gifts to respondents.

Not applicable.

10. Assurance of confidentiality.

The record keeping requirements of Part 192 do not include anything of a sensitive nature or of any matters considered private.

11. Justification for collection of sensitive information.

The record keeping requirements of Part 192 do not involve questions of a sensitive nature.

12. Estimate of burden hours for information requested.

The NPRM requires pipeline operators to notify PHMSA if they elect to operate at an alternative MAOP. The NPRM requires an operator to notify PHMSA, and state pipeline safety regulators exercising jurisdiction, when it elects to establish an alternative MAOP. Operators are required to furnish evaluation reports, prepare notification letters, disseminate public notices, and keep records. The notification and threat assessment requirements are described in §§ 192.112, 192,328, and 192.620. These requirements will allow the Agency to validate the operators' conclusions. The requirements are as follows:

- *Section 192.112,* requires operators to notify PHMSA, and a State pipeline safety authority when the pipeline is located in a State where PHMSA has an interstate agent agreement, results of pipeline safety tests, research, and analyses anywhere between 60 and 180 days before operating at the alternative maximum allowable operating pressure.
- *Section 192.328(d) and Section 192.620(b),* requires operators to notify PHMSA of the results of their MAOP related evaluations and analysis results. Under this section operators must furnish reports to each PHMSA pipeline safety regional office where the pipe is in service at least 60 days prior to operating at the alternative MAOP. An operator must also notify a State pipeline safety authority when the pipeline is located in a State where PHMSA has an interstate agent agreement, or an intrastate pipeline is regulated by that State.
- *Sections 192.620(d)(1)* requires an operator to prepare a threat assessment consistent with the assessments done under integrity management to address the risks of operating at an increased stress level.
- *Section 192.620(d)(2),* requires operators, not in an High Consequence Area (HCA) to inform any stakeholders living along the right of way of any increase in MAOP in their pipeline systems. Where the alternative MAOP pipeline is in an HCA already identified per Subpart O, then no additional notification is necessary besides what is already required.
- *Sections 192.620(c)(1), (2), and (3),* requires an operator to notify PHMSA, and applicable state pipeline safety regulators, when it elects to establish an alternative MAOP. In addition it requires an operator to further notify PHMSA when it has completed the actions necessary to support operation at an alternative MAOP, by submitting a certification by a senior executive that the pipeline meets the requirements for operation at alternative MAOP. The certification is required by paragraph (c)(2). A senior executive must certify that the pipeline meets the additional design and construction regulations of this rule. A senior executive must also certify that the operator has changed its operation and maintenance procedures to include the more rigorous additional operation and maintenance requirements. In addition, a senior executive must certify that the operator has reviewed its damage prevention program in light of best practices, such as Common Ground Alliance best practices or some equivalent best practices, and made any needed changes to it to ensure that the program meets or exceeds those standards or practices. The certification must be submitted at least 30 days prior to operation at an alternative MAOP.
- *Section 192.620(d)(8),* requires operators to notify the PHMSA Regional Office where pipeline is located (and states where appropriate) if inadequate CP readings are not addressed within six months, providing the reason for the delay and a justification that the delay is not inimical to pipeline safety.

PHMSA burden hours and labor costs calculations are based on the following assumptions:

- PHMSA estimates that 18 transmission operators will elect to establish alternative MAOP the first year, and three additional operators will opt to operate under alternative MAOP in successive year. This estimate is derived from the number of reports PHMSA received in 2006. In 2006 PHMSA received 1,393 reports covering 320,532 miles of gas transmission and gathering pipelines. On average each report covered 230 miles of pipeline (320,532 / 1,393). If each report covers, on average, one pipeline, PHMSA expects that 18 pipeline operators will account for the 4,200 miles of pipeline adopting an alternative MAOP in the first year (4,200 / 230). Similarly three operators will account for the 700 miles of additional pipeline that will adopt alternative MAOP in successive years (700 / 230).
- A compliance officer will prepare notification safety related documents and public awareness notices required under §§ 192.112, 192.328 and 192.620. Compliance officers in the natural gas industry earn, on average, $26.50 per hour with a fully loaded rate of approximately $40.00 ($26.50 * 1.50).[12]
- A chief executive officer earning, on average, $89.61 per hour with a fully loaded rate of approximately $134.00 ($89.61 * 1.50) will verify and sign notifications letters.[13]
- Health and safety engineers earning, on average, $36.25 per hour with a fully loaded rate of approximately $54 per hour ($36.25 * 1.50) will prepare the threat assessments described under Section 192.620.[14]
- Currently PHMSA requires operators to submit annual reports. Those reports take 12 hours to prepare. Preparing the required safety testing notifications and public awareness notices is not expected to be any more complicated or time consuming than preparing an annual report and would not exceed 12 hours per notification.
- PHMSA estimates that notification letters may be prepared in one-half hour (30 minutes).
- The notification letter must be signed by a senior executive officer. PHMSA estimates that it may take a senior pipeline executive 10 minutes to review and sign it.
- Bases on industry estimates, PHMSA expects each threat assessment will require 150 hours of labor to prepare.[15]

Notification Burden Hours - The burden hours for preparing and providing safety related notifications and public awareness notices are estimated at 216 (18 notifications * 12 hours) the first-year and 36 (3 notifications * 12 hours) in successive years.

The burden hours associated with the preparation of the notification letter is expected to be 9 hours the first-year for support staff (18 notifications * 30 minutes) and 3 hours for senior pipeline executives (18 notifications * 10 minutes). In subsequent years, the

[12] Bureau of Labor and Statistics hourly mean pay rate data for gas transportation industry NAICS 486200 - Pipeline Transportation of Natural Gas workers, May 2007 National Industry-Specific Occupational Employment and Wage Estimates. http://www.bls.gov/oes/current/naics4_486200.htm
[13] Ibid.
[14] Ibid.
[15] Communication between M. Dwayne Burton, KinderMorgan, and Paul Zebe, Volpe Center, August 3, 2007.

burden hours are expected to drop to 1.5 hours for staff support (3 notifications * 30 minutes), and 0.5 hours for senior pipeline executives (3 notifications * 10 minutes).

Threat Assessments Burden Hours - Threat assessments will require a larger information collection burden. General engineers are expected to complete the threat assessments. Each new alternative MAOP section will need an accompanying threat assessment.

The burden hours associated with the threat assessment are estimated to be 2,700 (18 threat assessments * 150 hours) the first-year. In subsequent years, the estimate is 450 hours (3 threat assessments * 150 hours).

Information Collection Burden Hour Reduction - PHMSA believes that the alternative MAOP regulation will reduce the number of reportable incidents. If the incidents are reduced then incident reports for those avoided incidents will also decrease. Because of the uncertainty involved the reduction of incident reports and their associated time burden is not included in the PRA analysis. However, it should be noted that besides the large benefits to human safety and reduced property damage from reduced incidents, the regulation will also likely produce a nominal savings in information collection burden.

Summary of Burden Hours - Based on this analysis of the regulation, there will be an estimated 2,928 total annual burden hours attributable to the notifications and threat assessments requirements in the first-year. In following years, the annual burden is expected to decrease to 488 hours.

13. Estimate of total annual costs to respondents. The following calculations are based on the same assumptions as those noted under number 12 above.

Notification Costs - PHMSA estimates that the cost of preparing and issuing safety related notifications and public awareness notices is $8,640 ($40* 12 hours* 18 notifications) the first year and $1,440 ($40* 12 hours* 3 notifications) in successive years.

PHMSA estimates the cost of preparing a notification letter, having it signed, and sending it to the Agency is $360 the first-year (18 notifications * ½ hour * $40) and $60 each successive years (3 notifications * ½ hour * $40). The cost for the senior official to review and sign the notification is estimated at $ 402 (18 notifications * $134 * .167 hours) the first-year and $ 67 (3 * $134 * .167 hours) in successive years.

PHMSA acknowledges that there may be some additional nominal cost to operators for storage and filing, depending on whether records are kept electronically or on paper, the length of time records are kept (i.e., the life of the pipeline), the volume, and how records are packaged. Assuming that operators store approximately (within their facilities) one cubic foot of records (at $23.00 per cubic foot) each, PHMSA estimates that it would cost each operator $23 per year to store and maintain the required paper records.

Threat Assessment Costs - Each threat assessment prepared by a health and safety engineer is expected to cost $8,100 ($54 * 150 burden hours) per assessment. In the first year the total cost of the threat assessments is estimated to be $145,800 ($8,100 * 18 threat assessments). In subsequent years the total cost is expected to drop to $24,300 ($8,100 * 3 threat assessments).

Summary of Costs - The cost associated with notification and threat assessments requirements is estimated at approximately $155,202 in the first-year and $25,867 in successive years.

14. Estimate of cost to the Federal government.

PHMSA does not expect there will be any additional cost for the Federal government.

15. Explanation of program changes or adjustments.

Not applicable.

16. Publication of results of data collection.

There is no expected publication associated with this information collection.

17. Approval for not explaining the expiration date for OMB approval.

PHMSA will display the expiration date.

18. Exceptions to certification statement. There are no exceptions to the certification statement.

Part B. Collections of Information Employing Statistical Methods

ATTACHMENTS:

N/A

1. Describe potential respondent universe and any sampling selection method to be used.

N/A.

2. Describe procedures for collecting information, including statistical methodology for stratification and sample selection, estimation procedures, degree of accuracy needed, and less than annual periodic data cycles.

N/A.

3. Describe methods to maximize response rate.

N/A.

4. Describe tests of procedures or methods.

N/A.

5. Provide name and telephone number of individuals who were consulted on statistical aspects of the information collection and who will actually collect and/or analyze the information.

N/A.