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DEPARTMENT OF TRANSPORTATION

PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION

49 CFR Part 192

[Docket No. PHMSA-2011-0009]

RIN 2137-AE71

Pipeline Safety: Expanding the Use of Excess Flow Valves in Gas Distribution Systems to Applications Other Than Single-Family Residences

AGENCY: Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

ACTION: Notice of proposed rulemaking.

SUMMARY: Excess Flow Valves (EFVs), which are safety devices installed on natural gas pipelines to reduce the risk of accidents, are currently required for new or replaced gas service lines servicing single-family residences (SFR) as defined in §192.383(a). PHMSA is proposing to make changes to Part 192 to expand this requirement to include new or replaced branched service lines servicing SFRs, multi-family residences, and small commercial entities consuming gas volumes not exceeding 1,000 Standard Cubic Feet per Hour (SCFH). PHMSA is also proposing to require the use of manual service line shut-off valve (e.g., curb valves) for new or replaced service lines with meter capacities exceeding 1,000 SCFH. Finally, PHMSA is proposing that operators notify customers of their right to request installation of an EFV on service lines that are not being newly installed or replaced. PHMSA is proposing to delegate the

question of who bears the cost of installing EFVs to service lines that are not being newly installed or replaced to the operator, customer, and the appropriate State regulatory agency.

DATES: Persons interested in submitting written comments on this Notice of Proposed Rulemaking (NPRM) must do so by **[DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].** PHMSA will consider late-filed comments so far as practicable.

ADDRESSES: You may submit comments identified by the docket number PHMSA-2011-0009 by any of the following methods:

Comments should reference Docket No. PHMSA-2011-0009 and may be submitted in the following ways:

- Website: http://www.regulations.gov. This site allows the public to enter comments on any **Federal Register** notice issued by any agency. Follow the online instructions for submitting comments.
- Fax: 1-202-493-2251.
- Mail: U.S. Department of Transportation (DOT) Docket Operations Facility (M-30), West Building, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: DOT Docket Operations Facility, West Building, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC, 20590 between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays.

Instructions: Identify the docket number, PHMSA-2011-0009, at the beginning of your comments. If you mail your comments, submit two copies. In order to confirm receipt of your comments, include a self-addressed, stamped postcard.

Note: All comments are posted electronically in their original form, without changes or edits, including any personal information.

Privacy Act Statement

Anyone can search the electronic comments associated with any docket by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). DOT's complete Privacy Act Statement was published in the Federal Register on April 11, 2000, (65 FR 19477).

FOR FURTHER INFORMATION CONTACT: Mike Israni, by telephone at 202-366-4571, by fax at 202-366-4566, or by mail at DOT, PHMSA, 1200 New Jersey Avenue, SE, PHP-1, Washington, DC 20590-0001.

SUPPLEMENTARY INFORMATION:

I. Background

An EFV is a mechanical safety device installed inside the natural gas service line between the street and residential meter. The EFV will "trip or close" if there is sufficient damage to the line to minimize the flow of gas through the line and thus, the amount of gas that escapes into the atmosphere. During normal use, the valve is kept pushed open against oncoming gas flow by a spring. EFVs are designed so that general usage, such as turning on

appliances, will not shut the valve. However, during a significant increase in the flow of gas (e.g., due to a damaged line), the spring cannot overcome the force of gas, and the valve will close and stay closed until the correct pressure is restored. When the correct pressure is restored, the EFV automatically resets itself.

On July 7, 1998, in South Riding, Virginia, a residential gas explosion resulted in one death and three injuries. It is not known if the explosion occurred on a branched or non-branched service line servicing an SFR; however, PHMSA believes that this proposed rule or its previous rule requiring EFVs on single lines serving SFRs would have mitigated the consequences of the explosion. An investigation by the National Transportation Safety Board (NTSB) found the explosion likely would not have occurred if an EFV had been installed for this single-family home. Similarly, PHMSA strongly believes this incident would have likely been would have been mitigated at a minimum. As a result, on June 22, 2001, the NTSB issued Safety Recommendation P-01-2, recommending that PHMSA require excess flow valves in all new and renewed gas service lines, regardless of a customer's classification, when the operating conditions are compatible with readily available valves.

In December of 2005, the "Integrity Management for Gas Distribution: Report of Phase I Investigations", [1] developed by a multi-stakeholder group, was published. In the report, the stakeholder group recommended that "[A]s part of its distribution integrity management plan, an operator should consider the mitigative value of excess flow valves (EFVs). EFVs meeting performance criteria in § 192.381 and installed in accordance with § 192.383 may reduce the need for other mitigation options."

[1] http://www.regulations.gov/#!documentDetail;D=PHMSA-RSPA-2004-19854-0070

In an effort to study the possible benefits of expanding EFVs beyond SFR applications, PHMSA began development of the Interim Evaluation in early 2009. In June and August of 2009, PHMSA held public meetings on NTSB Recommendation P-01-2.

The meeting participants included the National Association of Regulatory Utility Commissioners, the National Association of Pipeline Safety Representatives, the International Association of Fire Chiefs, the National Association of State Fire Marshals, natural gas distribution operators, trade associations, manufacturers, and the Pipeline Safety Trust. As a result of these meetings, PHMSA issued a report titled: ‘‘Interim Evaluation: NTSB Recommendation P-01-2 Excess Flow Valves in Applications Other Than Service Lines Serving One SFR’’).[2]

On December 4, 2009, PHMSA amended the pipeline safety regulations to require the use of EFVs for new or replaced gas lines servicing SFRs.[3] While this requirement met the mandate of the Pipeline Inspection, Protection, Enforcement and Safety Act (PIPES Act) enacted in 2006, distribution lines, including those that serve branched SFRs, apartment buildings, other multi-residential dwellings, commercial properties, and industrial service lines, are still not required to use EFVs. These structures are susceptible to the same risks as SFR service lines. PHMSA, already aware of this risk, was awaiting completion of the Interim Evaluation, which studied the possible expansion of EFVs beyond SFRs and the challenges of application. The Interim Evaluation also addressed other practical alternatives such as the use of manual isolation

[2] The Interim Evaluation Report was issued in 2010 by PHMSA. The purpose of the interim report was to respond to the NTSB safety recommendation P-01-02 and evaluate the possibility of expansion of EFVs to applications other than service lines serving one single family residence (above 10 psig). The interim report also built a foundation for an economic analysis, considered the need for enhanced technical standards or guidelines, and suggested that any new technical standards include criteria for pressure drops across the EFV. The interim report can be found at the following link: http://www.regulations.gov/#!documentDetail;D=PHMSA-2011-0009-0002

[3] “Pipeline Safety: Integrity Management Programs for Gas Distribution Pipelines,”, 74 FR 63906 (December 4, 2009) RIN 2137–AE15.

devices, such as curb valves. The evaluation identified challenges related to the feasibility and practicality of the proposed solutions, as well as significant cost factors and benefit factors. The evaluation found that there are no other devices or viable options to shut off gas supply quickly when gas services line ruptures.

On November 25, 2011, PHMSA published an Advance Notice of Proposed Rulemaking (ANPRM) (76 FR 72666) asking the public to comment on the findings of the Interim Evaluation and issues relating to the expanded use of EFVs in gas distribution systems. PHMSA also sought comments from gas distribution operators on their experiences using EFVs, including:

- Technical challenges of installing EFVs on services other than SFRs;
- Categories of service to be considered for expanded EFV use;
- Cost factors;
- Data analysis in the Interim Evaluation;
- Technical standards for EFV devices; and
- Potential safety and societal benefits, small business and environmental impacts, and costs of modifying the existing regulatory requirements.

The ANPRM comments received by PHMSA will assist in the finalization of the Interim Evaluation and in determining what regulatory changes may be necessary to fulfill this mandate.

In 2012, the President signed the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, which requires PHMSA to study the possibility of expanding the use of EFVs beyond SFRs and issue a final report on the evaluation of the NTSB's recommendation on excess flow valves within 2 years after enactment of the Act. PHMSA is also mandated to, if appropriate, issue regulations requiring the use of EFVs or equivalent technology, where

“economically, technically and operationally feasible”, for new or entirely replaced distribution branch services, multi-family lines, and small commercial service lines. PHMSA has determined for the purpose of this proposed rule, based on the study, that the safety benefits of expanding EFVs justify the cost and is appropriate. The only proposed exceptions are for large apartment buildings, industrial or commercial users for whom EFVs may not be practical due to inherent design complexity, continuous supply demands and/or contamination issues. Additionally, PHMSA is proposing that services exceeding 1,000 SFCH install curb valves on new or replaced gas service lines.

The proposed required use of curb valves for large commercial (greater than 1,000 SFCH) goes beyond the Section 22 language of the Pipeline Safety, Job Creation, and Regulatory Certainty Act of 2011, however it is based on ANPRM comments received from industry, trade associations and other stakeholders. PHMSA and industry in general believe that EFVs are not suitable larger commercial facilities over 1,000 SFCH. Curb valves are the best alternative to an EFV and provide an effective added level of safety for these facilities. These valves also are a feasible alternative based on the cost/benefit analyses.

PHMSA’s authority for regulating natural gas pipelines was first established by the Natural Gas Pipeline Safety Act of 1968, Pub. L. No. 90-481, and has since been enlarged by additional legislation. The Pipeline Safety Laws specifically delegate authority to DOT to develop, prescribe, and enforce minimum Federal safety standards for the transportation of natural gas. PHMSA has used this statutory authority to promulgate comprehensive minimum safety standards. While the 2011 Act specifically directed PHMSA to require the installation of EFVs on new and replaced branched lines serving SFRs, multi-family and small commercial

facilities, DOT's underlying prior statutory authority under 49 USC § 60104 provides PHMSA with the authority to require the installation of curb valves for large commercial facilities.

In the time since the 1998 incident in South Riding, Virginia, the NTSB has investigated an additional 8 incidents, which resulted in 10 fatalities that could have possibly been averted if an EFV had been in place. The most recent incident occurred on November 23, 2012, when a gas pipeline exploded in Springfield, Massachusetts. The Springfield explosion injured 21 people and damaged more than 40 buildings. It is important also to note that this incident occurred on the day after Thanksgiving and the daycare adjacent to the explosion was closed. If the daycare would have been open, it is highly likely this incident would have resulted in even more losses. This incident is currently under investigation by the NTSB. All eight of these incidents occurred on lines that would be affected by this rule.

II. Analysis of ANPRM

Nineteen organizations and individuals submitted comments in response to the ANPRM. The individual docket item numbers are listed for each comment.

Trade Associations

- Northeast Gas Association (NGA) (PHMSA-2011-0009-0012).
- Texas Pipeline Association (TPA) (PHMSA-2011-0009-0016).
- American Gas Association (AGA) (PHMSA-2011-0009-0023).
- American Public Gas Association (APGA) (PHMSA-2011-0009-0024).

Gas Transmission and Distribution Pipeline Companies

- MidAmerican Energy Company (MAE) (PHMSA-2011-0009-0011).
- Avista Utilities (AU) (PHMSA-2011-0009-0013).

- Southwest Gas Corporation (SWC) (PHMSA-2011-0009-0015).
- National Grid (NG) (PHMSA-2011-0009-0022) (Supported AGA comments).
- Laclede Gas (LG) (PHMSA-2011-0009-0018) (Supported AGA comments).
- Kansas Gas Service (KGS) (PHMSA-2011-0009-0017).
- Nicor Gas (PHMSA-2011-0009-0014).

Government/Municipalities

- City of Ellensburg, Washington (PHMSA-2011-0009-0004).
- NTSB (PHMSA-2011-0009-0009).
- Iowa Utilities Board (IUB) (PHMSA-2011-0009-0020).

Pipeline Industry Suppliers

- R.W. Lyall (PHMSA-2011-0009-0021).
- Gas Breaker, Inc. (GBI) (PHMSA-2011-0009-0019).

Citizens

- Rebecca Lee Roter (PHMSA-2011-0009-0006).
- Courtney D. Brown (PHMSA-2011-0009-0010).
- Anonymous (PHMSA-2011-0009-0008) (The anonymous commenter expressed concerns regarding pipeline safety versus job creation, corruption, and politics. These topics are beyond the scope of this NPRM and are not discussed further.)

PHMSA reviewed all of the comments received in response to the ANPRM. The comments received from the trade associations largely supported expanded EFV use with certain limitations. The operators that responded with comments raised some concerns with expanded EFV use generally related to logistics and implementation. Municipality comments reflected a

concern that State laws already in place could conflict with any new Federal requirements. The NTSB expressed strong approval of the expanded EFV use. The comments submitted are discussed below in the same order as presented in the questions from the ANPRM.

A. Technical Challenges of Installing EFVs on Services Other than SFRs

A.1. Does the Interim Evaluation address all challenges associated with expanded EFV use (changing gas usage patterns, snap loads, business-critical gas supply applications, system configuration, pressure ratings, and size of commercially available EFVs)?

The ANPRM solicited feedback and comments regarding whether the Interim Evaluation fairly and accurately explained the challenges of expanded EFV use. These challenges, identified in the Interim Evaluation from a variety of stakeholders, may limit or exclude future EFV expansion beyond SFR applications due to safety reasons. The challenges included changing gas-usage patterns, snap loads (i.e. loads that lead to false closures), business-critical gas supply applications, system configurations, pressure ratings, and the sizes of commercially available EFVs. Among the challenges discussed by the commenters, snap loads (loads that lead to false closures), load variation, and proper EFV sizing seemed to be of the greatest concern.

Overall, industry, trade association, government, and municipality commenters agreed that the Interim Evaluation failed to accurately and fully portray a variety of the technical and operational challenges and costs and benefits associated with expanded EFV requirements. These commenters either stated the report was lacking in certain areas or did not comment. In general, commenters, including AGA and APGA, strongly cautioned against the broad expansion of EFV requirements beyond those for SFRs, citing operators' lack of experience and design complexities. Specifically, APGA, SWC, AGA, LG, NG, AU, TPA, IUB, NGA, and MAE all

found the Interim Evaluation's discussion of the challenges of proper EFV sizing protocols, system configuration, and changes in gas-usage patterns to be inadequate and to contain false assumptions. Due to these concerns, MAE suggested that any EFV requirements should only affect new installations. Likewise, AGA supported the installation of EFVs on new and entirely replaced service lines in the following applications only:

- Service lines to SFRs;
- SFR service lines and branched SFR service lines installed at the same time;
- A branched SFR service line branching off an existing SFR service line that does not contain an EFV provided there is sufficient line capacity;
- A branched SFR service line branching off an existing SFR service line that contains an EFV sized appropriately for both customers provided there is sufficient line capacity;
- Multi-family installations, including duplexes, triplexes, and fourplexes, with individual meter sets, a known customer load (based on meter capacity) not exceeding 1,000 standard cubic feet per hour (SCFH), and a load that is not expected to increase over time; and
- Small commercial customers with a known customer load (based on meter capacity) not exceeding 1,000 SCFH through a single service line and where the load is not expected to increase over time.

AU, KGS, APGA, SWC, GBI, AGA, and the City of Ellensburg, WA, were concerned with the challenges of snap loads and the loss of continuous supply. Snap loads may occur when the amount of natural gas required to meet demand suddenly increases, which is generally due to many appliances being turned on at one time. GBI, AU, and AGA suggested that requiring EFVs for lines not exceeding 1,000 SCFH based on meter size is reasonable, but the false closure

and load variation challenges make using EFVs for applications that exceed 1,000 SCFH difficult. AU specifically stated that the failure (false closure or malfunction) of EFVs at high loads during winter frost is difficult to mitigate and is an inconvenience to customers who lose service. AU stated that winter frost makes pipeline excavation to repair lines difficult due to frozen soil. SWC commented that business disruptions and loss of service in vital areas such as high-occupancy dwellings created a safety hazard. KGS recommended that service lines serving multiple customers should not use a single EFV due to the increased degree of variation in the gas flow rates.

PHMSA received different approaches from commenters regarding the proper selection of an EFV for a pipeline, or what is referred to in the Interim Evaluation as "EFV sizing". The trip point is the specific point in which the EFV "trips", or closes, the valve due to gas pressure differential and is essentially the factor that guides the size selection of an EFV. In the Interim Evaluation, PHMSA suggested an EFV's trip point should be less than, but close to, the flow rate of a complete line rupture.

Commenters indicated that PHMSA's approach for trip point selection either led to tripping too easily or not at all. R.W. Lyall, an EFV manufacturer, further submitted that EFVs should be sized so that the EFV trip point, at the minimum system pressure, is above the maximum anticipated load and is above meter capacity. GBI suggested an EFV should be selected that operates at least 1.5 times the meter rating at the minimum design inlet pressure. Finally, SWC and NGA specifically commented that, due to the complexity of design found in multi-family industrial and commercial service lines, a common approach for sizing is not possible. With regard to the challenges of commercially available EFVs, PHMSA received two comments. GBI, an EFV manufacturer, commented that the commercial availability for most

applications, even those considered large, is not a problem. In contrast, MAE stated that the commercial availability of EFVs for non-residential load profiles is an assumption made on the part of PHMSA that may be inaccurate.

PHMSA Response

A number of the comments PHMSA received focused on a concern that EFVs could trip inadvertently and may cause unnecessary service disruptions. PHMSA agrees that variations in the configuration of service lines make it difficult to impose specific sizing requirements for various types of service lines and customers. However, if an operator installs an EFV and operates it in accordance with a manufacturer's specifications, the EFV should operate safely without the need for a prescriptive sizing requirement even when customer gas usage changes, unless the change were so large as to require a new service line.

Overall, PHMSA disagrees with the comments that EFVs are prone to failure and inadvertent tripping due to variations in gas flow, location, etc. Research and available data has shown very few failures with EFVs in actual usage. U.S. operators have gained considerable experience with EFVs since 1999 mainly with SFRs. The NRRI conducted a survey on EFV installation and operators' experiences with EFVs installed on single family residential service lines found of 2.5 million EFVs installed on SFRs only 223 failed[4]. In Europe, BEGAS. the government owned gas company in Eastern Austria, reported that EFVs have been installed since 1993 on service lines to hospitals, large facilities, production plants, etc. Out of 26,000 BEGAS

[4] "SURVEY ON EXCESS FLOW VALVES: INSTALLATIONS, COST, OPERATING PERFORMANCE AND GAS OPERATOR POLICY", Ken Costello, The National Regulatory Research Institute, March 2007

installations there have been no spurious failures[5]. PHMSA maintains proper operator installation using manufacture direction and maintenance of EFVs is paramount to their success. Therefore, PHMSA is not proposing a protocol for EFV installation. PHMSA is only advising operators to install EFVs as the manufacturer directs and the service safely requires.

Operators and manufacturers that PHMSA contacted stated they typically size an EFV in such a way that it trips at 20% to 30% above the maximum service load it will encounter. It is possible that this trip point could be too high for small leaks, however, EFVs are intended to react to ruptures, not small holes.

Likewise, one commenter mentioned winter time excavation of lines to repair them due to EFV failure was a concern. PHMSA suggests that digging in frozen ground in winter is not any more difficult than digging concrete or curbside if valve is located underneath. Again, PHMSA believes, proper sizing of an EFV is the key to avoiding all these issues. PHMSA has surveyed twice in the past, and there were only one or two instances of EFV failure in greater than a million services over many years. All major EFV manufacturers PHMSA contacted indicated that they are available to help operators to properly size their valves.

PHMSA received no information to indicate that pressure ratings and/or the size of commercially available EFVs are a problem for the expansion of EFVs to certain other types of service. Currently, the normal minimum pressure design (the minimum anticipated design pressure) is 10 psig. The maximum pressure of composite materials (250 psig), plastic (125 psig), and steel (1,000 psig and up), does not pose a problem. There is no pressure limit on an EFV's performance except that, when activated, the EFV seat must be able to withstand the

[5] "Operational Experiences with Excess Flow Valves for Service Lines and Main Lines in Network Operation", Peter Masloff, Technology Department Director, BEGAS - Burgenlandische Erdgasversorgungs AG. http://pipelife-gasstop.com/media/gasstop/pdf_englisch/GWF_7_2003_Excess-Flow-Valves_Experience-report.pdf

pressure. The pressure limit is normally constrained by the design of the carrier pipe. EFVs covered by ASTM F2138 must have a maximum inlet pressure of at least 125 psig, while ASTM F1802 applies to EFVs with a pressure rating of up to 125 psig. However, for very high-volume EFV applications, such as those for industrial customers, technical standards may need to address operating design pressures that exceed 125 psig.

Therefore, PHMSA proposes to expand EFV applications to new or replaced service lines for SFRs with branched lines; multi-family installations, including duplexes, triplexes, and fourplexes with individual meter sets and known customer loads not exceeding 1,000 SCFH; and small commercial customers with known loads not exceeding 1,000 SCFH. EFVs will not be required in the above-mentioned applications if one of the existing § 192.383 exceptions is present.

While the proposed expansion of EFVs would have costs, PHMSA believes the costs are justified by the added protection for gas customers, as the only proposed exceptions are for large apartment buildings, industrial or commercial users for whom EFVs may not be practical due to inherent design complexity and continuous supply demands. In those situations (loads exceeding 1,000 SFCH), PHMSA believes curb valves will provide the best possible option for improved safety at this time. PHMSA does not have definitive data, but some commenters stated that 2% to 5% of customers would fall into one of the exceptions for EFVs, which would include many of those facilities over with loads exceeding 1,000 SFCH.

A.2. Additional challenges not addressed by the Interim Evaluation

The ANPRM also solicited comments on whether additional challenges existed beyond those discussed in the Interim Evaluation. MAE commented that the addition of more EFVs in natural gas systems could create an increase in safety hazards resulting from the maintenance of

failed EFVs and EFVs that fail to trip on small leaks (i.e., pinhole corrosion). These safety hazards would be due to increased excavation activities, which place more workers in high-traffic and congested areas. MAE also mentioned that excavation contractors may be less cautious around service lines if they believe they will not leak because of an installed EFV. TPA stated that the mandated use of EFVs for new or replaced transmission or gathering lines should not be pursued until further study is completed.

PHMSA Response

MAE's comment regarding excavation damage prevention can be addressed with proper EFV installation techniques and the normal course of training forpipeline operator personnel, including training on excavation damage prevention. Excavation contractors hired by operators go thru same damage prevention training as operators regarding safe digging practices and are aware of the dangers of gas leaks and explosions. In regard to TPA's comment, PHMSA agrees at this time and is proposing to expand EFV use only to distribution lines, not gathering or transmission lines. PHMSA has found that there is a lack of experience with EFVs on gathering and transmission lines in addition to problems with contaminants and other factors.

A.3. Use of Curb Valves (manual shut-off valve) as an Alternative to EFVs.

The ANPRM sought comments on the use of curb valves as an alternative to EFVs. Most commenters agreed that use of a curb valve is a viable alternative to EFV use in some cases. In fact, the City of Ellensburg, Washington, stated the installation of a curb valve should be considered by PHMSA to be equivalent to the installation of an EFV. The City of Ellensburg mentioned that current Washington State regulations require the use of a curb valve if an EFV is not installed.

MAE, APGA, and APA commented that operators have experience with curb valves, but their use presents certain challenges. The technical challenges expressed by commenters with regard to curb valve use include: maintenance of the valve; location of the valve for accessibility; third-party damage to the valve; recordkeeping as to the location of the valve; ensuring the box does not place stress on the pipe; and the delayed shut-off response inherent in curb valve design during emergency situations. APGA commented that curb valves require trained personnel to manually close the valve with a special key. APGA further stated that "squeezing" off the gas in the line is sometimes quicker than using a curb valve for stopping the flow of gas.

PHMSA Response

Historically, curb valves have proven to be a very effective mechanism for interrupting the flow of gas in both routine maintenance situations and in emergencies. Other than a curb valves, distribution operators have tools (large pliers) to squeeze pipe to shut off gas supply. Curb valves require that a person make a conscious decision to physically close the valve itself, thereby avoiding inadvertent closures. Curb valves are slightly more expensive than EFVs and require some maintenance and need to be located in an accessible site. The primary disadvantage curb valves have is the time it can take to mobilize to the valve site and close the valve.

It is not technically feasible to expand EFV use to service lines operating at loads exceeding 1,000 SCFH. This is largely due to issues with reliable service, load fluctuation, the lack of experience with EFV usage in larger applications, and the complexity of design issues. Therefore, in the case of service lines operating at more than 1,000 SCFH, PHMSA proposes to

require curb valves be installed and maintained in such a manner that emergency personnel can access them. Although it does not come at a prohibitive cost, the installation of curb valves is slightly more expensive than the installation of EFVs.

A.4. Additional Situations Where the Installation of EFVs may not be Feasible

The ANPRM solicited comments concerning additional situations not found in the Interim Evaluation where the installation of an EFV may not be feasible or practical. AGA and SWC commented that they agreed with the examples cited in Section 10.3.1 of the Interim Evaluation. MAE commented that lines containing contaminants, and distribution systems with a history of transporting liquids, may create situations where EFVs are impracticable.

PHMSA Response

Section 192.383 currently includes exceptions for EFV installations with regard to SFRs. With respect to MAE's concern regarding lines containing contaminants and distribution systems with a history of transporting liquids, the proposed exceptions would waive the EFV requirement for those systems for which installing EFVs would be impracticable. This proposed rule incorporates the existing § 192.383 exceptions in place and would extend them to the additional service line applications covered in this NPRM.

B. Economic Analysis Considerations

PHMSA requested comments on the potential costs of modifying the existing regulatory requirements. PHMSA requested that commenters provide information and supporting data on the potential quantifiable safety and societal benefits, the potential impacts on small businesses, and the potential environmental impacts of modifying the existing regulatory requirements. The

economic analysis for the installation of EFVs on services other than SFRs involves challenges including the quantification and monetization of costs and benefits.

B.1. Categories of Service for Expanded Use of EFVs

The ANPRM requested comments on Section 10.3.2. of the Interim Evaluation. This section describes the "Categories of Services" in which PHMSA could expand EFV requirements. PHMSA sought input as to whether the categories accurately represented current "real world" applications and which categories are most likely to benefit from EFV expansion. [6]

AGA largely agreed with the categories of service presented in the Interim Evaluation, while MAE commented that the categories are sufficient for economic analysis only. MAE further states that if the rule in its final form creates different requirements among these five categories, the rule may prove difficult to implement because an operator may not be clear which category a service may fall into.

AGA, APGA, AU, Nicor, and SWC advised PHMSA not to apply the EFV requirements to all five categories named in the Interim Evaluation. Specifically, the commenters supported all categories of service with the exception of those with services requiring greater than 1,000 SCFH. Those services with 1,000 SCFH requirements or higher are generally sensitive to loss of supply and may have complex configurations not conducive to EFVs. Nicor, APGA, and AGA commented that service lines serving one multi-family building with one meter should be limited to duplexes, triplexes, and fourplexes with known loads not exceeding 1,000 SCFH, and that non-residential services to space and water heater customers should be limited to 1,000 SCFH

[6] The categories of service from the Interim Evaluation are: Branched service line serving single-family residence; Service line serving one (or two adjoining) multi-family residential building(s) with one meter or one meter header or manifold; Non-residential services to space and water heat customers; Other applications where the service line configuration or EFV specification is more complex; and Industrial customers.

due to possible snap loads. Additionally, AGA stated that there are factors to consider for applying EFVs to non-residential service lines such as commercial food sales, food service, and health care, and that these applications would require unique analysis. These service applications are susceptible to loss of service issues and frequently have complex designs. SWC likewise stated that EFVs work in applications not exceeding 1,000 SCFH. The industrial customer's category was mentioned by all those commenting on this question as a category not suitable for mandated EFV use due to unpredictable load changes over the life of the service and inherent design complexities.

PHMSA Response

PHMSA has reviewed the comments on the possible expansion of categories of gas services requiring EFVs. PHMSA proposes expansion of EFV use for only certain categories of service presented in the Interim Evaluation. Specifically, PHMSA proposes to expand EFV requirements to include:

• Branched SFR service lines off of existing SFR service lines that do not contain an EFV and have a known load not exceeding 1,000 SFCH based on meter capacity;

• SFR service lines and branched SFR service lines installed at the same time with a known load not exceeding 1,000 SFCH based on meter capacity;

• Branched SFR service lines off of existing SFR service lines with a known load not exceeding 1,000 SFCH based on meter capacity;

•Multi-family residences with individual meter sets and a known customer load not exceeding 1,000 standard cubic feet per hour (SCFH) based on meter capacity; and

• Small commercial customers with a known customer load (based on meter capacity) not exceeding 1,000 SCFH through a single service line.

Operators with services lines with loads exceeding 1,000 SCFH will be required to utilize curb valves. Since PHMSA has found commercial and industrial service lines often have complex designs and/or require constant reliable service requirements, PHMSA has decided that these categories of service are not good candidates for requiring EFV use. Often these services meet or exceed a demand for 1,000 SCFH. PHMSA therefore proposes the 1,000 SCFH threshold based on comments and PHMSA experience however we invite comment.

B.2. Cost Factors Associated with Mandatory EFV or Curb Valve Installation

The ANPRM sought comments as to whether there are any other issues related to the costs associated with mandatory EFV or curb valve installation that should be considered aside from those mentioned in the Interim Evaluation. Both AGA and SWC noted that cleaning labor for EFVs on larger service lines, inadvertent trips and the subsequent loss of business for commercial customers and accidental environmental discharges are additional costs to the operator that PHSMA should consider. APGA commented that EFV installation costs for large-volume EFVs may be higher due to the fact there is less demand for them, and PHMSA should not assume the same unit price as a SFR EFV. Both NGA and Nicor mentioned that installation of EFVs may conflict with restrictions placed by local jurisdictions on excavating paved roads to access existing or install new EFVs.

PHMSA Response

PHMSA has determined that installing EFVs by using manufacturer guidelines should eliminate most EFV tripping errors. EFVs are commercially available in a wide variety of pipe sizes. Some manufacturers report that they make EFVs for larger than 2-inch IPS (Iron Pipe Size) diameters (typical SFR size), and at least one manufacturer is developing a 10,000 SCFH EFV. The principles of operation remain the same as valve size and trip point increase, making EFVs for larger loads and pipe sizes technically feasible. PHMSA also noted that SFR installation of EFVs, which began in 2010, depended on manufacturer guidelines for installation. No PHMSA guidance was issued. Since 2010 the SFR EFVs required to be installed have resulted in no false trips or failures if installed as manufacturer directed. PHMSA has found manufacture guidelines to be well within the safety margin and they know their product better than PHMSA in most instances.

Additional costs for purging lines are minimal as documented by AGA estimates. AGA states many operators either have already installed EFVs on some services beyond SFRs or are planning to start. The price per unit has decreased in recent years given the development, improved availability, and quality of EFVs. Higher installation costs for high volume EFVs have been taken into account in the cost/benefit analysis through the averaged cost. Similarly, installation costs for curb valves are more expensive than smaller volume EFVs and the cost/benefit analysis considered that aspect.

B.3. Who should pay for the installation and maintenance of EFVs or other alternatives and why?

PHMSA sought comments as to who should pay for the costs of installation and maintenance of EFVs. Comments were received from AGA, SWC, and MAE concerning who

should be expected to pay for the installation and maintenance of EFVs or other alternatives if applicable regulatory requirements were implemented. MAE stated that operators should pay for the initial installation of valves, but any changes to customer loads requiring EFV installation should be at the customer's expense.

PHMSA Response

Because operators would already be newly installing or replacing pipelines, i.e. they would already have a trench open and be in place to work at the site, the addition of an EFV adds only minor costs (PHMSA estimates the cost of an EFV including installation is $30). This is supported by the AGA response to the excess flow valve census (Docket PHMSA-2012-0086, page 2), in which AGA indicated "the incremental cost per installation of EFVs is relatively minimal." AGA further committed to expand the installation of EFVs beyond SFR services by June 2013. This also supports the notion that cost is not a major factor for the expansion of EFV use on new and fully replaced service lines beyond SFRs as proposed by this NPRM. PHMSA additionally utilized ANPRM comments which included numerical data on the costs for EFVs provided by operators as well as PHMSA Technical Advisory Committee[7] input for this proposed rulemaking.

B.4. Are there any opportunity costs associated with the installation of EFVs? A particular time of day that is optimal for installation? How long does installation take?

The ANPRM sought comment as to any opportunity costs and installation timelines that EFVs or alternatives may require. AGA, APGA, SWC, MAE, and Nicor commented on this

[7] Joint Meeting of the PHMSA Technical Advisory Committees held Dec. 11-13, 2012, Alexandria, Virginia. Transcripts available at Regulations.gov., docket PHMSA-2009-0203.

question. These commenters all mentioned the loss of gas supply as a potential opportunity loss for customers due to the longer period of time needed to install an EFV on larger service lines. Additionally, the operators would spend more time and resources installing EFVs or alternatives versus maintenance, construction, operation, and inspection activities. APGA responded that EFVs do not need to be installed at any particular time of day, with most installations occurring during normal business hours.

PHMSA Response

Given industry's commitment to support EFV installation on new and fully replaced service lines where practically and technically feasible, PHMSA believes that the cost of installation of EFVs, as proposed by the regulation, are sufficiently low that they will not interfere with other operator expenditures. PHMSA agrees with industry that the incremental cost per installation is minimal and would be utilized during the new construction or the replacement of service lines when industry resources (labor) are already at the installation sites.

B.5. Are there any other issues related to benefits associated with the mandatory EFV or curb valve installation that should be considered when performing the benefit/cost analysis, other than those listed in section 10.5 "Defining Benefit Factors" of the Interim Evaluation? Does the methodology utilized in the Interim Evaluation appropriately quantify the expected number of incidents or consequences averted? Can a conclusion be satisfactorily made concerning the cost and benefits of EFV or curb valve installation as presented in the Interim Evaluation?

PHMSA asked for comments concerning any other issues that had not yet been considered regarding benefits associated with mandatory EFV or curb valve installation. IUB, NGA, MAE, and AGA commented on additional cost/benefit factors that had not yet been considered. NGA stated that upgrading existing EFVs to meet the increased demand loads will add significant costs to customers and will conflict with restrictions placed by local jurisdictions on excavating paved roads to access existing or install new EFVs. Similarly, MAE stated that load changes due to changes in ownership may cause extra expenses from service modifications and industrial process equipment damage. AGA and SWC were unaware of any additional cost/benefit factors other than those in the Interim Evaluation.

In terms of the methods PHMSA used in the Interim Evaluation to study EFV expansion, the comments were generally supportive. MAE, SWC, APGA, and AGA commented that they typically agreed with the methodology used by PHMSA. However, some trade association comments also indicated there was some concern about the assumptions PHMSA made with its methodology. In particular, there were concerns with the "incidents averted calculation", including the associated root cause analyses and assumed continued operations of all lines over 10 psi. AGA further commented that the analysis could not draw reliable conclusions. IUB suggested PHMSA should develop a separate analysis for each of the classes of service.

PHMSA Response

PHMSA's analysis was based on incident-specific data, which were obtained from the incident reports submitted by operators. PHMSA explained how it used the data, including the assumptions it made in applying the operational and other data obtained from incident reports, to filter past incidents that would likely not have been averted or mitigated had an EFV been

installed. The remaining candidate incidents might have been averted or mitigated had an EFV been installed, but PHMSA did not conclusively assert that all of those candidate incidents definitively would have been averted or mitigated. However, based on the analysis of the best available data, PHMSA is convinced that the installation of EFVs on additional service lines could help avert or mitigate future incidents. The candidate incidents, incidents that PHMSA can classify as preventable by EFV installation, .represent the scope of incidents that might have benefited from an EFV during the time period studied. PHMSA requests comments on whether the incidents that PHMSA has identified are likely to have been averted or mitigated if an EFV or manual service line shut-off valve had been in place. In addition, PHMSA does not have an EFV sizing protocol, nor was one proposed in the Interim Evaluation. The methodology for sizing EFVs was one of the challenges described in section 9.1 of the Interim Evaluation.

C. Technical Standards and Guidance for EFVs

The OMB circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards in Conformity Assessment Activities", directs Federal agencies to utilize voluntary standards, both domestic and international, whenever feasible and consistent with law and regulation. The current regulation at 49 CFR 192.381 only requires EFVs to be manufactured and tested by the manufacturer according to an industry specification or the manufacturer's written specification. The regulation does not prescribe a precise specification. PHMSA solicited comments as to the need for the adoption of consensus standards for EFV specification.

C.1. Should PHMSA incorporate by reference the following standards? Manufacturers Standardization Society (MSS) SP-115-2006 Design, Performance & Test, ASTM International (ASTM) F1802-04-Standard Specification for Excess Flow Valves for Natural Gas Service, and *ASTM International (ASTM) F2138-01-Standard Specification for Excess Flow Valves for Natural Gas Service?*

The comments received by PHMSA largely indicated that the incorporation by reference of any standards for EFVs is not necessary. AGA, supported by MAE, stated in their comments that manufacturers already construct and test EFVs according to industry consensus standards MSS SP-115-2006, ASTM F-1802, and ASTM F-2138. Operators have been successfully installing EFVs using manufacturer guidance with no known safety issues arising. Similarly, AGA and SWC expressed concern regarding the incorporation by reference of any industry standards due to the delay in updating the pipeline safety statutes, which in turn would prevent the timely installation of the newest and best EFVs on the market. As an alternative to PHMSA incorporating standards, commenters suggested that PHMSA continue to allow operators to utilize manufacturer installation guidance already available.

PHMSA Response

PHMSA will not be incorporating any new standards by reference for EFVs into the pipeline statutes at this time but may do so in the future. All EFVs currently available have been manufactured and tested to current consensus standards. Additionally, PHMSA has not incorporated any standards for EFVs into the pipeline safety regulations for SFRs and has not found any issues with that approach. If the need for incorporation by reference does become necessary, PHMSA will review the issue.

C.2. Are there alternatives to the standards referenced in C.1.?

PHMSA also asked for comments on three current consensus standards and if there are alternatives to them. APGA and APA stated they were unaware of additional standards beyond those listed in the Interim Evaluation, with the exception of "*MSS SP-142-2012 Excess Flow Valve for fuel gas service, NPS 1 1/2 through 12"* for larger sized EFVs. Similarly, MAE, deferring to AGA comments, stated it was aware of no other standards except for the Gas Piping Technology Committee (GPTC) Appendix G192-8 in the Z380 Guide.

PHMSA Response

PHMSA is also unaware of any alternatives to the three standards listed in the Interim Evaluation for EFVs for natural gas service. As for selection and sizing guidelines, PHMSA will request GPTC to develop comprehensive standards for selection, installation, and performance testing of EFVs for a variety of design considerations and service line configurations and operating conditions. This guidance will be in addition to guidance provided by manufacturers and will act as a supplement to address various situations which may not be elaborated on in manufacturer guidance. PHMSA will also issue advisory bulletins if we become aware of new conditions of concern for EFV installation.

C.3. Are guidelines or technical standards needed for developing and if so, why?

PHMSA asked for comments as to whether EFV guidelines or technical standards are in need of development, and if so, why. Both MAE and SWC commented that a standard approach or some sort of guidance for sizing EFVs, and criteria for identifying adverse conditions, may be

needed. SWC agreed and stated that additional guidance, not necessarily standards, need to be developed. SWC additionally asked PHMSA to issue advisory bulletins if PHMSA finds additional conditions in which an EFV installation is advisable. Likewise, AGA stated that the current industry standards used in manufacturing are satisfactory, and EFV performance testing using industry standards cannot be accomplished in an economically, technically, and operationally feasible manner on installed service lines.

PHMSA Response

PHMSA finds that additional technical standards development for EFVs at this time is not necessary. However, PHMSA is considering requesting a new or existing industry committee to develop guidelines for a standard approach to the sizing and installation of EFVs. Industry guidelines have already been developed for the implementation of (Distribution Integrity Management Program) DIMP by the GPTC and industry gas associations. PHMSA believes these guidelines should be developed in a more comprehensive manner to include the selection, installation, and performance testing of EFVs for a variety of design considerations and service line configurations. The identification of operating conditions and system configurations that are incompatible with EFVs could also be included in the guidelines.

D. Additional Comments

Only one commenter, MAE, provided additional information and supporting data with regard to additional potential costs and impacts of expanding EFV use. Specifically, MAE stated that it had installed 5,102 EFVs on SFRs in 2010. If applications beyond SFRs were required for service lines, MAE would have installed an additional 1,123 EFVs in 2010. MAE stated the

estimated average cost for an EFV is $50.00 and that there would be no anticipated significant impact on the environment.

Several comments from members of the public were received in response to the ANPRM. One commenter, Courtney D. Brown, supported the expanded use of EFVs to protect people in the vicinity of large businesses and/or entertainment venues. Brown commented that the cost of installing EFVs does not outweigh the loss of lives, homes, or businesses when an incident occurs. Commenter Rebecca Lee Roter expressed concern with the lack of regulatory requirements in place for natural gas and transmission lines in Class 1 areas. Roter indicated that these areas required little routine inspection and no emergency plans.

PHMSA Response

PHMSA received several additional comments on the topic of the expanded use of EFVs. The information from MAE was helpful for PHMSA to get a better understanding of the costs and impacts of expanding EFV use. PHMSA has estimated an average cost of $30 per valve—see the initial RIA for further discussion. Additionally, PHMSA is aware of the concern for public safety expressed by Brown and Roter.

III. Section by Section Analysis

§192.381 Service lines: Excess flow valve performance standards.

PHMSA is proposing to revise the language used in § 192.381(a) to remove the words "single residence". This change reflects the proposed expansion of EFVs to applications beyond SFRs.

§ 192.383 Excess flow valve installation.

PHMSA is proposing to revise § 192.383(b) to include the proposed new categories of service on which EFVs would be installed. The existing category of service (new or replaced service line serving a SFR) would remain. The new categories of service would include branched service lines to a SFR installed concurrently with the primary SFR service line; branched service lines to a SFR installed off a previously installed SFR service line that does not contain an EFV; and small commercial customers and multi-family installations. The existing exceptions for EFV installation found in § 192.383(b)(1) through (b)(4) would remain but would be moved to § 192.383(c)(1) through (c)(4).

PHMSA is proposing the addition of § 192.383(d) to allow existing service line customers the option of requesting an EFV installation on their service line if one or more of the exceptions listed in § 192.383(c)(1-4) are not met. Operators would install an EFV at the request of customer on a mutually agreeable date and time. This option would be available to service line customers on existing service lines when the customer applies for service and for a period of 90 days after service has started. Operators will rely upon the appropriate State regulatory agencies to determine who would bear the costs of installation for customer requested EFVs.

With regard to the issue of installation costs of a customer requested EFV, PHMSA has no jurisdiction concerning natural gas rates or any costs incurred due to installation of an optional EFV at a consumer's request. Rather, the appropriate State regulatory agency will determine all issues related to the costs of installation.

PHMSA proposes to add paragraphs (e) (1-2) which would require that operators notify existing service line customers of their right to request an EFV in writing. Master meter operators may continuously post a general notification in a prominent location frequented by customers. Operators must also have evidence of customer notification. Operator evidence of

notification could include such items as a statement printed on customer bills or mailings. Small Master meters would be ask to prove that they posted a notice at some common location. Each operator must maintain a copy of the customer EFV notice for three years. This notice must be available for inspection by the Administrator or a State agency participating under 49 U.S.C. 60105 or 60106.

§ 192.385 Manual service line shut-off valve installation.

PHMSA is proposing the addition of § 192.385 to require the installation of a manual service line shut-off valve, such as a curb valve, when an EFV is not installed in accordance with § 192.383. This proposed section also includes a definition for "Manual service line shut-off valve" to further clarify the applicability of this provision.

V. Regulatory Notices

A. Statutory/Legal Authority for this Rulemaking

This Notice of Proposed Rulemaking is published under the authority of the Federal pipeline safety law (49 USC 60101 et seq.). Section 60102 authorizes the Secretary of Transportation to issue regulations governing design, installation, inspection, emergency plans and procedures, testing, construction, extension, operation, replacement, and maintenance of pipeline service lines. Further, Section 60109(e)(3)(B) states that "the Secretary, if appropriate, shall by regulation require the use of excess flow valves, or equivalent technology, where economically, technically, and operationally feasible on new or entirely replaced distribution branch services, multifamily facilities, and small commercial service facilities."

B. Executive Order 12866, Executive Order 13563, and DOT Regulatory Policies and Procedures

Executive Orders 12866 (Regulatory Planning and Review) and 13563 (Improving Regulation and Regulatory Review) require agencies to regulate in the "most cost-effective manner," to make a "reasoned determination that the benefits of the intended regulation justify its costs," and to develop regulations that "impose the least burden on society." Expansion of the use of EFVs and curb valves is a non-significant regulatory action under Executive Order 12866 and the Department of Transportation's (DOT's) Regulatory Policies and Procedures. This proposed requirement has been reviewed by the Office of Management and Budget in accordance with Executive Order 13563 and Executive Order 12866 and is consistent with the requirements in both Orders.

During the initial stages of the development of the regulatory evaluation, PHMSA developed the survey recommended by the Interim Evaluation, which was aimed at gathering data on EFV and curb valve costs and benefits. PHMSA intended to send the survey to all operators in order to ensure that any proposed changes were based upon comprehensive and useful data. The goal was to have a better understanding of the costs of EFVs on installations beyond SFRs from those who have deployed them already, and on the costs and effectiveness of curb valves. Nine companies were asked to pilot the census, and a copy was published in the *Federal Register*.

Both the census pilot and the comments to the proposed census published in the *Federal Register* quickly revealed that company databases are not currently set up to provide the necessary data. Load and customer type data are stored separately from data on EFVs and from data on incidents, and grouping customers into the census categories would, in some cases, cost

more in labor for the database work and analysis than it would cost to implement this proposed rule itself. As a result of discussions with industry representatives and the NTSB, PHMSA chose to propose a rule similar to the framework included in Section 22 of the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011.

The initial Regulatory Impact Analysis (RIA), which is included in the docket for this rulemaking, does not address the benefits and costs of the proposal to require operators to install EFVs on branched service lines servicing SFRs because the benefits and costs of this proposal were addressed in the regulatory impact analysis for a previous rulemaking[8]. The initial RIA found that the estimated monetized benefits do not exceed the monetized costs in all cases. For the proposal to require EFVs on new or replaced service lines servicing MFRs, the monetized costs exceed monetized benefits even when using lower bound cost estimates. PHMSA believes that the proposals are nevertheless justified by the significant unquantifiable benefits, such as avoided evacuations and environmental damage from EFV-preventable incidents, including incidents that could not be included in the analysis because they do not meet PHMSA reporting criteria. EFVs also provide protection against a low-probability but high-consequence incident that could inflict mass casualties.

The proposed rule is assumed to affect approximately 1,289 natural gas distribution operators and 222,114 service lines per year on average. The RIA assumed valves do not have network effects, in other words, each EFV operates independently and the costs and benefits of EFV installation simply scale linearly. The total annual benefits of the rule are $7,735,725 when discounted at 7 percent, while the costs range from $4,381,734 to $17,848,499 depending on the costs of the valve. At the 3% discount rate the total benefits of the rule are $2,748,456, while

[8] .Pipeline Safety: Integrity Management Programs for Gas Distribution Pipelines." 74 FR 63906 (December 4, 2009) RIN 2137-AE15

the costs range from $4,967,145 to $20,311,030. PHMSA requests public comments on its monetized estimates of the proposed rule's benefits and costs.

The following tables summarize the quantified benefits and costs of this proposed rule at the 3 and 7% discount rates :

Estimated Benefits and Costs: Low and High Scenarios, 7% Discount Rate

Category	Number of Valves Installed, Year 1	Annualized Benefit	Annualized Cost, Low Scenario ($15 EFV, $10 curb valve)	Annualized Cost, from DIMP Analysis ($20-$30 per EFV)	Annualized Cost, High Scenario ($50 EFV, $100 curb valve)
SFR (as upper bound estimate for Branched SFR)[9]		*$11-27 million*		*$8 million*	
Multi-Family EFV	153,985	$1,144,372	$3,102,295		$10,340,985
Commercial EFV	27,174	$1,434,683	$547,467		$1,824,890
Industrial/ Large Other Curb Valve[10]	40,955	$5,156,671	$550,073		$5,500,726
Notification and Recordkeeping			$181,899		$181,899

[9] Benefit and cost information is taken from the DIMP rulemaking analysis. No information is available to estimate the proportion of SFR service lines that are branched; PHMSA believes it to be very roughly in the range of 10%. The DIMP analysis used different estimates for the cost of an EFV and used the then-prevailing USDOT values for injury prevention. Although DIMP did not cover branched SFR, benefits and costs were calculated as if they were, because there were no data available to create a more precise estimate.

[10] This category is defined by service characteristics (size, flow) for which a curb valve is more appropriate than an EFV. No data are available on customer classification within the category, though it likely includes larger MFR, commercial and industrial facilities, and other similar customers.

Category	Number of Valves Installed, Year 1	Annualized Benefit	Annualized Cost, Low Scenario ($15 EFV, $10 curb valve)	Annualized Cost, from DIMP Analysis ($20-$30 per EFV)	Annualized Cost, High Scenario ($50 EFV, $100 curb valve)
TOTAL	**222,114**	**$7,735,725**	**$4,381,734**		**$17,848,499**

Estimated Benefits and Costs: Low and High Scenarios, 3% Discount Rate

Category	Number of Valves Installed, Year 1	Annualized Benefit	Annualized Cost, Low Scenario ($15 EFV, $10 curb valve)	Annualized Cost, High Scenario ($50 EFV, $100 curb valve)
Multi-Family EFV	153,985	$1,958,991	$3,534,722	$11,782,405
Commercial EFV	27,174	$2,748,456	$623,778	$2,079,259
Industrial/ Large Other Curb Valve	40,955	$10,240,363	$626,747	$6,267,467
Notification and Recordkeeping			$181,899	$181,899
TOTAL	**222,114**	$14,947,810	**$4,967,145**	**$20,311,030**

Additional unquantified benefit areas include:

- Equity: Provides a fair and equal level of safety to members of society who do not live in single-family residences

- Additional incident costs avoided for which no PHMSA incident data are available : Mitigates the consequences (death, injury, property damage) of incidents when customer piping or equipment is involved and thus the incident would not be reflected in PHMSA records
- Additional incident costs which are not recorded in incident reports, including costs of evacuations, emergency response costs, and business downtime
- Environmental externalities associated with methane release (discussed in Appendix)
- Peace of mind for operators and customers
- Protection against seismic events and intentional tampering

PHMSA requests public comments on methods and information sources that could be used to quantify and monetize these unquantified benefits.

C. Executive Order 13132: Federalism

This NPRM has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 (‘‘Federalism’’). PHMSA issues pipeline safety regulations applicable to interstate and intrastate pipelines. The requirements in this rule apply to operators of distribution pipeline systems, primarily intrastate pipeline systems. Under 49 U.S.C. 60105, a state may regulate intrastate pipeline facility or intrastate pipeline transportation, after submitting a certification to PHMSA. Thus, state pipeline safety regulatory agencies with a valid certification on file with PHMSA will be the primary enforcer of the safety requirements proposed in this NPRM. Under 49 U.S.C. 60107, PHMSA provides grant money to participating states to carry out their pipeline safety enforcement programs. Although a few states choose not to participate in the natural gas pipeline safety grant program, every state has the option to participate. This grant money is used to defray additional costs incurred by enforcing the pipeline safety regulations.

PHMSA has concluded this proposed rule does not include any regulation that: (1) Has substantial direct effects on states, relationships between the national government and the states, or distribution of power and responsibilities among various levels of government; (2) imposes substantial direct compliance costs on states and local governments; or (3) preempts state law. Therefore, the consultation and funding requirements of Executive Order 13132 (64 FR 43255; August 10, 1999) do not apply.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 et seq.) requires an agency to review regulations to assess their impact on small entities, unless the agency determines that a rule is not expected to have a significant impact on a substantial number of small entities. This NPRM has been developed in accordance with Executive Order 13272 (''Proper Consideration of Small Entities in Agency Rulemaking'') and DOT's procedures and policies to promote compliance with the Regulatory Flexibility Act to ensure that potential impacts of rules on small entities are properly considered.

This NPRM proposes to require small and large gas pipeline operators to comply with the new EFV installation requirements. The Small Business Administration (SBA) criteria for defining a small entity in the natural gas pipeline distribution industry is one that employs less than 500 employees as specified in the North American Industry Classification System (NAICS) codes.

PHMSA calculated the number of small businesses affected by reviewing annual reports submitted by gas pipeline operators and data provided by Dunn and Bradstreet. PHMSA estimated that of the 1,289 operators who submitted an annual report to PHMSA on their gas

distribution activities, 1,221, or 95 percent, of these natural gas operators are classified as being "small business". The natural gas distribution industry does have a substantial number of small entities as defined by the SBA. However, we believe that this rule would not have a significant impact on small entities because the additional costs are minimal: approximately $30 per EFV installed and $55 per curb valve installed. Industry comments have described these additional costs as "relatively minimal"[11] and the one-time cost is largely offset by incident cost avoidance over the 50-year lifetime of the valves. The notification and recordkeeping costs associated with the new notification requirement for optional EFV installation are estimated at $42 per firm annually, which is a minimal cost even for the smallest operators. .

Accordingly, the head of the agency certifies under Section 605(b) of the RFA that the proposed rule, if promulgated, will not have a significant economic impact on a substantial number of small entities. PHMSA seeks comment on the Initial Regulatory Flexibility Analysis. A copy of the Initial Regulatory Flexibility Analysis has been placed in the docket.

E. Unfunded Mandates Reform Act of 1995

This proposed rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It would not result in costs of $147.6 million, adjusted for inflation, or more in any one year to State, local, or tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the proposed rule. Installation of EFVs and curb valves significantly protects the safety of the public and is technically and economically feasible.

[11] PHMSA-2012-0086-0003, Comment by the American Gas Association, submitted 7/17/2012, pg. 2

F. National Environmental Policy Act

PHMSA analyzed this NPRM in accordance with section 102(2)(c) of the National Environmental Policy Act (42 U.S.C. 4332), the Council on Environmental Quality regulations (40 CFR Parts 1500–1508), and DOT Order 5610.1C, and has preliminarily determined that this action will not significantly affect the quality of the human environment. A preliminary environmental assessment of this NPRM is available in the docket, and PHMSA invites comment on the environmental impacts of this rule.

G. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments

This NPRM has been analyzed in accordance with the principles and criteria contained in Executive Order 13175 (‘‘Consultation and Coordination with Indian Tribal Governments’’). Because this NPRM does not have tribal implications and does not impose substantial direct compliance costs on Indian tribal governments, the funding and consultation requirements of Executive Order 13175 do not apply.

H. Executive Order 13211: Energy Supply, Distribution, or Use

This proposed rule is not a ‘‘significant energy action’’ under Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use). It is not likely to have a significant adverse effect on supply, distribution, or energy use. The Office of Information and Regulatory Affairs has not designated this proposed rule as a significant energy action.

I. Paperwork Reduction Act

Pursuant to 5 CFR 1320.8(d), PHMSA is required to provide interested members of the public and affected agencies with an opportunity to comment on information collection and recordkeeping requests. As a result of the requirements proposed in this notice of proposed rulemaking, the following information collection impacts are expected:

Gas Distribution Annual Report Revision

PHMSA is proposing to revise § 192.383, to require the installation of EFVs beyond single family residences as currently required. Further, PHMSA is proposing to add § 192.385 which would require the installation of manual service line shut-off valves. As a result, PHMSA wants to track the number of new installations related to these provisions on an annual basis. This will lead to changes to the Gas Distribution Annual Report which is contained in the currently approved information collection titled "Incident and Annual Reports for Gas Pipeline Operators" identified under OMB Control Number 2137-0522. PHMSA proposes to revise the Gas Distribution Annual report to collect the number of EFVs installed on multi-family dwellings and small commercial businesses and the number of manual service line shut-off valves installed. Currently, operators are required to submit the total number of excess flow valves installed on single family residences and the total number of EFVs within their system. Therefore, PHMSA does not expect operators to experience an increase in burden beyond the burden currently estimated for the Gas Distribution Annual Report.

Customer Notification

PHMSA proposes to revise § 192.383 to require operators to notify customers of their right to request the installation of EFVs. PHMSA estimates that approximately half of the 6,184

operators categorized as either master meter operators or small LPG systems will be impacted, resulting in 3,092 operators. This estimate is based on the premise that only half of these operators have systems that can accommodate an EFV. PHMSA also estimates that 1,289 gas distribution operators will be impacted. Therefore PHMSA estimates a total impacted community of 4,381 (3,092 master meter/small LPG operators and 1,289 gas distribution operators). PHMSA estimates that each impacted operator will take approximately 30 minutes per year to complete this notification and an additional 30 minutes per year to maintain the associated records. Therefore, PHMSA will request a new information collection to address these reporting and recordkeeping requirements.

As a result of the changes listed above, PHMSA proposes to submit an information collection revision request as well as a new information collection request to OMB for approval based on the requirements in this proposed rule. These information collections are contained in the pipeline safety regulations, 49 CFR Parts 190–199. The following information is provided for these information collections: (1) Title of the information collection; (2) OMB control number; (3) Current expiration date; (4) Type of request; (5) Abstract of the information collection activity including a description of the changes applicable to the rulemaking action; (6) Description of affected public; (7) Estimate of total annual reporting and recordkeeping burden; and (8) Frequency of collection. The information collection burden for the following information collection will be requested as follows:

1. Title: Incident and Annual Reports for Gas Pipeline Operators.

OMB Control Number: 2137-0522.

Current Expiration Date: January 31, 2014.

Type of Request: Revision.

Abstract: This information collection covers the collection of information from Gas pipeline operators for Incidents and Annual reports. This information collection will only be revised to reflect the amendment to the Gas Distribution Annual Report which will not result in a burden hour increase.

Affected Public: Gas Pipeline Operators.

Annual Reporting and Recordkeeping Burden:

Total Annual Responses: 21.864. (no change)

Total Annual Burden Hours: 83,131. (no change)

Frequency of Collection: On occasion.

2. Title: Customer Notifications for Installation of Excess Flow Valves.

OMB Control Number: TBD.

Current Expiration Date: Not Applicable.

Type of Request: New Information Collection.

Abstract: This new information collection will cover the reporting and recordkeeping requirements for gas pipeline operators associated with customer notifications pertaining to the installation of excess flow valves.

Affected Public: Gas Pipeline Operators.

Annual Reporting and Recordkeeping Burden:

Total Annual Responses: 4,381 responses.

Total Annual Burden Hours: 4,381 hours.

Frequency of Collection: On occasion.

Requests for a copy of this information collection should be directed to Cameron Satterthwaite, Office of Pipeline Safety (PHP–30), Pipeline and Hazardous Materials Safety Administration (PHMSA), 2nd Floor, 1200 New Jersey Avenue, SE, Washington, DC 20590–0001, Telephone 202-366-4595.

J. Privacy Act Statement

Anyone is able to search the electronic form of all comments received for any dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000, (65 FR 19477) or at http://www.regulations.gov.

K. Regulation Identifier Number

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document may be used to cross-reference this action with the Unified Agenda.

VI. List of Subjects

49 CFR Part 192

Excess Flow Valve Installation, Service Lines, Excess Flow Valve Performance Standards, Pipeline Safety

In consideration of the foregoing, PHMSA proposes to amend 49 CFR Part 192 as follows:

PART 192 – TRANSPORTATION OF NATURAL AND OTHER GAS BY PIPELINE: MINIMUM FEDERAL SAFETY STANDARDS

1. The authority citation for part 192 continues to read as follows:

Authority: 49 U.S.C. 5103, 60102, 60104, 60108, 60109, 60110, 60113, 60116, 60118, and 60137, and 49 CFR 1.97.

2. In **§** 192.381, the introductory text of paragraph (a) is revised to read as follows:

§ 192.381 Service lines; Excess flow valve performance standard.

(a) Excess flow valves to be used on service lines that operate continuously throughout the year at a pressure not less than 10 p.s.i. (69 kPa) gage must be manufactured and tested by the manufacturer according to an industry specification, or the manufacturer's written specification, to ensure that each valve will;

* * * * *

3. Section 192.383 is revised to read as follows:

§ 192.383 Excess flow valve installation.

(a) Definitions. As used in this section:

Replaced service line means a gas service line where the fitting that connects the service line to the main is replaced or the piping connected to this fitting is replaced.

Service line serving SFR means a gas service line that begins at the fitting that connects the service line to the main and serves only one SFR.

(b) *Installation required*. An excess flow valve (EFV) installation must comply with the performance standards in §192.381. After January 3, 2014, each operator must install an EFV on any new or replaced services line serving the following types of services before the line is activated:

(1) A single service line to one SFR;

(2) A branched service line to a SFR installed concurrently with the primary SFR service line (i.e., a single EFV may be installed to protect both service lines);

(3) A branched service line to a SFR installed off a previously installed SFR service line that does not contain an EFV;

(4) Multi-family residences with known customer loads not exceeding 1,000 SCFH per service, at time of service installation based on installed meter capacity, and

(5) A single, small commercial customer served by a single service line with a known customer load not exceeding 1,000 SCFH, at the time of meter installation, based on installed meter capacity.

(c) *Exceptions to excess flow valve installation requirement*. An operator need not install an excess flow valve if one or more of the following conditions are present:

(1) The service line does not operate at a pressure of 10 psig or greater throughout the year;

(2) The operator has prior experience with contaminants in the gas stream that could interfere with the EFV's operation or cause loss of service to a customer;

(3) An EFV could interfere with necessary operation or maintenance activities, such as

blowing liquids from the line; or

(4) An EFV meeting performance standards in §192.381 is not commercially available to the operator.

(d) *Customer's right to request an EFV.* Existing service line customers, who desire an EFV on service lines not exceeding 1,000 SFCH and not meeting the conditions in paragraph (b) of this section, may request an EFV be installed on their service line. If a service line customer requests EFV installation, an operator must install the EFV at a mutually agreeable date. The appropriate State regulatory agency determines whom and/or how the costs of the requested EFVs are distributed.

(e) *Operator notification of customers concerning EFV installation.* Operators must notify customers of their right to request an EFV in the following manner*:*

(1) Except as specified in paragraph (e)(2) of this section, each operator must provide written notification to the customer of their right to request the installation of an EFV within 90 days of the customer first receiving gas at a particular location.

(2) Operators of master meter systems may continuously post a general notification in a prominent location frequented by customers.

(f) *Operator evidence of customer notification.* Each operator must maintain a copy of the customer EFV notice for three years. This notice must be available for inspection by the Administrator or a State agency participating under 49 U.S.C. 60105 or 60106.

(g) *Reporting*. Each operator must report the EFV measures detailed in the annual report required by §191.11.

4. Section 192.385 is added to read as follows:

§ 192.385 Manual service line shut-off valve installation.

(a) Definitions. As used in this section:

Manual service line shut-off valve means a curb valve or other manually operated valve located near the service main or a common source of supply that is accessible to first responders and operator personnel to manually shut off gas flow to the service line in the event of an emergency.

(b) The operator must install a manual service line shut-off valve for any new or replaced service line, with installed meter capacity exceeding 1,000 SCFH.

(c) Manual service line shut-off valves for any new or replaced service line must be installed in such a way to allow accessibility during emergencies.

Issued in Washington, DC on July 7, 2015, under authority delegated in 49 CFR Part 1.97.

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