

**DEPARTMENT OF TRANSPORTATION****National Highway Traffic Safety Administration**

[Docket No. NHTSA–2020–0070]

**Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Automated Vehicle Transparency and Engagement for Safe Testing (AV TEST) Initiative****AGENCY:** National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).**ACTION:** Notice and request for comments on a new information collection.

**SUMMARY:** In compliance with the Paperwork Reduction Act of 1995 (PRA), this notice announces that the Information Collection Request (ICR) abstracted below will be submitted to the Office of Management and Budget (OMB) for review and approval. The ICR describes the nature of the information collection and its expected burden.

The information collection described in this document is for NHTSA's planned Automated Vehicle Transparency and Engagement for Safe Testing (AV TEST) Initiative, which involves the collection of voluntarily-submitted information from entities involved in the testing of vehicles equipped with automated driving systems (ADS) and from States and local authorities involved in the regulation of ADS testing. The purpose of this collection is to provide information to the public about ADS testing operations in the United States and applicable State and local laws, regulations, and guidelines.

A **Federal Register** Notice with a 60-day comment period soliciting comments on the information collection was published on July 2, 2020 (85 FR 39975). NHTSA received 20 comments and a brief summary and NHTSA's response to those comments is provided in this document.

**DATES:** Comments must be submitted on or before October 29, 2020.

**ADDRESSES:** Written comments and recommendations for the proposed information collection, including suggestions for reducing burden, should be submitted to the Office of Management and Budget at [www.reginfo.gov/public/do/PRAMain](http://www.reginfo.gov/public/do/PRAMain). To find this particular information collection, select "Currently under Review—Open for Public Comment" or use the search function.

**FOR FURTHER INFORMATION CONTACT:** For additional information or access to

background documents, contact Michael Frenchik, Office of Data Acquisition, Safety Systems Management Division (NSA–0130), Room W53–303, 1200 New Jersey Avenue SE, Washington, DC 20590. Mr. Frenchik's telephone number is (202) 366–0641. National Highway Traffic Safety Administration, U.S. Department of Transportation, 1200 New Jersey Avenue, SE, Washington, DC 20590.

**SUPPLEMENTARY INFORMATION:** Under the PRA (44 U.S.C. 3501 *et seq.*), a Federal agency must receive approval from the Office of Management and Budget (OMB) before it collects certain information from the public and a person is not required to respond to a collection of information by a Federal agency unless the collection displays a valid OMB control number. In compliance with these requirements, this notice announces that the following information collection request will be submitted OMB.

A **Federal Register** notice with a 60-day comment period soliciting public comments on the following information collection was published on July 2, 2020.

*Title:* Automated Vehicle Transparency and Engagement for Safe Testing (AV TEST) Initiative.

*OMB Control Number:* 2127–NEW.

*Form Number:* NHTSA Form 1586—AV TEST Tracker eForm; NHTSA Form 1587—AV TEST Onboarding Form.

*Type of Request:* Request for approval of a new information collection.

*Type of Review Requested:* Regular.

*Length of Approval Requested:* Three years from the date of approval.

*Summary of the Collection of Information:* The U.S. Department of Transportation (DOT), National Highway Traffic Safety Administration (NHTSA) was established by Congress to save lives, prevent injuries, and reduce economic costs due to motor vehicle crashes through education, research, safety standards, and enforcement activity. DOT and NHTSA are fully committed to reaching an era of crash-free roadways through the deployment of innovative lifesaving technologies. The prevalence of automotive crashes in the United States underscores the urgency to develop and deploy lifesaving technologies that can dramatically decrease the number of fatalities and injuries on our Nation's roadways.

NHTSA believes that Automated Driving System (ADS) technology, including technology contemplating no human driver at all, has the potential to significantly improve roadway safety in the United States. This technology

remains substantially in development phases with companies across the United States performing varying levels of development, research, and testing relating to the performance of various aspects of ADS vehicle technologies. While much of these development operations occur in private facilities and closed-course test tracks, many stakeholders have progressed to conducting ADS vehicle testing on public roads or in public demonstrations. Moreover, to regulate such operations in their jurisdictions, many local authorities, such as States and cities, have passed laws governing ADS vehicle testing on public roads. These statutes, regulations, and ordinances vary, ranging from operational requirements to mandating the submission of periodic reports detailing ADS vehicle operation.

*Description of the Need for the Information and Proposed Use of the Information:* The AV TEST Initiative seeks to enhance public education and engagement with public ADS vehicle testing by coalescing information regarding respondents' various testing operations or requirements into a centralized resource. This information collection seeks voluntarily-provided information from entities performing ADS testing about their operations and information from local authorities about requirements or recommendations for such operations. NHTSA will maintain a digital platform on its website that collects information from respondents and makes the information about ADS operations and applicable State and local requirements and recommendations available to members of the public.

The program will support two main objectives. The first objective is to provide the public with access to geographic visualizations of testing at the national, State, and local levels. This information will be displayed on a graphic of the United States, with projects overlaid on the geographic areas in which the testing project is taking place. By clicking on a testing location, members of the public will be able see additional information about the operation and the ADS operator. Additional information may include basic information about the ADS operator, a brief statement about the entity, specific details of the testing activity, high-level (non-confidential) descriptions of the vehicles and technology, photos of the test vehicles, the dates on which testing occurs, frequency of vehicle operations, the number of vehicles participating in the project, the specific streets or areas comprising the testing routes,

information about safety drivers and their training, information about engagement with the community and/or local government, weblinks to the company's websites with brief introductory statements, and a link to the company's Voluntary Safety Self-Assessment (VSSA).<sup>1</sup>

The second objective is to provide members of the public with information collected from States and local authorities that regulate ADS operations. State and local authorities will be asked to provide weblinks for specific ADS-related topics, such as statutes, regulations, or guidelines for ADS operations, privacy-related issues, emergency response policies and training, or other activities that cultivate ADS testing. The implementation of this program will provide a central resource for the aforementioned information concerning ADS testing across the United States.

**Affected Public:** There are two information collection components to this request. The first affects entities engaged in testing of ADS vehicles, including original manufacturers of ADS vehicles and ADS vehicle equipment, and operators of ADS vehicles. The second affects local authorities regulating testing of ADS vehicles within their jurisdictions, including States, cities, counties, and other municipalities.

**Estimated Number of Respondents:** NHTSA anticipates that the Initiative will include up to 60 State or local government respondents and 40 private industry respondents (ADS developer, ADS vehicle manufacturer, or ADS operator respondents) per year.

**Frequency:** Participation is completely voluntary and each participant will choose its respective degree of involvement and the frequency of its submissions. Therefore, the frequency of a participant's response may vary due to a variety of factors, such as the degree of the entity's participation in the initiative or the frequency with which each entity modifies its ADS testing operations or, in the case of local authorities, amends its regulations governing such operations.

**Number of Responses:** Participation is completely voluntary and each participant will choose the number and frequency of its submissions. Therefore, the number of responses from a participant will vary due to a variety

of factors, such as the degree of the entity's participation in the initiative or the frequency with which each entity modifies its ADS testing operations or, in the case of local authorities, amends its regulations governing such operations.

**Estimated Total Annual Burden Hours:** NHTSA estimates that each State or local participant will spend approximately 30 hours per year providing information to the AV TEST Initiative and estimates that each private industry participant will spend approximately 48 hours per year providing information to the AV TEST Initiative. While NHTSA's estimate for the burden hours per private industry participant remained the same from the July 2, 2020 notice, NHTSA has increased the burden estimate for State and local participants. Since publishing the original notice, NHTSA conducted a pilot involving 9 State and local participants and 9 ADS operators. NHTSA's revised estimates are based upon direct work with the participants in the pilot phase of the AV TEST Initiative. One of the pilot participants, Maryland Department of Transportation, also commented on the July 2 notice.

Specific estimates provided by a majority of participants in the initiative's pilot program confirmed NHTSA's original estimate that, on average, private industry participants would spend approximately 48 hours per year, or 4 hours per month, on data entry for the AV TEST Initiative. This estimate also factors in time for new participants to learn how to use the data-entry platform and submit initial information. While NHTSA's estimate for private industry participants has remained 48 hours per year, NHTSA has revised its estimate for State and local participants based on specific estimates provided by pilot participants, as well as NHTSA's observation of pilot participants in gathering and submitting data. Although the July 2 notice estimated that State and local participants would spend approximately 10 hours per year on data submission to the AV TEST Initiative, NHTSA now estimates the annual burden to be 30 hours per participant.

NHTSA estimates that the annual burden of participation will be approximately 48 hours for private industry respondents that include ADS operators, developers, or vehicle manufacturers. This total number of hours represents approximately four hours per month to perform data entry for testing projects (4 hours × 12 months = 48). Therefore, for the estimated 40 private industry participants, the total

burden is estimated to be 1,920 hours per year (40 respondents × 48 hours).

NHTSA estimates that the annual burden of participation will likely be approximately 30 hours annually for State or local authorities. The increase from 10 hours to 30 hours per year was based on specific estimates provided by a majority of participants in the Initiative's pilot program, including a public comment by Maryland Department of Transportation.<sup>2</sup> Therefore, for the estimated 60 State or local authority participants, the total burden is estimated to be 1,800 hours per year (60 respondents × 30 hours). The total annual burden for the entire information collection request is estimated to 3,720 hours (1,920 hours + 1,800 hours).

The labor cost associated with this collection of information is derived by (1) applying the appropriate average hourly labor rate published by the Bureau of Labor Statistics, (2) dividing by either 0.701<sup>3</sup> (70.1%), for private industry workers, or 0.623 (62.3%), for State and local government workers, to obtain the total cost of compensation, and (3) multiplying by the estimated burden hours for each respondent type.

Labor costs associated with original manufacturers of ADS vehicles or ADS vehicle equipment and operators of ADS vehicles are estimated to be \$60.96 per hour for "Project Management Specialists," Occupation Code 13-1198, (\$42.73<sup>4</sup> per hour ÷ 0.701). The estimated labor cost per private industry respondent is estimated to be \$2,926.08 per year (\$60.96 × 48 hours). Therefore, the total annual labor cost for private industry to participate in the AV TEST Initiative is estimated to be \$117,043.

Labor costs associated with State and local authorities, such as States, counties, and cities are estimated to be \$60.84 per hour for "Legal Support Workers," Occupation Code 23-2099, (\$37.90<sup>5</sup> per hour ÷ 0.623). The labor cost per State and local respondent is

<sup>2</sup> This estimate takes into consideration Maryland Department of Transportation's public comment to the 60-Day Notice and Request for Comment: AV TEST Initiative (<https://beta.regulations.gov/document/NHTSA-2020-0070-0006>).

<sup>3</sup> See Table 1. Employer Costs for Employee Compensation by ownership (Dec. 2019), available at <https://www.bls.gov/news.release/ceec.t01.htm> (accessed May 4, 2020).

<sup>4</sup> See May 2019 National Industry-Specific Occupational Employment and Wage Estimates, NAICS 336100—Motor Vehicle Manufacturing, available at [https://www.bls.gov/oes/current/naics4\\_336100.htm#15-0000](https://www.bls.gov/oes/current/naics4_336100.htm#15-0000) (accessed May 4, 2020).

<sup>5</sup> See May 2019 National Occupational Employment and Wage Estimates by ownership, Federal, state, and local government, available at <https://www.bls.gov/oes/current/999001.htm#23-0000> (accessed May 4, 2020).

<sup>1</sup> Voluntary Self-Assessments are described in Automated Driving Systems 2.0: A Vision for Safety, available at [https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0\\_090617\\_v9a\\_tag.pdf](https://www.nhtsa.gov/sites/nhtsa.dot.gov/files/documents/13069a-ads2.0_090617_v9a_tag.pdf). VSSAs are covered by the PRA Clearance with OMB Control Number 2127-0723.

estimated to be \$1,825.20 per year (\$60.84 × 30 hours). Therefore, the total annual labor cost for State and local authorities to participate in the AV

TEST Initiative is estimated to be \$109,512 per year. The total annual labor costs for all respondents, private industry and State and local authorities together, are

estimated to be \$226,555 per year. See Table 1 below for a summary of estimated annual burden hours and estimated labor costs.

TABLE 1—SUMMARY OF ESTIMATED BURDEN HOURS AND ESTIMATED LABOR COSTS

Respondent type	Number of respondents	Annual hours per respondent	Labor cost per hour	Annual labor cost per respondent	Total annual estimated burden hours	Total annual labor costs
Original Manufacturer of ADS Vehicles or ADS Vehicle Equipment and Operators of ADS Vehicles .....	40	48	\$60.96	\$2,926.08	1,920	\$117,043
State or Local Authority .....	60	30	60.84	1,825.20	1,800	109,512
Total All Respondents .....	100	.....	.....	.....	3,720	226,555

*Estimated Total Annual Burden Cost:* NHTSA estimates that there will be no costs to respondents other than labor costs associated with burden hours.

*Summary of Public Comments:* On July 2, 2020, NHTSA published a notice in the **Federal Register** Notice with a 60-day comment period soliciting comments on the information collection (85 FR 39975). NHTSA received a total of 20 comments from organizations and individuals. A summary of the comments is provided below and is arranged by topic area.

*Mandatory Data Collection and Evaluation of Submissions:* Several commenters, such as the National Transportation Safety Board (NTSB) and the Center for Auto Safety, were opposed to the voluntary nature of the Initiative. Although the commenters were in favor of NHTSA collecting information about ADS testing, they believe that NHTSA should make the submission of the information mandatory. Additionally, commenters suggested that NHTSA require more specific information that would allow NHTSA to evaluate the safety of the ADS testing.

The objective of AV TEST Initiative is to provide members of the public with a centralized database of high-level information about ADS testing activities and State and local laws, recommendations, and initiatives. It is, therefore, outside of the scope of the project to make any reporting mandatory or to expand the collection to include technical information or information that NHTSA would use to evaluate the safety of ADS operations. NHTSA shares the commenters' view that detailed technical material often provides valuable information and, in fact, the agency frequently engages with industry participants regarding technical aspects of their ADS development. Also, as noted in *Automated Driving Systems 2.0: A Vision for Safety*, NHTSA encourages ADS developers to make certain

information available to members of the public in Voluntary Self-Assessments (VSSAs). NHTSA has outlined 12 areas related to ADS safety and performance to be included in the documents. Entities that choose to participate in AV TEST will be presented with a data entry field to provide a link to their VSSA if they have one and would like to include it with their AV TEST submission.

*Data Standardization, Uniformity, and Completeness:* Several commenters urged NHTSA to take steps to standardize submissions, including establishing standard terminology to increase uniformity of submissions. NHTSA appreciates this comment and would like to highlight a few of ways that NHTSA has designed the system to balance improving the quality of data collection and maximizing participation.

First, the AV TEST Initiative uses a data entry website that provides a structured data collection environment for contributors. Participating stakeholders are required to complete a minimum set of data fields when submitting information.<sup>6</sup> If a participant does not fill in a required field, they will be prompted to complete it before the submission can be sent to NHTSA for publication. Requiring certain data elements ensures a minimum level of completion for each submission and improves the quality of the data that is placed on the public website. While certain data fields are required, others are not. This allows the system to accommodate a wider range of ADS testing operations, vehicles, and jurisdictions. One commenter, General Motors LLC, advised that significant

<sup>6</sup> For a submission for an ADS operation, the required fields include: Country, State/Province, City, Public or Private Road, Road Type, Latitude and Longitude, Base Vehicle Type, Operation Status, a field asking whether the vehicle has a safety operator, and a field for the participant to indicate the type of operation (e.g., providing service).

variance could exist for the types and amounts of data maintained by companies. As such, NHTSA believes that additional standardization of submission requirements or minimum information thresholds for participation may unintentionally exclude interested parties from participation.

Second, NHTSA agrees with commenters who suggested providing standard terminology and has integrated definitions for the requested data elements into the AV TEST tracker to ensure participants have a consistent understanding of the terminology being used by NHTSA. NHTSA is also providing a list of terms and definitions on the public website so that users can better understand the information presented.

Third, NHTSA has designed the data entry website to use drop-down options for many of the data fields to ensure greater uniformity across submissions. For example, the data field for road type provides the following drop-down options: freeway, highway, parking lot, rural, street, business campus, path/sidewalk, university, unknown, or not specified. NHTSA believes this feature will improve data uniformity while providing sufficient flexibility for unique operations. For features that do not have drop-down options, NHTSA has also taken steps to minimize error. For example, the data field for number of vehicles at a test site has character restrictions.

*Accessibility and Vulnerable Populations:* Several organizations submitted comments underscoring the potential impact of ADS technologies on accessibility and mobility, as well as the impact on children. Commenters suggested that NHTSA provide opportunity for participants to submit information related to accessibility of ADS operations as well as specific information related to the transportation of children.

NHTSA agrees with the comments and believes information about

engagement with the community is an integral part of the AV TEST Initiative—particularly those with accessibility issues and members of vulnerable populations. Currently, NHTSA does not restrict participants from conveying this information, particularly for ADS test sites that are available for public use. However, NHTSA will encourage participants to provide information on accessibility and mobility for those with special needs. NHTSA will do this by creating new categories of weblinks that can be submitted to NHTSA. For example, NHTSA has added a “Disability or Accessibility” category, just as it has done for Emergency Response and VSSA information.

*Establish Sunset for AV TEST tracker:* Maryland Department of Transportation (MDOT) suggested NHTSA consider establishing a time to sunset the AV TEST tracker to eliminate data collection redundancy. NHTSA does not agree with MDOT’s assertion that the AV TEST Initiative would present a data collection redundancy for vehicles that comply with all applicable FMVSS. In fact, some of the operations reported to NHTSA during its pilot phase of the AV TEST Initiative are for ADS operations involving the use of FMVSS-certified vehicles equipped with ADS. The type of information that will be collected through the AV TEST Initiative is not duplicative of data collected through NHTSA’s existing crash data systems because NHTSA crash data systems only collect data on vehicles involved in crashes and vehicle-related deaths and injuries. NHTSA does not currently have a mechanism to collect information about ADS operations.

However, NHTSA notes that data submitted as part of the AV TEST Initiative may become stale. For example, because the AV TEST Initiative is voluntary, an ADS operator could provide information on an ADS operation and never update NHTSA when the operation is completed. Although we will provide a mechanism for participants to change the status of test sites from active to inactive or completed, participants may not update the status of an operation. As the AV TEST Initiative progresses, NHTSA will consider reaching out to program participants about operations that has not been updated for an extended period of time. In addition, we have provided participants the ability to remove out-of-date information and archive the data, which removes it from the AV TEST web page.

*Estimated Total Annual Burden Hours:* MDOT estimates States will spend more than 10 hours per year on supporting their AV TEST profiles.

While MDOT acknowledged that that the 10-hour estimate may be appropriate for States solely focused on entering adopted legislation/regulation information once or twice per year, MDOT expects to 120 hours responding to the AV TEST Initiative. MDOT stated that it will update the AV TEST database for multi-modal transportation business units and estimates it will need 10 hours per month for this exercise. With respect to this subject, the Commercial Vehicle Safety Alliance, whose members include many State and local jurisdictions, advised that it “deferred to its member jurisdictions” on the burden presented by this collection.

NHTSA appreciates the comments on this topic and, in particular, the level of investment in the AV TEST Initiative that MDOT’s comment anticipates and hopes that other participants will similarly dedicate resources as necessary and appropriate to further the goals of the program. The majority of participants in the pilot program estimated that they have and will continue to allocate approximately 2–3 hours per month to AV TEST related activities. Therefore, NHTSA calculates that State and local organizations will dedicate approximately 2.5 hours per month, or 30 hours annually, on their submissions with variances due to a range of factors, such as the availability of resources or each entity’s approaches to the program. Nevertheless, NHTSA appreciates MDOT’s comment that some jurisdiction participants may dedicate more time than what NHTSA estimates for the average participant.

*Categories of Eligible Participants:* Valeo, an automotive supplier, commented expressing a desire to participate in the program and share information regarding its automated vehicle development activities. Valeo specifically requested that NHTSA enable Tier 1 suppliers to participate in the AV TEST Initiative in the future. Additionally, the American Automobile Association (AAA) recommends that future versions of the AV TEST Initiative web platform include information provided by consumer and safety groups that evaluate vehicle technologies with the goal of educating consumers on the safety benefits, capabilities, and limitations of these applications.

In response, NHTSA appreciates AAA and Valeo’s comments and is encouraged by the interest generated by the program at multifaceted levels of the automotive industry and the public. NHTSA’s original 60-day notice contemplated that the collection could also include motor vehicle equipment

manufacturers, which could encompass Tier 1 suppliers conducting AV test operations on public roads. As the AV TEST Initiative progresses, NHTSA will evaluate opportunities to enhance the scope of project and may consider allowing submission of information from organizations engaged in evaluating emerging vehicle technologies.

*Number of Respondents:* Several commenters expressed a concern that the voluntary nature of AV TEST would minimize industry participation, with one commenter believing that NHTSA’s original estimate of at least 40 private participants was too high. Based on the number of entities that have already expressed interest in participating, NHTSA continues to anticipate that its estimate of 40 private participants is realistic, with even higher levels of participation possible as AV TEST becomes more established and entities engaged in ADS testing activities increase.

*ADS Policy:* NHTSA also received comments from safety advocates and individual members of the public highlighting concerns regarding driving automation. One comment stated that “NHTSA should be focusing on proven safety systems currently available that can prevent or mitigate the crashes . . .” such as a number of crash avoidance technologies included in the NTSB’s Most Wanted Lists of Transportation Safety Improvements since 2016. Another commenter suggested that vehicles equipped with ADS technologies should be removed from roadways until NHTSA can ensure “malware and terrorists cannot hack these computers driven moving time bombs.” In addition, one commenter requested that ADS technology testing be limited to roadways that are built solely for ADS-equipped vehicles rather than public roads.

NHTSA appreciates the commenters’ input and will keep this input in mind when considering future approaches to ADS technologies.

*Public Comments Invited:* You are asked to comment on any aspects of this information collection, including (a) whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) the accuracy of the agency’s estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information

on respondents, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, *e.g.*, permitting electronic submission of responses.

**Authority:** The Paperwork Reduction Act of 1995; 44 U.S.C. Chapter 35, as amended; 49 CFR 1.49; and DOT Order 1351.29.

**Chou-Lin Chou,**

*Associate Administrator, National Center for Statistics and Analysis.*

[FR Doc. 2020–21417 Filed 9–28–20; 8:45 am]

**BILLING CODE 4910–59–P**

## DEPARTMENT OF TRANSPORTATION

### Pipeline and Hazardous Materials Safety Administration

[Docket No. PHMSA–2020–0025]

#### Pipeline Safety: Overpressure Protection on Low-Pressure Natural Gas Distribution Systems

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

**ACTION:** Notice; Issuance of advisory bulletin.

**SUMMARY:** The Pipeline and Hazardous Materials Safety Administration (PHMSA) is issuing this advisory bulletin to remind owners and operators of natural gas distribution pipelines of the possibility of failure due to an overpressurization on low-pressure distribution systems. PHMSA is also reminding such owners and operators of existing federal integrity management regulations for gas distribution systems.

**ADDRESSES:** PHMSA guidance, including the advisory bulletin, can be found on PHMSA's website at <https://www.phmsa.dot.gov/guidance>.

**FOR FURTHER INFORMATION CONTACT:**

*Technical Questions:* Michael Thompson, Transportation Specialist, by phone at 503–883–3495 or by email at [michael.thompson@dot.gov](mailto:michael.thompson@dot.gov).

*General Questions:* Ashlin Bollacker, Technical Writer, by phone at 202–366–4203 or by email at [ashlin.bollacker@dot.gov](mailto:ashlin.bollacker@dot.gov).

**SUPPLEMENTARY INFORMATION:**

#### I. Natural Gas Distribution Systems

Natural gas distribution systems deliver natural gas to customers for heating, cooking, and other domestic and industrial uses. A basic natural gas distribution system has four elements: (1) Mains that transport gas underground; (2) service lines that deliver natural gas from the main to the customer; (3) regulators that control the

pressure of gas to a designated value; and (4) meters that measure the quantity of natural gas used by each customer. Customer piping takes natural gas from the meter to the customer's heating equipment and other appliances.

There are two types of natural gas distribution systems used to supply natural gas to the customer: High-pressure distribution systems and low-pressure distribution systems. In a high-pressure distribution system, the gas pressure in the main is higher than the pressure provided to the customer. A pressure regulator installed at each meter reduces the pressure from the main to a pressure that can be used by the customer's equipment and appliances. These regulators incorporate an overpressure protection device to prevent overpressurization of the customer's piping and appliances should the regulator fail. Additionally, as of April 14, 2017, all new or replaced service lines connected to a high-pressure distribution system must have excess flow valves. (§ 192.383).<sup>1</sup> Excess flow valves can reduce the risk of overpressurization in natural gas distribution pipelines by shutting off unplanned, excessive gas flows. Because each customer's service line in a high-pressure distribution system is protected by an excess flow valve and a pressure regulator, it is highly unlikely that an overpressurization condition in the main would impact customers.

In a low-pressure natural gas distribution system, however, the natural gas in a distribution pipeline flows predominantly at the same pressure as the pressure contained within the customer's service line piping. Natural gas is typically supplied to distribution pipeline mains from a high-pressure source that connects to, and flows through, a regulator station. The regulator station functions to reduce the pressure to a level that allows the gas to flow continuously at a low pressure all the way to premises of the customers where the gas is ultimately consumed. Since there are no regulators at the customer meter set in a low-pressure system, an overpressure condition occurring on the distribution system can affect all customers served by the system in the event that the regulator(s) that controls the pressure for the system fails. This scenario is

what happened in the September 13, 2018, accident in Merrimack Valley that prompted the subsequent National Transportation Safety Board (NTSB) report and recommendations.

#### II. CMA's Accident in Merrimack Valley

##### A. Accident Synopsis

On September 13, 2018, a series of structure fires and explosions occurred after high-pressure natural gas entered a low-pressure natural gas distribution system operated by Columbia Gas of Massachusetts (CMA), a subsidiary of NiSource, Inc.<sup>2</sup> CMA delivers natural gas to about 325,000 customers in Massachusetts. According to an investigation of the accident conducted by the National Transportation Safety Board,<sup>3</sup> the fires and explosions damaged 131 structures, including at least 5 homes that were destroyed in the city of Lawrence and the towns of Andover and North Andover. CMA shut down the low-pressure natural gas distribution system serving 10,894 customers, including some outside the affected area who had their service shut off as a precaution. An 18-year-old male was killed when a home exploded, and the house's chimney fell onto the vehicle where he was sitting. Another person in the vehicle at the time of the explosion was seriously injured, as was someone on the second floor of the house. In total, 22 people, including 3 firefighters, were transported to hospitals for treatment of their injuries.

##### B. Background on CMA's Natural Gas Main Replacement Project

The low-pressure natural gas distribution system in the Merrimack Valley was installed in the early 1900s and was constructed with cast iron mains. The system was designed with 14 regulator stations to control the pressure of natural gas entering the downstream distribution pipeline mains. Each regulator station contained two regulators in series—a “worker regulator” and a “monitor regulator”—each with a sensing line connected to a downstream section of main for the purpose of providing a pressure measurement back to the regulator station so that the system could be maintained at a specified pressure level of 0.5 pounds per square inch. The

<sup>1</sup> PHMSA published the final rule, “Pipeline Safety: Expanding the Use of Excess Flow Valves in Gas Distribution Systems to Applications Other Than Single-Family Residences,” on October 14, 2016, but delayed the effective date by six months to give operators time to comply with the new provisions. (81 FR 70987). A copy of this final rule is available in the docket PHMSA–2011–0009 at <https://www.regulations.gov>.

<sup>2</sup> CMA is expected to be officially transferred by NiSource, Inc., to Eversource Energy in November 2020.

<sup>3</sup> “Pipeline Accident Report: Overpressurization of Natural Gas Distribution System, Explosions, and Fires in Merrimack Valley, Massachusetts; September 13, 2018.” The National Transportation Safety Board. Accident Report: NTSB/PAR–19/02. Adopted September 24, 2019.