
Office of Inspector General

Audit Report

INSUFFICIENT GUIDANCE, OVERSIGHT, AND COORDINATION HINDER PHMSA'S FULL IMPLEMENTATION OF MANDATES AND RECOMMENDATIONS

Pipeline and Hazardous Materials Safety Administration

Report Number: ST-2017-002

Date Issued: October 14, 2016





Memorandum

U.S. Department of
Transportation

Office of the Secretary
of Transportation
Office of Inspector General

Subject: **ACTION:** Insufficient Guidance, Oversight, and
Coordination Hinder PHMSA's Full
Implementation of Mandates and
Recommendations
Pipeline and Hazardous Materials Safety
Administration
Report No. ST-2017-002

Date: October 14, 2016

From: Barry J. DeWeese
Assistant Inspector General for Surface
Transportation Audits

Reply to
Attn. of: JA-30

To: Pipeline and Hazardous Materials Safety Administrator

The Pipeline and Hazardous Materials Safety Administration (PHMSA) develops and enforces regulations for the safe, reliable, and environmentally sound operation of the Nation's 2.6 million mile pipeline transportation system and nearly 1 million daily shipments of hazardous materials (hazmat) by land, sea, and air. The Agency also responds to congressional mandates and recommendations from the National Transportation Safety Board (NTSB), the Government Accountability Office (GAO), and the Department of Transportation Office of Inspector General (OIG) on the safe transport of these materials. In addition, the Agency addresses safety issues raised by other Operating Administrations (OA) in the Department of Transportation (DOT).

PHMSA has long faced criticism from Congress for its lack of timeliness in implementing statutory requirements—mandates—and recommendations from NTSB, GAO, and OIG reports. In addition, in 2005, we reported¹ that PHMSA needed to address long-standing pipeline and hazmat mandates and NTSB recommendations. The Ranking Member of the House Transportation and Infrastructure Committee expressed concerns over the time PHMSA has taken to

¹ *Actions Taken and Needed in Implementing Mandates and Recommendations Regarding Pipeline and Hazardous Materials Safety*, OIG Report Number AV-2006-003, October 20, 2005. OIG reports can be found on our Web site at: <https://www.oig.dot.gov/>.

establish new regulations for railroad tank cars carrying crude oil and to implement mandates from the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011.² The Ranking Member requested that we conduct this audit of PHMSA's pipeline and hazmat safety programs. Our objectives were to assess PHMSA's (1) progress in addressing congressional mandates and recommendations from NTSB, GAO, and OIG issued or open since 2005; (2) process for implementing mandates and recommendations, including any impediments to Agency action; and (3) efforts to coordinate and address Operating Administrations' safety concerns.

We conducted our work in accordance with generally accepted Government auditing standards. We reviewed PHMSA's 263 mandates and recommendations open since 2005, and analyzed 26 of these as case studies. Of the 26 case studies, 12 involved rulemakings and the other 14 involved studies and other non-rulemaking activities. The case studies included: mandates and recommendations issued and resolved after January 1, 2011, through rulemaking or non-rulemaking activities. We also reviewed PHMSA's processes for working with other OAs on hazmat safety. We interviewed staff from the Secretary of Transportation's Office of General Counsel, PHMSA, NTSB, GAO, relevant OAs, and two trade associations. See exhibit A for a full description of our scope and methodology, including the selection criteria for the case studies of mandates and recommendations. See exhibit B for a list of the entities we visited or contacted.

RESULTS IN BRIEF

Since 2005, PHMSA has implemented 173—or nearly two-thirds—of its 263 mandates and recommendations but missed many deadlines. Twenty of PHMSA's 81 mandates (25 percent) remain unimplemented, including 8 pipeline safety rulemaking mandates from the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011. Sixty of NTSB's 118 recommendations (51 percent) remain open, including one to revise the threshold for spill response plans for trains carrying highly flammable oil. Ten of GAO's and OIG's 64 recommendations (16 percent) remain open. Despite progress in addressing mandates and recommendations, PHMSA missed about 75 percent of its mandated deadlines and 85 percent of the deadlines that DOT policy requires OAs to set for notices of proposed rulemaking and final rules.

PHMSA has not established agency-wide processes for implementing mandates and recommendations, or provided guidance to the programs offices—the Office on Pipeline Safety (OPS) and the Office on Hazardous Materials Safety (OHMS)—on implementing mandates and recommendations. Under the DOT

² Public Law 112-90 (2012).

Order on PHMSA's organization, the Administrator sets policies and establishes processes for the Agency and its program offices. However, PHMSA has not established policies or processes on rulemaking or implementing mandates and recommendations that provide guidance to the program offices, the Chief Counsel, and the Chief Safety Officer (CSO) on how to fulfill their responsibilities for safety regulations under the DOT Order. Furthermore, PHMSA has not always followed project management requirements for implementing mandates and recommendations that require rulemakings or those that call for non-rulemaking activities, such as advisory bulletins and studies. PHMSA has also not provided adequate oversight of program offices' efforts to implement mandates and recommendations. This lack of sufficient processes, project management, and oversight has impeded the Agency's ability to meet deadlines. PHMSA has recognized this issue, has recently identified many areas for improvement related to rulemakings, and is currently developing plans to address them through organizational changes. However, it is too soon to determine whether these plans, once finalized, will adequately address the Agency's ability to meet mandates and recommendations in full and on time.

PHMSA has not adequately coordinated on rulemaking and international standards development with the three other OAs—the Federal Aviation Administration (FAA), the Federal Motor Carrier Safety Administration (FMCSA), and the Federal Railroad Administration (FRA)—involved with the transportation of hazmat. Under the DOT Order on PHMSA's organization, PHMSA must coordinate with these other OAs on hazmat policy, but the Agency has not established agreements regarding how they will coordinate. In addition, PHMSA has not developed policy or guidance on how to respond to safety concerns from FAA, FMCSA, and FRA. As a result, disputes have arisen between PHMSA and these OAs that have delayed PHMSA's rulemaking activities.

We are making recommendations to PHMSA to improve its implementation of mandates and recommendations and coordination with the other OAs.

BACKGROUND

The PHMSA Administrator is responsible for setting policies, establishing processes, and overseeing all elements of the Agency, including the creation of Federal safety regulations through rulemaking. OPS and OHMS each have a Standards and Rulemaking Division responsible for working with other program office staff, the Office of Chief Counsel, and PHMSA's CSO to plan, develop, and maintain Federal safety regulations. In addition to implementing its own safety initiatives, each program office responds to congressional mandates and recommendations from NTSB, GAO, and OIG with either rulemaking or non-rulemaking activities. OHMS must also address safety issues raised by other OAs

regarding the transportation of hazmat. The program offices work independently to address issues related to their respective safety programs. The offices have separate authorizations and appropriations, as well as their own staff and Associate Administrator who directs overall activity and reports to the PHMSA Administrator.

PHMSA initiates a rulemaking based on one of several factors, including Agency initiatives, recommendations from other agencies and external groups, and in response to mandates. Each program office also has a process—known as a regulatory change support paper—that it uses to evaluate proposed changes to existing regulations. The process requires justifications and preliminary cost-benefit analyses for proposed changes. The Agency also satisfies some recommendations and mandates through non-rulemaking activities. For example, Congress may require PHMSA to conduct a study or verify that it has a certain number of enforcement personnel.

To initiate the rulemaking process, PHMSA prepares a notice of proposed rulemaking (NPRM). For significant rules,³ PHMSA conducts a regulatory impact analysis estimating the proposed regulation's costs and benefits. DOT's Office of the Secretary (OST) and the Office of Management and Budget (OMB) must approve the NPRM and regulatory impact analysis. The Agency's Administrator approves rules not designated as significant.⁴ Approved NPRMs are published in the Federal Register for public comment. After the comment period, PHMSA prepares a final rule that goes through the same approval process and is published in the Federal Register. See exhibit C for a flow chart depicting the rulemaking process.

In the past, both OIG and GAO have assessed PHMSA's addressing mandates and recommendations. See exhibit D for more information.

³ Under Executive Order 12866, a significant regulatory action is any regulatory action that is likely to result in a rule that may have an annual economic effect of at least \$100 million or raises novel legal or policy issues based on legal mandates, the President's priorities, or this Executive Order. OMB determines the designation of "significant" throughout the rulemaking process; therefore, a rule that is significant at the NPRM stage may be non-significant at the final rule stage.

⁴ Under 49 U.S.C. § 60115(c), the Secretary, as delegated to PHMSA, is required to provide proposed pipeline standards to its technical safety standards committees. The law requires the Secretary, as delegated to PHMSA, to allow the committees 90 days to review and recommend any actions before the Agency finalizes new standards.

PHMSA HAS MADE PROGRESS WITH IMPLEMENTING MANDATES AND RECOMMENDATIONS, BUT HAS MISSED DEADLINES

Since 2005, PHMSA has implemented the majority of its mandates and recommendations but missed many deadlines. The Agency has closed 173 of 263 mandates and recommendations issued or open since 2005, but 90 remain open, including 20 mandates (see table 1).

Table 1. Current Status of 263 Mandates and Recommendations Issued or Open Since 2005

	Total			Related to Pipelines			Related to Hazardous Materials		
	Open	Closed	Total	Open	Closed	Total	Open	Closed	Total
Congressional Mandates	20	61	81	9	44	53	11	17	28
OIG Recommendations	3	49	52	2	27	29	1	22	23
GAO Recommendations	7	5	12	6	3	9	1	2	3
NTSB Recommendations	60	58	118	38	26	64	22	32	54
Total	90	173	263	55	100	155	35	73	108

Source: OIG analysis

The nine open pipeline safety mandates are from the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, and eight of the nine open mandates require rulemaking. Forty-one of the 155 mandates and recommendations (26 percent) on pipeline safety require rulemakings, and 27 (17 percent) require studies. For example, in its evaluation of pipeline accidents in which operator response time was a factor, NTSB recommended that PHMSA require operators of hazardous liquid pipelines to improve pipeline monitoring. PHMSA addressed this recommendation through a rulemaking. In response to a fatal liquid propane explosion in 2007, NTSB recommended that PHMSA conduct a study to identify actions that pipeline operators can implement to eliminate seam failures in certain pipes manufactured prior to 1970.

The eleven open hazmat safety mandates are from three different acts. Three of the eleven open mandates come from the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy For Users of 2005.⁵ Seven of the eleven open mandates come from the Moving Ahead for Progress in the 21st Century Act

⁵ Public Law 109-59 (2005).

of 2012 (MAP-21).⁶ The remaining open mandate comes from the Consolidated and Further Continuing Appropriations Act of 2015.⁷

One of the eleven open mandates requires a rulemaking. For hazmat safety, 39 of the 108 mandates and recommendations (36 percent) require rulemakings, and 16 (15 percent) require studies. For example, in response to a 2013 derailment of rail tank cars carrying crude oil from North Dakota, which resulted in the release of 1.6 million gallons of crude oil that ignited and killed 47 people in Lac-Mégantic, Canada, NTSB recommended that PHMSA require shippers to sufficiently test and document the physical and chemical characteristics of hazmat. PHMSA addressed this recommendation through a rulemaking. In response to one MAP-21 mandate, PHMSA conducted a study and assessment to improve the collection, analysis, reporting, and use of data related to incidents involving the transportation of hazmat. See exhibit E for a list of open mandates and OIG, GAO, and NTSB recommendations.

While PHMSA has implemented the majority of its mandates and recommendations, it has missed many of its deadlines. Of the 81 mandates, 62 included implementation deadlines, but PHMSA missed the deadlines for 45 of these (about 73 percent). All 182 recommendations included response deadlines, but PHMSA missed deadlines for 128 of these (about 70 percent). See table 2 for details.

⁶ Public Law 112-141 (2012).

⁷ Public Law 113-235 (2014).

Table 2. Missed Deadlines⁸ for Mandates and Recommendations Open in or Issued Since 2005

	Total			Related to Pipelines			Related to Hazardous Materials		
	Issued	With deadlines	Missed deadlines	Issued	With deadlines	Missed deadlines*	Issued	With deadlines	Missed deadlines
Congressional Mandates	81	62	45	53	41	26	28	21	19
OIG Recommendations	52	52	3	29	29	3	23	23	0
GAO Recommendations	12	12	10	9	9	7	3	3	3
NTSB Recommendations	118	118	115	64	64	61	54	54	54
Total	263	244	173	155	143	97	108	101	76

* Deadlines for OIG, GAO, and NTSB recommendations are for PHMSA's initial response to each recommendation.

Source: OIG analysis

OIG, GAO and NTSB each have statutory and other requirements on the time in which agencies respond to their recommendations. OIG requires DOT's OAs to respond within 60 days with either agreement or disagreement with findings and recommendations and estimated target dates.⁹ Federal statute requires that agencies respond to Congress concerning GAO's¹⁰ recommendations within 60 days with actions and proposed timelines, and to NTSB¹¹ within 90 days with either agreement or disagreement with the recommendations and a proposed timetable.

Forty-one of the 53 total pipeline mandates contained deadlines. The Agency met 14 (34 percent) and missed 26 (63 percent) of these; the remaining deadline has not yet passed. Six of the 41 deadlines are for mandates that remain open, including one from 2012 that calls for PHMSA to issue regulations within 2 years to require the use of automatic or remote-controlled shut-off valves on new transmission pipelines. This mandate followed the explosion in San Bruno, CA, in which the lack of automatic shut-off valves contributed to the severity of the explosion that killed eight people.

⁸ PHMSA missed some deadlines by a day and others by years. The range of time in which PHMSA missed deadlines for pipeline-related mandates was 33 to 3,136 days; for responses to NTSB, 1 to 613 days; and for responses to GAO, 30 to 59 days. For hazardous materials, the range of time in which PHMSA missed mandated deadlines was 12 to 1665 days; and responses to NTSB, 15 to 345 days. PHMSA never responded to a 2013 GAO report on hazmat transportation. This report contains all three of GAO's recommendations that remain open.

⁹ DOT Order 8000.1C, Office of Inspector General Audit and Investigation Report Findings, Recommendations, and Follow Up Action, July 1989.

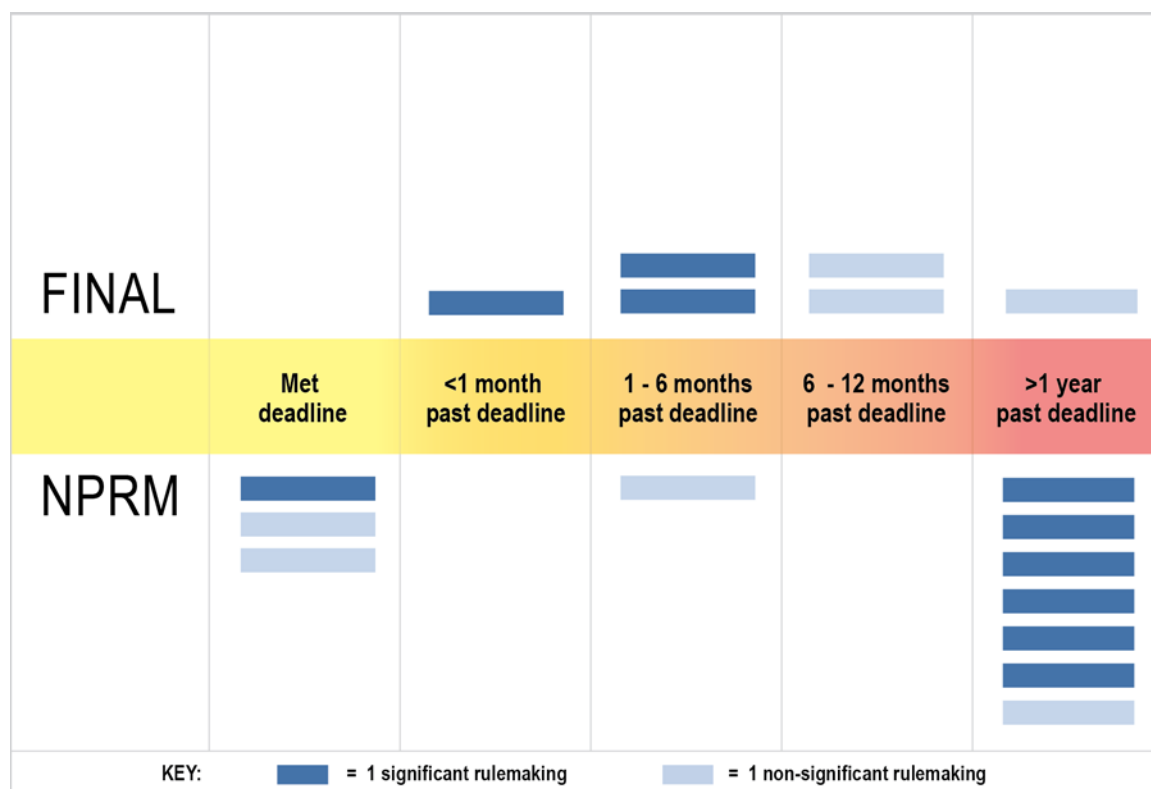
¹⁰ 31 U.S.C. § 720.

¹¹ 49 U.S.C. § 1135.

Twenty-one of the 28 hazmat mandates contained deadlines, and PHMSA met 2 (10 percent) and missed 19 (90 percent). Six of these deadlines are for mandates that remain open, including one from 2012 calling for the Agency submit to Congress within 2 years a report on the results of a pilot program to test a hazmat communications system meant to improve communications among emergency responders in accidents involving hazmat.

PHMSA also has not met its internal deadlines for rulemakings. DOT requires OAs to set internal deadlines for publishing NPRMs and final rules,¹² and record them in the Department's Rulemaking Management System (RMS). However, as seen in figures 1 and 2, since 2005, PHMSA has missed 85 percent of these internal deadlines, both for significant and non-significant rulemakings. For example, in response to a 2001 NTSB recommendation to develop inspection criteria related to pressure relief devices on rail tank cars, RMS shows that PHMSA's internal deadline to issue the non-significant final rule was April 2012, but PHMSA did not publish the final rule until June 2012.

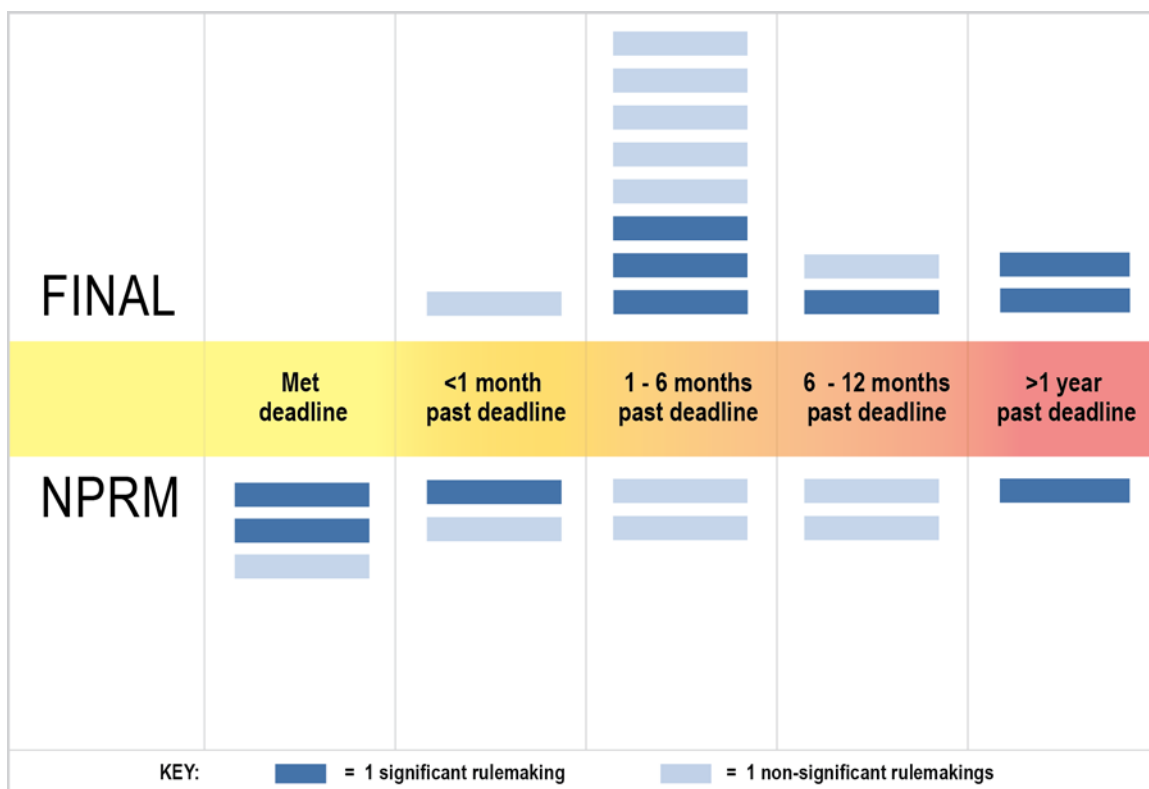
Figure 1. Timeliness of Mandated or Recommended Pipeline Rulemaking Activities, 2005-2016



Source: OIG analysis of RMS data

¹² DOT Order 2100.5, Policies and Procedures for Simplification, Analysis, and Review of Regulations, May 1980.

Figure 2. Timeliness of Mandated or Recommended Hazmat Rulemaking Activities,* 2005-2016



* PHMSA withdrew two hazmat rulemakings within the scope of this audit, and we did not include those in this analysis.

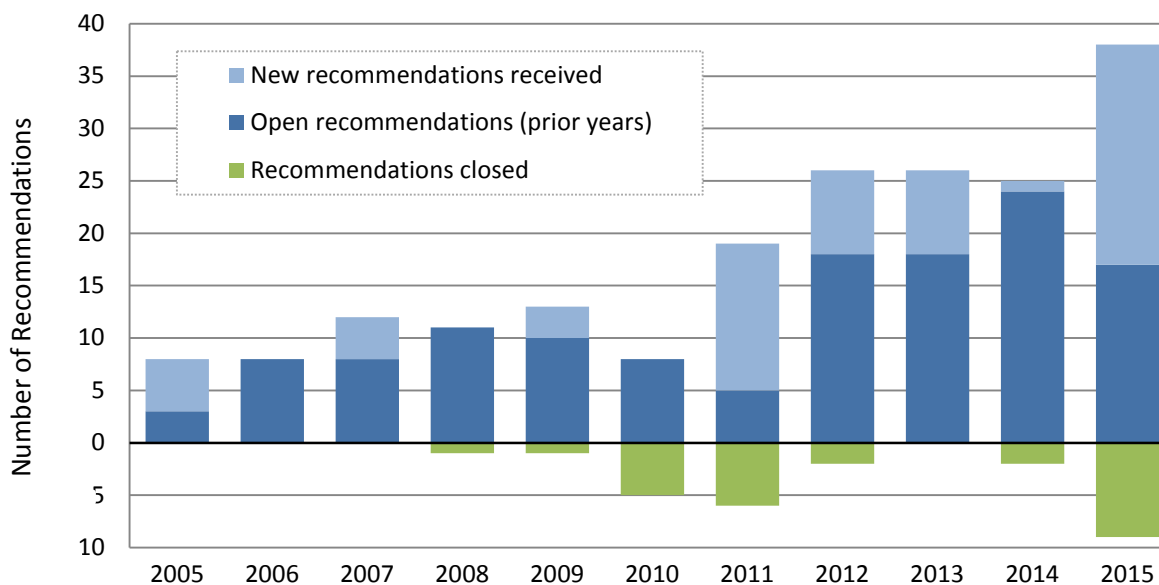
Source: OIG analysis of RMS data

Because the Agency receives congressional mandates on an irregular basis, we could not determine whether PHMSA improved the time it takes to respond to mandates over time. In the case of pipeline safety mandates, PHMSA received 1 in 2005, 19 in 2006, 1 in 2007, none from 2008 through 2011, 32 in 2012, and none from 2013 through 2015. For hazmat safety mandates, PHMSA received 9 in 2005, none in 2006, 2 in 2007, none from 2008 through 2011, 16 in 2012, none in 2013, 1 in 2014, and none in 2015. PHMSA also receives GAO and OIG recommendations on an irregular basis.

PHMSA receives pipeline safety related recommendations from NTSB on a more regular basis. Between 2005 and 2015, the Agency closed a low number of pipeline-related NTSB recommendations each year compared to the total number of open recommendations—including new recommendations received that year and open recommendations carried over from prior years (see figure 3). For example, in 2015, PHMSA had a total of 38 open recommendations (21 new and 17 carried over), but closed only 9 recommendations. On average, the Agency closed 2.4 NTSB recommendations on pipeline safety per year between 2005 and

2015, and received an average of 5.5 new recommendations during the same period. In the last 5 years, PHMSA closed an average of 3.8 pipeline safety NTSB recommendations per year and received an average of 9.8.

Figure 3. Progress Addressing NTSB Recommendations on Pipeline Safety,* 2005-2015

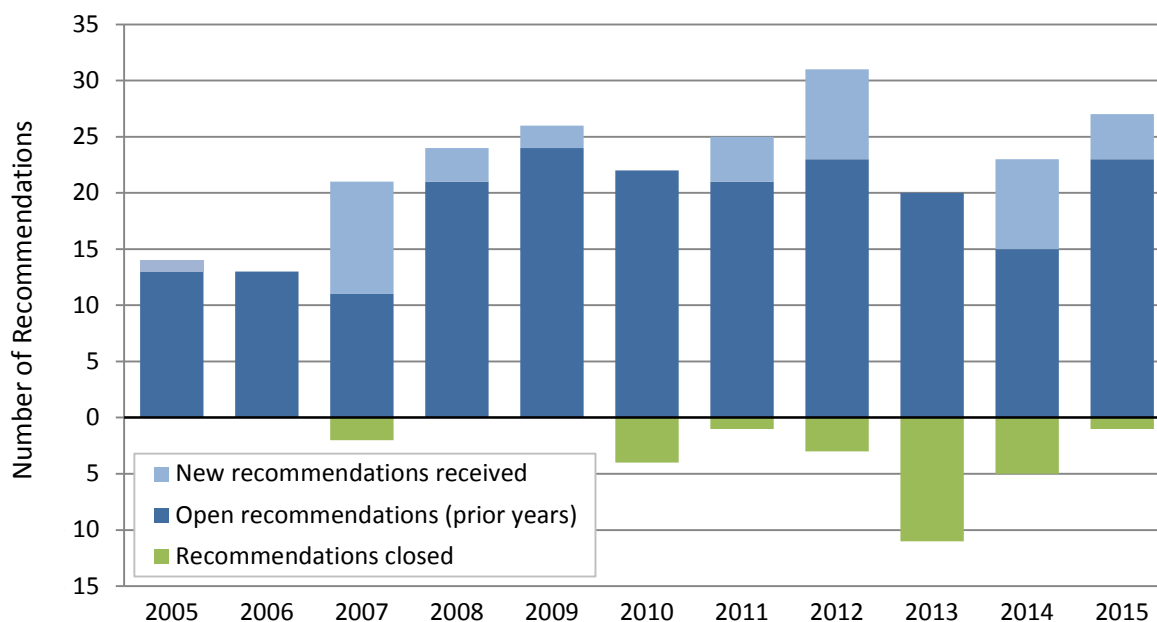


* "Recommendations received" does not include recommendations that were issued and closed in the same year. Recommendations issued and closed in the same year are included in the total for "recommendations closed."

Source: OIG analysis

We found a similar trend with NTSB's recommendations on hazmat safety. Between 2005 and 2015, PHMSA closed a low number of hazmat-related recommendations each year compared to the number of open recommendations (see figure 4). For example, in 2015, PHMSA had a total of 26 open recommendations (4 new and 22 carried over), but the Agency closed only 1 recommendation. On average, the Agency closed 2.5 NTSB recommendations on hazmat safety per year between 2005 and 2015, and received an average of 3.7 new recommendations during the same period. In the last 5 years, PHMSA closed an average of 4.2 hazmat NTSB recommendations per year and received an average of 5.0.

Figure 4. Progress Addressing NTSB Recommendations on Hazmat Safety,* 2005-2015



* "Recommendations received" does not include recommendations that were issued and closed in the same year. Recommendations issued and closed in the same year are included in the total for "recommendations closed."

Source: OIG analysis

PHMSA'S LACK OF SUFFICIENT PROCESSES, GUIDANCE, AND OVERSIGHT FOR IMPLEMENTING MANDATES AND RECOMMENDATIONS HAS IMPEDED TIMELINESS

PHMSA has not developed sufficient agency-wide processes or provided guidance to the program offices on implementing mandates and recommendations. Specifically, PHMSA lacks implementation processes, does not always follow project management requirements, and does not adequately oversee implementation activities. These factors have impeded the Agency's timeliness in implementing mandates and recommendations. To its credit, PHMSA has recently identified many shortcomings related to rulemakings, and is currently developing plans to address them through organizational changes. However, it is too soon to determine the extent to which these plans will resolve those shortcomings.

PHMSA Lacks Processes for Rulemakings and Other Mandate and Recommendation Implementation Activities

PHMSA has not developed agency-wide policies or processes on how to promulgate rulemakings and other activities required to implement mandates and

recommendations. DOT's Order¹³ on PHMSA's organization establishes organizational responsibilities for the Administrator, OPS, OHMS, and the offices of the Chief Counsel and CSO. The Order requires:

- The Administrator to set policies, establish processes, and oversee all elements of the Agency;
- OPS and OHMS to plan and develop Federal safety regulations;
- The Chief Counsel to work with the program offices in the planning, development, and review of regulations; and
- The CSO to review the quality of regulatory impact analyses and ensure timely actions to address recommendations from NTSB, GAO, and OIG.

However, because PHMSA has not established agency-wide policies or processes on rulemaking or implementing mandates and recommendations, the Agency has not provided guidance to OPS, OHMS, the Chief Counsel, or the CSO on how to fulfill their responsibilities under the DOT Order. In the absence of guidance from PHMSA, the program offices have developed incomplete procedures.

For example, OPS and OHMS's procedures on rulemaking¹⁴ do not sufficiently incorporate the roles for the Office of Chief Counsel and the CSO required by the Order. According to officials in the Offices of the Chief Counsel and the CSO, their staffs' involvement is at the discretion of program officers. The program offices' procedures do not require Chief Counsel staff to participate in the planning and development of regulations, but the program offices must send regulations to Chief Counsel staff for review and agreement before the regulations go to the Administrator for approval. Program offices' rulemaking procedures do not call for the CSO's staff to provide the quality assurance reviews of regulatory analyses that the DOT Order requires. According to CSO staff, even when they provide input on how to improve the quality of regulatory analyses, the program staff do not always incorporate their input.

This lack of guidance and adequate procedures has impeded PHMSA's ability to meet internal deadlines for mandates and recommendations. For example, in 2011, the Agency received an NTSB recommendation to eliminate from a regulation a "grandfather" clause that exempts operators from testing gas transmission

¹³ DOT Order 1100.74A, Department of Transportation Organization Manual: Pipeline and Hazardous Materials Safety Administration, September 2010. This Order took direct authority over OPS and OHMS away from the Chief Safety Officer and gave it to the Administrator and Deputy Administrator.

¹⁴ Both OHMS and OPS have standard operating procedures on the development of regulations. OHMS first authorized its procedures in June 2012 and revised them in March 2015. OPS first authorized its procedures in May 2015.

pipelines installed before 1970. To address this recommendation, in 2016, PHMSA published an NPRM that eliminated the clause. Records show that OPS staff spent almost 13 months drafting a 396-page NPRM before inviting the Chief Counsel's office to comment on it in February 2013. Chief Counsel staff reviewed the document, sent multiple sets of comments, met with program staff several times to discuss comments, and then concurred with the NPRM in December 2013, about 11 months after the internal deadline for completing the draft document. The NPRM was ultimately published in April 2016, more than 2.5 years after its internal deadline. Chief Counsel staff stated that the process would have been faster for them if they had been involved in the drafting.

PHMSA Did Not Always Follow Project Management Requirements in Implementing Rulemaking Mandates and Recommendations

In implementing rulemaking mandates and recommendations, program offices did not always: develop plans; establish priorities; identify team member roles and responsibilities; create timetables; or justify and document delays as required by Federal and DOT standards and policies. This was due, in part, to a lack of guidance from PHMSA. As a result, PHMSA delayed completion of several rulemakings in our case studies.

Several Federal and DOT standards and policies apply to rulemaking.¹⁵ Executive Order 12866,¹⁶ Regulatory Planning and Review, directs Federal agencies to consider the degree and nature of risks posed by various substances or activities within their jurisdictions in setting regulatory priorities. DOT's manual¹⁷ on its RMS—the Department's recordkeeping system for the rulemaking process—requires the OAs to provide various information, including estimated and actual milestones and reasons for delays in each rulemaking. OPS and OHMS addressed these standards in their rulemaking procedures issued in 2015 and 2012, respectively, but we found that staff did not always follow these procedures.

To assess how OHMS and OPS followed project management requirements for rulemaking activities, we reviewed 12 case studies. See table 3 for the results.

¹⁵ Furthermore, the Internal Control Standards state that plans should be part of an entity's internal control system. The Standards also direct Federal managers to determine the roles needed to fulfill assigned responsibilities. DOT policy on records management states that records provide evidence of departmental activities and enable oversight by Congress and authorized agencies. The Order also directs Administrators to promote adequate documentation by defining recordkeeping requirements.

¹⁶ Executive Order 12866, October 1993.

¹⁷ DOT Rulemaking Management System User Manual, Version 2.0.

Table 3. PHMSA’s Use of Project Management Requirements for 12 Mandates and Recommendations Involving Rulemakings

	Yes	No	Partial	Not Applicable	Total
Developed Plans	1	9	2	0	12
Established Priorities	0	9	3	0	12
Identified Team Members’ Roles and Responsibilities	0	5	7	0	12
Created Timetables	0	4	8	0	12
Justified or Documented Delays	1	8	2	1	12

Source: OIG analysis

For example:

- A lack of planning and assignment of roles and responsibilities may have contributed to delayed implementation of a 2004 NTSB recommendation to OPS.¹⁸ NTSB recommended removing an exemption that permitted the use of pipes that could be damaged when not transported to pipeline sites according to industry standards. OPS intended to address the recommendation in a 2007 rulemaking and then in a 2011 rulemaking. In 2015—over 2 years after its scheduled date—it issued a final rule that addressed the recommendation. OPS staff could not provide evidence of planned action steps with assigned persons and due dates for this rulemaking; the Office did not document team members’ roles and responsibilities. Furthermore, OST returned the final rule to OPS four times over the course of almost a year, citing concerns with quality of the regulatory impact analysis each time. In total, OPS needed 5 months to respond to OST’s comments but did not justify and document its reasons for delays.
- A lack of planning, prioritization, assignment of roles and responsibilities, and timetables may have delayed implementation of a 1992 NTSB recommendation to OHMS. NTSB recommended periodic testing and inspections of rail tank cars to help ensure the detection of cracks in the cars. OHMS did not create a plan or assign a priority level to the recommendation. Although OHMS assigned a team lead to address the recommendation, it did not communicate the responsibility clearly and the team lead was not aware of the designation. In addition, OHMS did not establish internal deadlines or document justifications for delays in the process. For example, the team lead stated that delays occurred because OHMS, in coordination with FRA, developed a different approach than the one recommended by NTSB due to rail

¹⁸ In 2004, OPS and OHMS made up PHMSA’s predecessor, the Research and Special Programs Administration.

industry concerns, but did not document this delay. OHMS promulgated a rule addressing the recommendation, which NTSB closed in 2013—over 20 years after issuing it.

PHMSA Offices Did Not Always Follow Project Management Requirements in Implementing Non-Rulemaking Mandates and Recommendations

In implementing non-rulemaking mandates and recommendations, program offices rarely: developed plans; established priorities; identified team member roles and responsibilities; created timetables; or justified and documented delays. This was due, in part, to a lack of guidance from PHMSA. As a result, PHMSA delayed completion of several non-rulemaking activities, such as studies, in our case studies.

To assess OHMS and OPS’s project management for non-rulemaking activities, we reviewed 14 case studies. See table 4 for the results.

Table 4. PHMSA’s Use of Project Management Requirements for 14 Non-Rulemaking Mandates and Recommendations

	Yes	No	Partially	Not Applicable	Total
Developed Plans	1	11	2	0	14
Established Priorities	2	11	0	1	14
Identified Team Members’ Roles and Responsibilities	0	13	1	0	14
Created Timetables	2	10	2	0	14
Justified or Documented Delays	2	8	0	4	14

Source: OIG analysis

For example:

- A lack of priorities and timetables may have led to slow implementation of a 2012 mandate requiring OPS to update a nation-wide pipeline mapping system. The maps must include information on locations such as ecologically sensitive and drinking water areas, but OPS lacks the necessary data to create the maps. By 2015, OPS had determined that it could purchase data on ecologically sensitive areas for \$417,000 a year. The drinking water data were not available for purchase and OPS would have to provide over \$1 million every 2 years for services that identify data that meet regulatory requirements. PHMSA did not assign this mandate a deadline, and OPS management did not decide until 2016 to purchase the data.

- A lack of planning, prioritization, assignment of roles and responsibilities, and documentation may have delayed implementation of a 2012 mandate requiring OHMS to report on the feasibility and effectiveness of using advanced communications methods to convey hazard information among all parties involved in hazmat incidents, including emergency responders and law enforcement personnel. To address the mandate, OHMS contracted with DOT's Volpe National Transportation Systems Center (Volpe) to conduct required pilot projects. OHMS staff informed us that Volpe manages the projects and OHMS staff do not have any documents related to planning, prioritization, roles and responsibilities, or delays. Furthermore, the team lead stated that he spoke regularly with Volpe staff but had not received or reviewed any quarterly performance reports from them.

This mandate has exceeded its deadline by over 1.5 years. OHMS stated that OMB took 9 months to approve an information collection request for the pilot projects. OMB's records show that OHMS submitted the request in December 2013, and OMB approved it in September 2014. However, May 2014 emails between PHMSA and OMB indicate that OMB had concerns about the request, including selection of the pilot test population, evaluation of success, and identification of procedures for the pilot studies. OHMS had to revise its proposal to address these concerns, and provided OMB the revised version in July 2014.

PHMSA Does Not Adequately Oversee Implementation of Mandates and Recommendations

PHMSA has not established processes for its oversight of the program offices' implementation of mandates and recommendations. Though Agency officials stated that implementation is a top priority, they have not ensured timely implementation.

The Deputy Secretary of Transportation regularly reviews written reports on PHMSA's rulemakings in progress, open NTSB recommendations, and pending reports to Congress. But PHMSA has not created internal reporting processes to track the progress of the Agency's implementation of mandates and recommendations. According to PHMSA officials, program office officials conduct verbal briefings for the Administrator but do not document the briefings.

PHMSA also does not have a process for regular updates of a DOT database—OST's Legislative Implementation Plan system—that contains all mandates from major authorizing legislation and their implementation status. We found some PHMSA-related information in the database to be inaccurate. For example, a

report to Congress that PHMSA must produce under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users¹⁹ showed inaccurate status information for four of the act's seven mandates. Chief Counsel staff stated that they update the database only when directed to do so, not as part of an on-going process. Staff stated further that they do not verify the information on mandate status that they receive from the program offices.

PHMSA also has no agency-wide process to ensure that it addresses NTSB, GAO, and OIG recommendations in a timely manner. There is no agency-wide tracking of progress on recommendations because PHMSA has delegated these responsibilities to the program offices. As a result, since 2005, PHMSA has missed deadlines for responding to 115 of 118 NTSB recommendations and 10 of 12 GAO recommendations, as shown in table 2. PHMSA officials acknowledged, for example, that the Agency had failed to send the required responses to three GAO recommendations on hazmat safety issued in 2013. As of October 2015, PHMSA had not sent a response to those recommendations.

PHMSA is Working To Address Shortcomings in Its Rulemaking Activities

In January 2016, PHMSA completed a comprehensive assessment of its rulemaking model, capabilities and processes, and compared them to those of high performing rulemaking organizations. PHMSA found that it had opportunities to improve its model and processes and “significant gaps”²⁰ in its rulemaking capabilities. The assessment also made high level recommendations, including clarifying and communicating roles and responsibilities in an agency-wide rulemaking model and development of an agency-wide standard operating procedures for rulemakings.

To address these recommendations, PHMSA has drafted a proposal for revising its organizational structure that includes creation of an Executive Director position. The Executive Director would also serve as the CSO and have direct authority over OPS and OHMS. In addition, the Executive Director would have authority over three new offices including an office of planning and analytics that could improve planning and project management, data, and rulemaking capabilities. PHMSA has also developed draft agency-wide prioritization criteria for its regulatory agenda. However, it is too soon to determine the extent to which these plans once finalized will resolve the significant shortcomings PHMSA identified.

¹⁹ Public Law 109-59 (2005).

²⁰ PHMSA Organizational Assessment, Rulemaking Diagnostic, January 2016.

PHMSA LACKS ADEQUATE COORDINATION AND POLICIES FOR ADDRESSING FAA, FMCSA, AND FRA'S HAZMAT CONCERNS

PHMSA has not adequately coordinated with FAA, FMCSA, or FRA on how to address the OAs' safety concerns regarding hazmat in the rulemaking and international standards development processes. In addition, PHMSA has not established internal policies and procedures for how to coordinate with the OAs to respond to disputes over rulemaking. As a result, disputes between PHMSA and FAA, FMCSA, and FRA have delayed rulemaking activities.

PHMSA Has Not Adequately Coordinated with the Other OAs on Rulemaking and International Standards

PHMSA has not adequately coordinated with FAA, FMCSA, or FRA on their safety concerns regarding hazmat in the rulemaking and international standards development processes. Under the DOT Order on PHMSA's organization, PHMSA must coordinate with these other OAs on hazmat policy.

PHMSA and the OAs have not communicated clearly on how to coordinate on updates of existing regulations. For example, in early 2013, in response to separate requests from FAA and FRA to change hazmat regulations, PHMSA officials directed the two OAs to follow the regulatory change support paper process, but did not similarly direct FMCSA. During this audit, FMCSA officials informed us that they believed that the regulatory change support paper process was internal to PHMSA. When they had safety concerns about cargo tank facility regulations, they did not submit a regulatory change support paper to PHMSA. PHMSA's coordinator for the regulatory change support paper process stated he never communicated with FMCSA officials to explain the process or encourage them to use it.

PHMSA has received criticism from the other OAs on the regulatory change support paper process but not addressed it. For example, FAA officials stated to us that they were dissatisfied with elements of the process, such as the level of economic analysis required and the lack of timeframes for PHMSA's responses. PHMSA officials acknowledged that they were aware of FAA's dissatisfaction with the process and that the process has weaknesses. For example, PHMSA's process coordinator stated that he provides feedback to the OAs on their draft papers that can be overwhelming and sometimes causes the OAs to forgo the process. The coordinator also said PHMSA had no deadlines for responding to regulatory change support papers from the OAs.

PHMSA has also not adequately coordinated with FAA on the development of proposals for international negotiations on standards for safe international transport of hazmat by air. For example, FAA officials stated that PHMSA did not

communicate with FAA on its August 2015 letter to a private individual in response to a request for interpretation of current regulations on the classification of certain lithium ion batteries.²¹ According to FAA officials, PHMSA's interpretation in its response to the letter was important and the lack of communication resulted in confusion and disagreement about the issue between the two OAs during an international meeting. According to PHMSA officials, FAA has submitted positions on international standards to the International Civil Aviation Organization (ICAO)—such as weight restrictions for lithium ion batteries—without first getting PHMSA's concurrence. PHMSA officials further stated that the poor coordination between PHMSA and FAA on international safety standards has resulted in the United States missing opportunities to strengthen overall hazmat standards.

This inadequate coordination has occurred in part because PHMSA lacks agreement with FAA, FMCSA, and FRA on rulemaking coordination and negotiations on standards for international hazmat transportation by air.²² PHMSA officials stated that it has agreements on enforcement but not on rulemaking because while it shares legal authority with the other OAs for enforcing hazmat laws and regulations, PHMSA alone has the legal authority to promulgate hazmat regulations. These Officials further stated that PHMSA staff coordinate with OA staff on the development of regulations and international standards using common sense, and thus agreements are unnecessary.

PHMSA Has Not Developed Policy or Guidance on How To Respond to the OAs' Safety Concerns

PHMSA does not have a policy on how to respond to the other OAs' safety concerns, and consequently has not provided guidance to OHMS on how to respond. The Internal Control Standards direct Federal managers to implement controls through policies. PHMSA officials explained that ongoing discussion with the OAs allows PHMSA to quickly address their safety concerns, making unnecessary a policy on how to address the concerns. Yet, PHMSA officials also acknowledged that poor coordination has on occasion resulted in disputes with OAs that have negatively impacted the timeliness of rulemaking.

²¹ In the letter, the individual requested PHMSA's interpretation of the size limit for lithium batteries in 49 C.F.R. § 173.185(c)(1)(i) and clarification of why he and another person had received different information in response to this inquiry.

²² The Agency has agreements with FAA, FMCSA, and FRA on enforcement of hazardous materials regulations and evaluation of special permits and approvals. The Agencies signed the special permit and approval agreement as of February 2014, after a 2010 OIG report on the special permits and approvals program that stated that deficiencies existed in PHMSA's coordination with the OAs. According to the Director of PHMSA's Approvals and Permits Division, developing the special permits agreement was useful because it forced staff to establish reasonable expectations and the basis for productive working relationships.

PHMSA, FAA, FMCSA, FRA, and the Office of the Secretary of Transportation have in place a dispute resolution process that requires referral of disputes to senior management. However, PHMSA and the other OAs have not clearly defined the circumstances under which staff should initiate this process, and could not provide an example of its use, despite multiple disputes over rulemaking. PHMSA officials stated they prefer to resolve disputes informally rather than use the resolution process.

As a result of the lack of policy, PHMSA has taken a significant amount of time to resolve disputes. For example, in April 2013, FAA sent a memorandum to PHMSA requesting that the Agency clarify its position on a February 2013 emergency addendum revising a special provision of ICAO's standards on transport of lithium batteries by air.²³ According to FAA officials, they never received a response from PHMSA. In March 2015, FAA submitted another memo and a regulatory change support paper to PHMSA requesting that the Agency revise its regulations to align with the 2013 emergency addendum. In the transmittal email to OHMS, FAA officials cited their concern over this "serious safety issue that puts us at odds with the international community..." According to OHMS's records, as of January 2016, PHMSA had accepted FAA's proposal and was drafting the notice of proposed rulemaking.

In another instance, FAA challenged the adoption of several special permits in a final rule that was required by Congress. PHMSA officials stated that the OAs—including FAA—were part of its rulemaking team from the early stages of developing the NPRM. In August 2015—about a month before the rule's legal deadline of October 1, 2015—PHMSA sent the draft final rule to FAA for concurrence. However, FAA did not concur, and in a memorandum to PHMSA, identified several special permits incorporated into the NPRM that it objected to. For example, one special permit that FAA objected to reclassified detonating cords for explosives in a way that would allow explosive materials to be transported on cargo aircraft. In late October 2015, PHMSA's rulemaking staff requested that PHMSA's experts on explosives classification meet with FAA to address its concerns over these special permits. Yet, the meeting did not take place for over 2 months, and PHMSA officials could not explain the significant time lag. Ultimately, PHMSA and FAA agreed to remove the special permit for detonating cords that FAA objected to, and PHMSA published the final rule in January 2016. PHMSA's inability to quickly resolve this dispute with FAA delayed the final rule's publication by over 3 months and caused the Agency to miss the rule's legal deadline.

²³ ICAO Document 9284-AN/905, Addendum No. 1 to the 2013-2014 Edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air, February 2013. This addendum revised special provision A51, which covers transporting packages of lithium ion aircraft batteries up to 100 kilograms.

CONCLUSION

Mandates and recommendations regarding pipeline and hazmat materials transportation safety from Congress, NTSB, GAO, and OIG are directed at improving safety and protecting the public. Implementing the mandates and recommendations requires timely action by PHMSA in coordination with other OAs also charged with protecting the public. PHMSA's slow progress and lack of coordination over the past 10 years has delayed the protections those mandates and recommendations are intended to provide. PHMSA has recently made efforts to close old NTSB recommendations and improve its rulemaking process, but a lack of sustained leadership attention to development of policies and oversight of implementation has made it difficult for the Agency to accomplish its safety mission.

RECOMMENDATIONS

We recommend that the Pipelines and Hazardous Materials Safety Administrator:

1. Develop and issue an agency-wide policy for implementing mandates and recommendations. The policy should, at a minimum, establish:
 - a. Specific roles, responsibilities, and authorities of the Chief Counsel, Chief Safety Officer, and the Associate Administrators for Pipeline and Hazardous Materials Safety;
 - b. Requirements for developing a plan to address each mandate and recommendation;
 - c. Requirements for assigning responsibilities to each team member, in particular to team leads, for carrying out this policy;
 - d. Requirements for retaining documentation in accordance with the Department of Transportation records management policy; and
 - e. Management controls including oversight processes for the implementation of mandates and recommendations.
2. Develop and implement a rulemaking prioritization process that requires assessment of risk.
3. Develop written agreements with the FAA, FMCSA, and FRA on appropriate coordination for rulemaking and the international standards development

process. At a minimum, the agreements should cover roles and responsibilities, communication protocols, and required documentation on decisions.

4. Provide guidance to OHMS on implementing its written agreements with other Operating Administrations.
5. Develop and implement an internal policy on the dispute resolution process that includes criteria and timeframes for when to use the process.

AGENCY COMMENTS AND OFFICE OF INSPECTOR GENERAL RESPONSE

We provided PHMSA a copy of our report on August 25, 2016, and received its response on September 26, 2016, which is included as an appendix to this report. In its response, PHMSA concurred with recommendations 1, 2, 4, and 5 and provided appropriate actions and completion dates. Accordingly, we consider these recommendations resolved but open pending completion of the planned actions.

PHMSA concurred with the intent of recommendation 3 but proposed a standardized process for collaborating across DOT instead of developing and implementing written agreements. While we are not opposed to an alternative course of action, PHMSA's response is not clear on how it will ensure agreement from FAA, FMCSA and FRA on this standardized process. Until PHMSA provides additional details on its planned action, we consider recommendation 3 open and unresolved.

ACTIONS REQUIRED

We consider recommendations 1, 2, 4, and 5 resolved but open pending completion of planned actions. In accordance with DOT Order 8000.1C, we request that PHMSA provide us the additional clarification and information requested above for recommendation 3 within 30 days of the date of this report

We appreciate the courtesies and cooperation of PHMSA representatives during this audit. If you have any questions concerning this report, please call me at (202) 366-5630, or Wendy Harris, Program Director, at (202) 366-2794.

#

cc: DOT Audit Liaison, M-1
PHMSA Audit Liaison, PH-3

EXHIBIT A. SCOPE AND METHODOLOGY

We conducted our work from May 2015 through August 2016 in accordance with generally accepted Government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To assess PHMSA's progress in addressing congressional mandates and recommendations from NTSB, GAO, and OIG issued or open since 2005, we reviewed the Rulemaking Management System, rulemaking documents, advisory bulletins, congressional reports, and correspondence with NTSB and GAO. We used this information to create a universal set of 263 mandates and recommendations, including current status and deadlines set by PHMSA. After confirming this universal data set with PHMSA, we determined PHMSA's timeliness in responding to mandates and recommendations, timeliness in conducting rulemaking activities, and progress addressing NTSB recommendations. We also interviewed NTSB, GAO, and PHMSA management and staff.

To assess PHMSA's process for implementing mandates and recommendations, including any impediments to Agency action, we analyzed 26 case studies made up of mandates and recommendations that were open within the longest or shortest time frames. We excluded mandates and recommendations closed before January 1, 2011, and those that were not directly related to safety or the objectives of this audit. To understand PHMSA's process for implementing the mandates and recommendations in our case studies, we reviewed relevant PHMSA contracting documents, rulemaking and advisory bulletin policies, electronic databases, written status reports, briefing papers, regulatory support papers, Technical Advisory Committee transcripts and SharePoint Website. We also interviewed program staff that act as team leads for implementing the mandates and recommendations.

To assess PHMSA's efforts to coordinate and address OAs' safety concerns, we reviewed the Agency's written agreements with other OAs and its policies and procedures related to coordination with the OAs. We also reviewed PHMSA's records related to coordination activities. We interviewed FAA, FMCSA, FRA, and PHMSA management and staff and observed two meetings during which the four OAs discussed coordination and safety issues.

EXHIBIT B. ENTITIES VISITED OR CONTACTED

PHMSA

- Office of the Chief Safety Officer
- Office of the Chief Counsel
- Office of Pipeline Safety
 - Standards and Rulemaking Division
 - Engineering and Research Division
 - Program Development Division
 - Safety Data Systems and Analysis Division
- Office of Hazardous Materials Safety
 - Standards and Rulemaking Division
 - Engineering and Research Division
 - Program Development Division
 - Approvals and Permits Division

Other Operating Administrations

- Federal Aviation Administration, Office of Hazardous Materials Safety
- Federal Motor Carrier Safety Administration, Hazardous Materials Division
- Federal Railroad Administration, Hazardous Materials Division

Office of the Secretary of Transportation

- Office of the General Counsel

Other Entities

- Government Accountability Office
- National Transportation Safety Board
- American Short Line and Regional Railroad Association
- National Association of State Fire Marshals

EXHIBIT C. RULEMAKING PROCESS FLOW CHART

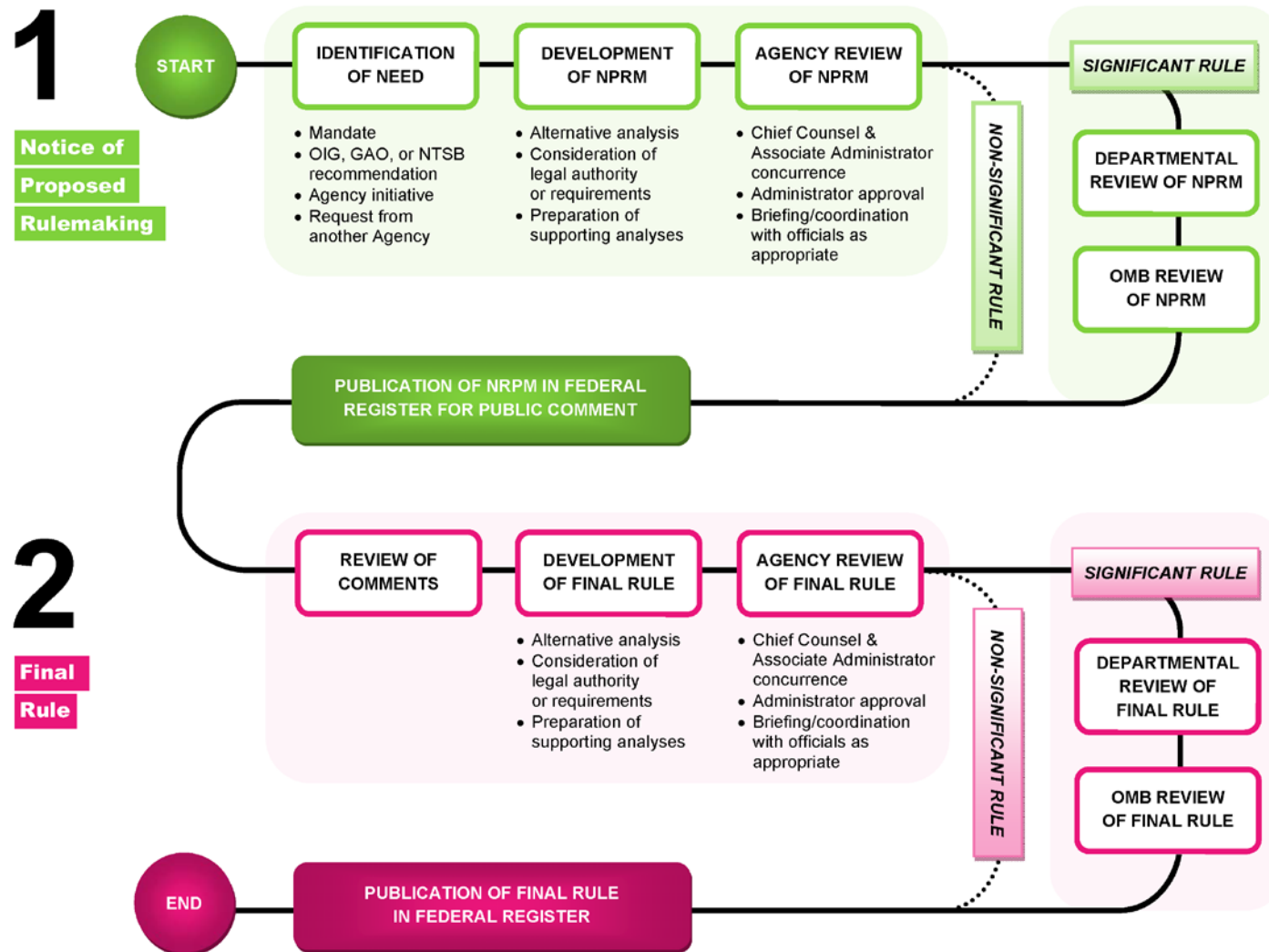


Exhibit C. Rulemaking Process Flow Chart

EXHIBIT D. PRIOR AUDITS AND EVALUATIONS ON PHMSA'S PROGRESS ADDRESSING MANDATES AND RECOMMENDATIONS

Department of Transportation Office of the Inspector General

- *Pipeline Safety Program: Research and Special Permits Administration*, OIG Report Number RT-2000-069, March 13, 2000. We found that PHMSA's predecessor, the Research and Special Programs Administration (RSPA), had 21 open pipeline safety recommendations dating back to 1987. We recommended that RSPA comply with DOT's order instructing the OA to establish and transmit timetables to NTSB regarding the implementation of recommendations.
- *The Department of Transportation's Rulemaking Process*, OIG Report Number MH-2000-109, July 20, 2000. In response to congressional and departmental concerns over DOT's not completing rulemaking actions in a timely manner, we evaluated whether DOT's rulemaking process had improved since 1993. We reported that RSPA had taken an average of 5.9 years to complete significant rules compared to 1.6 years in 1993. We also reported that RSPA had 10 open rulemakings ranging from 3.5 to 10.5 years past their statutory deadlines.
- *Actions Taken and Needed in Implementing Mandates and Recommendations Regarding Pipeline and Hazardous Materials Safety*, OIG Report Number AV-2006-003, October 20, 2005. We reported that PHMSA still needed to address long-standing pipeline and hazmat mandates and NTSB recommendations. For example, the Agency had 7 open mandates that were over 10 years old and more open NTSB recommendations than any other OA, with 4 recommendations over 10 years old.

Government Accountability Office

- *Pipeline Safety: Progress Made, but Significant Requirements and Recommendations Not Yet Complete*, GAO-01-1075, September 28, 2001. GAO reported that OPS had implemented 6 of 22 mandates that had been open in May 2000 but had not yet fully implemented 11—including 3 from 1992 or earlier that could significantly improve pipeline safety. GAO classified the other 5 mandates as closed for other reasons, such as Congress's revision of the original mandate.

EXHIBIT E. OUTSTANDING RECOMMENDATIONS AND MANDATES

TABLE 5. OUTSTANDING OIG RECOMMENDATIONS FROM 2005 TO 2015

	Issue Date	Report Title and Number	Recommendation	Actions Taken	Actions Needed
PIPELINE SAFETY					
1	6/18/2012	Hazardous Liquid Pipeline Operators' Integrity Management Programs Need More Rigorous PHMSA Oversight, AV-2012-140	Update integrity management (IM) requirements to mandate baseline and recurring assessments for non-line pipe facilities.	Proposed new course of action and new target action date. Briefed OIG on research (non line pipe new technologies).	Conduct road-mapping at the 2016 R&D Forum and issue a competitive solicitation addressing integrity threats to non-line pipe.
2	6/18/2012	Hazardous Liquid Pipeline Operators' Integrity Management Programs Need More Rigorous PHMSA Oversight, AV-2012-140	Create database of physical characteristics, accidents, and inspections, including location, of pipelines to identify and monitor those at risk.	Published information collection request (ICR): Pipeline Safety: Request for Revision of a Previously Approved Information Collection: National Pipeline Mapping System Program.	Obtain OMB approval of ICR and create database of physical characteristics, accidents, and inspections, including location, of pipelines to identify and monitor those at risk.
HAZARDOUS MATERIALS SAFETY					
3	7/17/2014	PHMSA Has Addressed Most Weaknesses We Identified in Its Special Permit and Approval Process, MH-2014-064	Develop and implement a plan—including milestones and funding requirements—to resolve company identifier issue.	Worked with Dunn and Bradstreet to enhance company identifier data.	Assess effectiveness of Dunn and Bradstreet's information and determine whether plan to resolve company identifier issue is required.

Table 6. Outstanding Mandates From Statutes Passed Between 2005 and 2015

	Report Title and Number	Outstanding Mandate	Actions Taken	Actions Needed
PIPELINE SAFETY				
1	Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, P.L. 112-90	Prescribe minimum safety standards for transportation by pipeline of carbon dioxide in gaseous state.	Reviewing comments on CO ₂ report to better understand possible effects of regulatory scenarios presented in report.	Review CO ₂ report comments and prescribe minimum safety standards for transportation by pipeline of carbon dioxide in gaseous state.
2	Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, P.L. 112-90	If appropriate, issue regulations based on a report to Congress about existing Federal and State regulations for all gathering lines.	Published NPRM: Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines.	Review NPRM with appropriate technical advisory committee.
3	Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, P.L. 112-90	2.7 years outstanding. If appropriate, issue regulations requiring use of excess flow valves or equivalent technology, where economically, technically, and operationally feasible on new or entirely replaced distribution branch services, multi-family facilities, and small commercial facilities.	Published NPRM: Expanding the Use of Excess Flow Valves in Gas Distribution Systems to Applications Other Than Single-Family Residences.	Publish final rule.
4	Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, P.L. 112-90	Require tests to confirm material strength of previously untested gas transmission pipelines in high concentration areas (HCA).	Published NPRM: Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines.	Review NPRM with appropriate technical advisory committee.
5	Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, P.L. 112-90	2.7 years outstanding. If appropriate, issue regulations requiring use of automatic or remote-controlled shut-off valves on transmission pipelines constructed or entirely replaced after rule's date.	Sent NPRM to OST: Pipeline Safety: Amendments to Parts 192 and 195 to Require Valve Installation and Minimum Rupture Detections Standards.	OST approve NPRM and forward to OMB.

Exhibit E. Outstanding Recommendations and Mandates

	Report Title and Number	Outstanding Mandate	Actions Taken	Actions Needed
6	Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, P.L. 112-90	If warranted by integrity management system (IMS) study, issue final regulations expanding IMS requirements beyond HCAs and remove redundant class locations requirements for gas transmission pipeline facilities; may not issue during review period unless there is risk to public safety.	Published NPRM: Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines. Sent Final Rule to OST: Pipeline Safety: Safety of On-Shore Hazardous Liquid Pipelines.	Review NPRM with appropriate technical advisory committee. OST approve Final Rule and forward to OMB.
7	Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, P.L. 112-90	Maintain map of designated HCAs (part of national pipeline mapping system (NPMS)) in which pipelines are required to meet IMP regulations. Update the NPMS map biennially.	OPS is procuring drinking water and ecological data.	Update NPMS with drinking water and ecological data.
8	Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, P.L. 112-90	If appropriate, issue regulations requiring leak detection on hazardous liquid pipelines and establishing leak detection standards. May not issue during review period unless there is a risk to public safety.	Sent Final Rule to OST: Pipeline Safety: Safety of On-Shore Hazardous Liquid Pipelines. Sent NPRM to OST: Pipeline Safety: Amendments to Parts 192 and 195 to Require Valve Installation and Minimum Rupture Detections Standards.	OST approve Final Rule and forward to OMB. OST approve NPRM and forward to OMB: Pipeline Safety: Pipeline Rupture Detection and Mitigation for Onshore Populated and High Consequence Areas

Exhibit E. Outstanding Recommendations and Mandates

	Report Title and Number	Outstanding Mandate	Actions Taken	Actions Needed
9	Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, P.L. 112-90	3.2 years outstanding. Revise regulations to (a) require telephonic reporting no later than 1 hour following “confirmed discovery;” (b) review and revise procedures for operators and National Response Center (NRC) to notify emergency responders, including 911; (c) require revising initial telephonic report after 48 hours if practicable;(d) update initial report on accident or incident instead of generating new report.	Published NPRM: Operator Qualification, Cost Recovery, Accident and Incident Notification, and Other Pipeline Safety Proposed Changes; Technical Advisory Committees approved NPRM and rulemaking team recommended to management modifications to current rule.	Publish final rule.

Exhibit E. Outstanding Recommendations and Mandates

	Report Title and Number	Outstanding Mandate	Actions Taken	Actions Needed
HAZARDOUS MATERIALS SAFETY				
10	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, P.L. 109-59	Make grants for training instructors to train hazmat employees; maintenance-of-way employees and railroad signalmen shall receive general awareness and familiarization training and safety training pursuant to section 49 C.F.R. § 172.704.	Addressed 49 C.F.R. § 172.704.	Address mandate as written.
11	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, P.L. 109-59	Transmit to FMCSA hazardous material registrant information obtained before, on, or after the date of enactment under 49 U.S.C. § 5108, with any DOT identification number for each registrant	Unknown.	Unknown.
12	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users, P.L. 109-59	Provide funding to Operation Respond Institute to design, build, and operate seamless first responder hazardous materials incident detection, preparedness, and response system	None.	Address with appropriated funds.
13	Moving Ahead for Progress in the 21 st Century Act, P.L. 112-141	3.0 years outstanding. FY 2012: Submit report to Congress identifying ultimate grant recipients and include: detailed accounting and description of each grant expenditure by recipient, including amount of and purpose for, each expenditure; number of persons trained under the grant program, by training level; an evaluation of the program efficacy of such planning and training programs; and any recommendations Secretary may have for improving grant programs.	Received OMB's approval for ICR that will allow PHMSA to address this mandate in FY 2016 notice of grant awards.	PHMSA cannot address this mandate for FY 2012.

Exhibit E. Outstanding Recommendations and Mandates

	Report Title and Number	Outstanding Mandate	Actions Taken	Actions Needed
14	Moving Ahead for Progress in the 21 st Century Act, P.L. 112-141	2.0 years outstanding. FY 2013: Submit report to Congress identifying ultimate grant recipients and include: detailed accounting and description of each grant expenditure by recipient, including amount of and purpose for, each expenditure; number of persons trained under the grant program, by training level; an evaluation of the program efficacy of such planning and training programs; and any recommendations Secretary may have for improving grant programs.	Received OMB's approval for ICR that will allow PHMSA to address mandate in FY 2016 notice of grant awards.	PHMSA cannot address this mandate for FY 2013.
15	Moving Ahead for Progress in the 21 st Century Act, P.L. 112-141	1.0 years outstanding. FY 2014: Submit report to Congress identifying ultimate grant recipients and include: detailed accounting and description of each grant expenditure by recipient, including amount of and purpose, for each expenditure; number of persons trained under grant program, by training level; an evaluation of program efficacy of planning and training programs; and any recommendations Secretary may have for improving grant programs.	Received OMB's approval for ICR that will allow PHMSA to address this mandate in FY 2016 notice of grant awards.	PHMSA cannot address this mandate for FY 2014.

Exhibit E. Outstanding Recommendations and Mandates

	Report Title and Number	Outstanding Mandate	Actions Taken	Actions Needed
16	Moving Ahead for Progress in the 21 st Century Act, P.L. 112-141	2.0 years outstanding. Submit a report to Congress on the results of the pilot projects carried out under this section, including: (1) a detailed description of the pilot projects; (2) an evaluation of each pilot project, including an evaluation of the performance of each paperless hazard communications system in such project; (3) an assessment of the safety and security impact of using paperless hazard communications systems, including any impact on the public, emergency response, law enforcement, and the conduct of inspections and investigations; (4) an analysis of the associated benefits and costs of using the paperless hazard communications systems for each mode of transportation; and (5) a recommendation that incorporates the information gathered in subparagraphs (1) – (4) on whether paperless hazard communications systems should be permanently incorporated into the Federal hazardous material transportation safety program	Conducted 24 pilot tests; draft report under review.	Conduct data evaluation on pilot test data and impact analysis data collection, and prepare a feasibility and assessment report.
17	Moving Ahead for Progress in the 21 st Century Act, P.L. 112-141	2.0 years outstanding. 2014: Ongoing review and analysis of special permits. Not later than 1 year after date on which special permit has been in continuous effect for 10 years, conduct review and analysis of that special permit to determine whether it may be converted into hazardous materials regulations.	Evaluated all permits in initial review completed in October 2013.	Conduct review analysis of special permits for FY 2014.

Exhibit E. Outstanding Recommendations and Mandates

	Report Title and Number	Outstanding Mandate	Actions Taken	Actions Needed
18	Moving Ahead for Progress in the 21 st Century Act, P.L. 112-141	1.0 years outstanding. 2015: Ongoing review and analysis of special permits. Not later than 1 year after date on which special permit has been in continuous effect for 10 years, conduct review and analysis of that special permit to determine whether it may be converted into hazardous materials regulations.	Evaluated all permits in initial review completed in October 2013.	Conduct review analysis of special permits for FY 2015.
19	Moving Ahead for Progress in the 21 st Century Act, P.L. 112-141	After completing review and analysis of 10-year special permits, either institute rulemaking to incorporate special permit into hazmat regulations or publish in Federal Register its justification for why special permit is not appropriate for incorporation into regulations.	Unknown.	Contingent on completion of rulemaking mandate to issue regulations to incorporate into the hazmat regulations any special permits identified in the initial review and analysis that PHMSA determines are appropriate for incorporation based on the review factors.
20	Consolidated and Further Continuing Appropriations Act, 2015, P.L. 113-235	Prior years recoveries recognized in the current year shall be available to develop a hazardous materials response training curriculum for emerge responders...and make training available through an electronic format.	Made grants to three non-profit organizations to develop trainings.	Provide training in electronic format.

Exhibit E. Outstanding Recommendations and Mandates

Table 7. Outstanding NTSB Recommendations From 2005 Through 2015 (Including One from 2001 and One from 1998)

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
PIPELINE SAFETY				
1	P-01-02 6/22/2001	Require that excess flow valves be installed in new and renewed gas service lines, regardless of customer's classification, when operating conditions are compatible with readily available valves.	Sent Final Rule to OST: Pipeline Safety: Expanding the Use of Excess Flow Valves in Gas Distribution Systems to Applications Other Than Single-Family Residences.	Publish final rule.
2	P-09-02 10/27/2009	Based on results of study requested in NTSB Safety Recommendation P-09-1, to identify actions pipeline operators can take to eliminate certain seam failures, implement actions needed.	Ongoing study.	Complete study and implement necessary actions.
3	P-11-08 9/26/2011	Require operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines to provide system-specific information about pipeline systems to community emergency response agencies. Include pipe diameter, operating pressure, product transported, and potential impact radius.	Published a Pipeline Public Awareness Strengths, Weaknesses, Opportunities, and Threat (SWOT) report; an ICR: Pipeline Safety: Request for Revision of a Previously Approved Information Collection: National Pipeline Mapping System Program; and a revised ICR.	Develop recommendations for enhancing American Petroleum Institute Recommended Practice 1162, Public Awareness Programs for Pipeline Operators; OMB approval of ICR.
4	P-11-09 9/26/2011	Require operators of natural gas transmission and distribution pipelines and hazardous liquid pipelines to ensure that control room operators immediately and directly notify 911 emergency call centers when possible rupture of any pipeline is indicated.	Published Advisory Bulletin. Recommendation included in NPRM: Pipeline Safety: Amendments to Parts 192 and 195 to Require Valve Installation and Minimum Rupture Detections Standards, revised based on PHC comments.	OST approve NPRM and forward to OMB.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
5	P-11-10 9/26/2011	Require that all operators of natural gas transmission and distribution pipelines equip supervisory control and data acquisition systems with tools to assist in recognizing and pinpointing locations of leaks, including line breaks; tools could include real-time leak detection system and appropriately spaced flow and pressure transmitters along covered transmission lines.	Published Advisory Bulletin; Sent to OST NPRM: Pipeline Safety: Amendments to Parts 192 and 195 to Require Valve Installation and Minimum Rupture Detections Standards.	OST approve NPRM and forward to OMB.
6	P-11-11 9/26/2011	Amend 49 CFR § 192.935(c) to require that automatic shutoff valves or remote control valves in high consequence areas and in class 3 and 4 locations be installed and spaced at intervals that consider factors listed in that regulation.	Sent to OST NPRM: Pipeline Safety: Amendments to Parts 192 and 195 to Require Valve Installation and Minimum Rupture Detections Standards.	OST approve NPRM and forward to OMB.
7	P-11-12 9/26/2011	Amend 49 CFR §§ 199.105 and 199.225 to eliminate operator discretion with regard to testing of covered employees. Revised language should require drug and alcohol testing of each employee whose performance either contributed to accident or cannot be completely discounted as contributing factor.	Published NPRM: Pipeline Safety: Operator Qualification, Cost Recovery, and Other Proposed Changes; started summarizing comments.	Publish final rule.
8	P-11-14 9/26/2011	Amend 49 CFR § 192.619 to delete grandfather clause and require that all gas transmission pipelines constructed before 1970 be subjected to hydrostatic pressure test that incorporates spike test.	Issued NPRM: Safety of Gas Transmission and Gathering Pipelines.	Review NPRM with appropriate technical advisory committee.
9	P-11-15 9/26/2011	Amend 49 CFR § 192 so that manufacturing and construction related defects can only be considered stable if gas pipeline has been subjected to post construction hydrostatic pressure test of at least 1.25 times maximum allowable operating pressure.	Issued NPRM: Safety of Gas Transmission and Gathering Pipelines.	Review NPRM with appropriate technical advisory committee.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
10	P-11-18 9/26/2011	Revise integrity management inspection protocol to incorporate review of meaningful metrics; require auditors to verify that operator has procedure for ensuring completeness and accuracy of underlying information; require auditors to review all integrity management performance measures reported to PHMSA and compare leak, failure, and incident measures to operator's risk model; and require setting performance goals for pipeline operators at each audit and follow up on goals at subsequent audits.	Modified several components of inspection and enforcement processes and procedures.	Finish developing data analysis program to evaluate performance metrics and post operator metrics and goals on Website.
11	P-11-20 9/26/2011	Work with State public utility commissions to: implement oversight programs that employ meaningful metrics to assess effectiveness of oversight programs and make metrics available in centralized database, and identify and correct deficiencies in programs.	With National Association of Pipeline Safety Representatives (NAPSR), developed draft metrics and preliminary criteria for screening. Reviewed metrics of each State pipeline program as part of State's annual evaluation and correct any identified deficiencies.	Work with NTSB to close recommendation.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
12	P-12-03 7/25/2012	Revise 49 C.F.R. § 195.452 to clearly state: when engineering assessment of crack defects, including environmentally assisted cracks, must be performed; acceptable methods for performing these assessments, including assessment of cracks coinciding with corrosion with safety factor that considers uncertainties associated with sizing of crack defects; criteria for determining when probable crack defect in pipeline segment must be excavated and time limits for completing excavations; pressure restriction limits for crack defects that are not excavated by required date; and acceptable methods for determining crack growth for any cracks allowed to remain in pipe, including growth caused by fatigue, corrosion fatigue, or stress corrosion cracking.	Sent Final Rule to OST: Pipeline Safety: Safety of On-Shore Hazardous Liquid Pipelines.	OST approve Final Rule and forward to OMB.
13	P-12-04 7/25/2012	Revise 49 C.F.R. § 195.452(h)(2)--discovery of condition--to require, when determination about pipeline threats has not been obtained within 180 days following inspection date, that pipeline operators notify PHMSA and provide expected date when adequate information will be available.	Sent Final Rule to OST: Pipeline Safety: Safety of On-Shore Hazardous Liquid Pipelines.	OST approve Final Rule and forward to OMB.
14	P-12-07 7/25/2012	Develop requirements for team training of control center staff involved in pipeline operations similar to those used in other transportation modes.	Included recommendation in NPRM: Pipeline Safety: Operator Qualifications, Cost Recovery, and Other Proposed Changes. The Technical Advisory Committees approved final rule.	Publish final rule.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
15	P-12-08 7/25/2012	Extend operator qualification requirements in 49 C.F.R. § 195 (G) to all hazardous liquid and gas transmission control center staff involved in pipeline operational decisions.	Included recommendation in NPRM: Pipeline Safety: Operator Qualifications, Cost Recovery, and Other Proposed Changes. The Technical Advisory Committees approved final rule.	Publish final rule.
16	P-12-09 7/25/2012	Amend 49 C.F.R. Part 194 to harmonize onshore oil pipeline response planning requirements with those of Coast Guard and EPA for facilities that handle and transport oil and petroleum products to ensure that pipeline operators have adequate resources available to respond to worst-case discharges.	Continues study and evaluation of ways to better harmonize C.F.R. Part 194 – Response Plans for Onshore Pipelines with regulations promulgated by other agencies and intends to incorporate harmonization or other changes in next Part 194 update rule.	Incorporate harmonization or other changes in next update to 49 C.F.R. Part 194.
17	P-14-01 3/5/2014	Revise 49 C.F.R. § 903 (O), Gas Transmission Pipeline Integrity Management, to add principal arterial roadways including interstates, other freeways and expressways, other principal arterial roadways as defined in FHA's Highway Functional Classification Concepts, Criteria and Procedures to the list of identified sites that establish a high consequence area.	Partially addressed through NPRM: Safety of Gas Transmission and Gathering Pipelines.	Review NPRM with appropriate technical advisory committee.
18	P-15-01 2/10/2015	Assess: need for additional inspection protocol guidance for State inspectors; adequacy of existing mentorship program for these inspectors; and availability of subject matter experts for consultation with them, and implement the necessary improvements.	Provided additional information in Section 5.1.4.d of 2016 Guidelines for States Participating in the Pipeline Safety Program.	Report results and any identified actions for improvement to NTSB.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
19	P-15-02 2/10/2015	Modify overall State program evaluation, training, and qualification requirements for State inspectors to include Federal-to-State coordination in integrity management inspections.	Modified Section 5.1.3.a of 2016 Guidelines to add information regarding availability of PHMSA personnel to provide technical support to State inspectors.	Report to NTSB results, with any corrective actions for improvement, and schedule for corrective actions.
20	P-15-03 2/10/2015	Work with NAPSRS to develop and implement program to formalize, publicize, and facilitate increased State-to-State coordination in integrity management inspections.	Sent Operator Coordination Report to States. Report to be used by States and PHMSA to determine whether States have operators in common to facilitate coordination of inspections. Report also helps States determine whether they have operators in common with PHMSA.	Update NTSB on actions taken to address this recommendation (past due).
21	P-15-04 2/10/2015	Increase positional accuracy of pipeline centerlines and attribute details relevant to safety in NPMS.	Published ICR: National Pipeline Mapping System Program.	Obtain OMB approval of ICR and update NTSB.
22	P-15-05 2/10/2015	Revise submission requirement to include high consequence area identification as attribute data element to NPMS.	Published NPRM: Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines.	Review NPRM with appropriate technical advisory committee.
23	P-15-06 2/10/2015	Assess limitations associated with current process for identifying HCAs, and disseminate results of assessment to pipeline industry, inspectors, and public.	Performing assessment of limitations associated with current process for identifying HCAs.	Finalize HCA assessment and publish results in an advisory bulletin.
24	P-15-07 2/10/2015	Work with Federal Geographic Data Committee (FGDC) to identify and publish standards and specifications for geospatial data commonly used by gas transmission pipeline operators, and disseminate standards and specifications to operators and inspectors.	Met with FGDC but plans to take no further actions.	Report to NTSB on FGDC meeting outcome in next comprehensive recommendations update (past due).

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
25	P-15-08 2/10/2015	Work with appropriate Federal, State, and local agencies to develop national repository of geospatial data resources for process for HCA identification, and publicize availability of repository.	Met with FGDC, which recommended not developing a new repository. OPS is procuring drinking water and ecological data.	Evaluate feasibility of repository, additional datasets that can aid in HCA identification and provide update to NTSB (past due).
26	P-15-09 2/10/2015	Establish minimum criteria for eliminating threats, and provide guidance to gas transmission pipeline operators for documenting rationales for all eliminated threats.	Published NPRM: Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines.	Complete Final Rule and publish results in advisory bulletin and updated inspection protocol guidance.
27	P-15-10 2/10/2015	Update guidance for gas transmission pipeline operators and inspectors on evaluation of interactive threats. Should list all threat interactions that must be evaluated and acceptable methods to be used.	Held risk modeling workshop and established risk modeling workgroup that includes industry and other stakeholders, to address perceived shortcomings in application of certain risk models.	Perform evaluation of interactive threats and publish results in advisory bulletin and as updated inspection protocol guidance (past due).
28	P-15-11 2/10/2015	Develop and implement specific risk assessment training for inspectors in verifying technical validity of risk assessments that operators use.	Began developing training material regarding risk assessments.	Provide risk assessment training under development to NTSB (past due).
29	P-15-12 2/10/2015	Evaluate safety benefits of four risk assessment approaches currently allowed by gas integrity management regulations; determine whether they produce comparable safety benefit; disseminate results to industry, inspectors, and public.	Established risk modeling workgroup on four risk models and other matters.	Disseminate workgroup's results to industry, inspectors, and public.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
30	P-15-13 2/10/2015	Update guidance for gas transmission pipeline operators and inspectors on critical components of risk assessment approaches. Include: methods for setting weighting factors; factors that should be included in consequence of failure calculations; appropriate risk metrics and methods for aggregating risk along pipeline.	Established risk modeling workgroup on four risk models and other matters.	Evaluate guidance on critical components of risk assessment approaches, identify needed improvements, and revise guidance.
31	P-15-14 2/10/2015	Revise 49 CFR § 192.915 to require all personnel involved in integrity management programs to meet minimum professional qualification criteria.	Provided initial response to NTSB.	Issue advisory bulletin.
32	P-15-15 2/10/2015	Revise PHMSA Form F7100.1, Annual Report Form, to collect information about which methods of HCA identification and risk assessment approaches were used.	Published ICR: National Pipeline Mapping System Program.	Revise PHMSA Form F7100.1, Annual Report Form.
33	P-15-16 2/10/2015	Revise PHMSA Form F7100.2, Incident Report Form to: collect information about both results of previous assessments and previously identified threats for each pipeline segment involved in incident; allow for inclusion of multiple root causes when multiple threats interacted.	Published notice in Federal Register proposing changes to Form F7100.2.	Will evaluate comments to Federal Register notice before revising PHMSA Form F7100.2.
34	P-15-17 2/10/2015	Develop program to use data collected in response to Safety Recommendations P-11-15 and P-11-16 to evaluate relationship between incident occurrences and: inappropriate elimination of threats; interactive threats; risk assessment approaches used by gas transmission pipeline operators. Disseminate results of evaluation to industry, inspectors, and public annually.	Provided initial response to NTSB.	Evaluate method for conducting analysis to include potential changes to investigation and data systems and communicate findings to NTSB (past due).

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
35	P-15-18 2/10/2015	Require that all natural gas transmission pipelines be capable of being in-line inspected by either reconfiguring pipeline to accommodate in line inspection tools or by use of new technology that permits inspection of previously un-inspectable pipelines; priority should be given to highest risk transmission pipelines that considers age, internal pressure, pipe diameter, and class location (Safety Recommendation P-15-18 superseded Safety Recommendation P-11-17).	Published NPRM: Safety of Gas Transmission and Gathering Pipelines.	Complete final rule and forward to OST.
36	P-15-20 2/10/2015	Identify all operational complications that limit use of in-line inspection tools in piggable pipelines, develop methods to eliminate operational complications, and require operators to use these methods to increase use of in-line inspection tools.	Published NPRM: Safety of Gas Transmission and Gathering Pipelines.	Complete final rule and forward to OST.
37	P-15-21 2/10/2015	Develop and implement plan for eliminating use of direct assessment as sole integrity assessment method for gas transmission pipelines.	Published NPRM: Safety of Gas Transmission and Gathering Pipelines.	Complete final rule and forward to OST.
38	P-15-22 2/10/2015	Develop and implement plan for all segments of pipeline industry to improve data integration for integrity management through use of geographic information systems (GIS).	Published NPRM: Safety of Gas Transmission and Gathering Pipelines.	Complete final rule and forward to OST.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
HAZARDOUS MATERIALS SAFETY				
39	A-08-01 1/7/2008	In collaboration with air carriers and manufacturers of lithium batteries and electronic devices, air travel associations, and other appropriate Government and private organizations, establish process to ensure wider, highly visible, and continuous dissemination of guidance and information to air-traveling public, including flight crews, about safe carriage of rechargeable lithium batteries or electronic devices containing them on board passenger aircraft.	Continued efforts to provide guidance to public on safe use of batteries through SafeTravel campaign, monitored passenger and flight crew awareness and behavior, and assessed visibility of SafeTravel campaign.	Provide NTSB documentation to indicate that guidance has been used and information about methodology used to measure effectiveness of guidance.
40	A-08-02 1/7/2008	In collaboration with air carriers, manufacturers of lithium batteries and electronic devices, etc., establish process to periodically measure effectiveness of efforts to educate air-traveling public, including flight crews, about safe carriage of rechargeable lithium batteries on passenger aircraft.	Continued efforts to provide guidance to public on safe use of batteries through SafeTravel campaign, monitored passenger and flight crew awareness and behavior, and assessed visibility of SafeTravel campaign.	Develop a plan to fully address the recommendation and provide NTSB documentation to indicate that guidance has been used and information about the methodology used to measure the effectiveness of guidance.
41	H-04-23 7/1/2004	Require periodic nondestructive testing on nurse tanks to identify material flaws that could develop and grow during tank's service and result in tank failure.	As required by FAST Act, withdrew rulemaking: Hazardous Materials: Safety Requirements for External Product Piping on Cargo Tanks Transporting Flammable Liquids.	Unknown, dependent upon response from NTSB.
42	H-09-01 3/5/2009	Modify 49 CFR § 173.301 to clearly require that: cylinders be securely mounted on mobile acetylene trailers and other trailers with manifold cylinders to reduce likelihood of cylinders being ejected during accident; cylinder valves, piping, and fittings be protected from multidirectional impact forces likely to occur during highway accidents, including rollovers.	Published NPRM: Miscellaneous Amendments (RRR).	Complete final rule and forward to OST.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
43	H-09-02 3/5/2009	Require fail-safe equipment that ensures that operators of mobile acetylene trailers perform unloading procedures correctly and in sequence.	Published NPRM: Miscellaneous Amendments (RRR).	Complete final rule and forward to OST.
44	H-11-04 9/2/2011	Work with FMCSA to develop and disseminate guidance to assist hazardous materials carriers in implementing comprehensive cargo tank motor vehicle rollover prevention programs, including active participation of drivers, dispatchers, and management through training, loading practices, delivery schedules, and acquisition of equipment.	Augmented Hazardous Materials Transportation Training Module 5.1 and sponsored Transportation Research Board (TRB) study, "Role of Human Factors in Preventing Cargo Tank Rollovers."	Take action based on analysis of TRB research project.
45	H-11-05 9/2/2011	Conduct comprehensive analysis of all available accident data on DOT specification cargo tanks to identify cargo tank designs and associated dynamic forces that pose higher risk of failure and release of hazardous materials in accidents. Then study dynamic forces acting on susceptible structures under varying accident conditions and develop performance standards to eliminate or mitigate the risks.	Initiated 6-month special study to improve data quality on cargo tank rollover incidents.	Complete project and develop standards.
46	H-11-06 9/2/2011	Once standards in Safety Recommendation H-11-5 have been developed, require that all newly manufactured cargo tanks comply with standards.	Initiated 6-month special study to improve the data quality on cargo tank rollover incidents.	Complete project and develop standards. Complete NPRM and forward to OST.
47	R-07-04 4/25/2007	With FRA's assistance, require that railroads immediately provide to emergency responders accurate, real-time information regarding identity and location of all hazardous materials on a train.	Volpe Center completed draft feasibility and assessment study, and PHMSA initiated new rulemaking adopting § 7302 of FAST Act.	Provide feasibility and assessment report to Congress. Complete both related rulemakings.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
48	R-08-13 5/22/2008	With FRA's assistance, evaluate risks posed to train crews by unit trains transporting hazardous materials, determine optimum separation requirements between occupied locomotives and hazardous materials cars, and review 49 CFR § 174.85.	Working with FRA to determine best way to modify, streamline, expand, or repeal relevant regulations.	Coordinate with FRA to review findings that may support regulatory changes.
49	R-12-07 3/2/2012	Require that all newly manufactured and existing tank cars authorized for transportation of hazardous materials have center sill or draft sill attachment designs that conform to revised Association of American Railroads' (AAR) design requirements adopted as a result of Safety Recommendation R-12-9 (recommendation given to Association of American Railroads).	Jointly with FRA leading a Railroad Safety Advisory Committee (RSAC) initiative to address this recommendation.	Complete work with RSAC. Complete NPRM and forward to OST.
50	R-14-05 1/21/2014	Revise spill response planning thresholds contained in 49 CFR § 130 to require comprehensive response plans to effectively provide for carriers' ability to respond to worst-case discharges resulting from accidents involving unit trains or blocks of tank cars transporting oil and petroleum products.	Published NPRM: Hazardous Materials: Oil Spill Response Plans for High-Hazard Flammable Trains.	Complete final rule and forward to OST.
51	R-14-06 1/21/2014	Require shippers to sufficiently test and document physical and chemical characteristics of hazardous materials to ensure proper classification, packaging, and record-keeping of products.	The Secretary signed final rule, Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains.	Identify uniform sampling and testing methodology.
52	R-14-14 8/26/2014 (DOT is lead agency)	Require railroads transporting hazardous materials through communities to provide emergency responders and local and State emergency planning committees with current commodity flow data and assist with development of emergency operations and response plans.	The Secretary signed final rule, Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains.	Expand advanced notification for all hazmat and railroads.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
53	R-14-18 8/26/2014	Take action to ensure that emergency response information carried by train crews is consistent with and at least as protective as existing emergency response guidance provided in Emergency Response Guidebook.	Informed NTSB that contemplating possible actions.	Unknown; PHMSA did not commit to specific action.
54	R-14-19 8/26/2014	Require railroads transporting hazardous materials to develop, implement, and periodically evaluate a public education program similar to 49 CFR § 192.616 and 195.440 for the communities along railroad hazardous materials routes.	Continued to participate in and promote efforts of Transportation Community Awareness and Emergency Response program, and to encourage operators to target both public and emergency response community.	Review public awareness program for pipeline operators.
55	R-14-20 8/26/2014	Collaborate with FRA and the American Short Line and Regional Railroad Association (ASLRRA) to develop risk assessment tool that addresses known limitations and shortcomings of Rail Corridor Risk Management System software tool.	Informed NTSB that it will not be significantly involved in FRA's efforts to address recommendation.	Unknown, dependent upon response from NTSB.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
56	R-14-21 8/26/2014	Collaborate with FRA and ASLRRA to conduct audits of short line and regional railroads to ensure that route risk assessments that identify safety and security vulnerabilities are performed and incorporated into a safety management system program.	Informed NTSB that it will not be significantly involved in FRA's efforts to address recommendation.	Unknown, dependent upon response from NTSB.
57	R-15-14 4/3/2015	0.4 years outstanding. ²⁴ Require that all new and existing tank cars used to transport Class 3 flammable liquids be equipped with thermal protection systems that meet or exceed thermal performance standards 49 CFR § 179.18(a) and are appropriately qualified for tank car configuration and commodity transported.	The Secretary signed final rule Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains.	Unknown, dependent upon response from NTSB.
58	R-15-15 4/3/2015	0.4 years outstanding. In conjunction with thermal protection systems called for in safety recommendation R-15-14, require that new and existing tank cars used to transport Class 3 flammable liquids be equipped with appropriately sized pressure relief devices that allow release of pressure under fire conditions to ensure thermal performance that meets or exceeds the requirements of 49 CFR § 179.18(a), and that minimizes likelihood of energetic thermal ruptures.	The Secretary signed final rule: Hazardous Materials: Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains..	Unknown, dependent upon response from NTSB.

²⁴ NTSB marked recommendations R-15-14 through R-15-17 as urgent. NTSB Order 70B states that, typically, urgent recommendations should be implemented within 1 year.

Exhibit E. Outstanding Recommendations and Mandates

	Rec. No and Issue Date	Open NTSB Recommendation	Actions Taken	Actions Needed
59	R-15-16 4/3/2015	0.4 years outstanding. Require aggressive, intermediate progress milestone schedule, such as 20 percent yearly completion metric over 5-year implementation period, for replacement or retrofitting of legacy DOT-111 and CPC-1232 tank cars to appropriate tank car performance standards that include equipping cars with jackets, thermal protection, and appropriately sized pressure relief devices.	Determined that the FAST Act prevents the Agency from implementing this recommendation.	Establish intermediate metrics for evaluating safety improvement.
60	R-15-17 4/3/2015	0.4 years outstanding. Establish publicly available reporting mechanism that reports at least annually, progress on retrofitting and replacing tank cars subject to thermal protection system performance standards as recommended in safety recommendation R-15-16.	Working with stakeholders to modify an industry reporting system to include progress on retrofitting or replacing tank cars.	Complete efforts to establish publicly available reporting mechanism.

Exhibit E. Outstanding Recommendations and Mandates

Table 8. Outstanding GAO Recommendations From 2005 to 2015

	Issue Date	Report Title and Number	Open GAO Recommendation	Actions Taken	Actions Needed
PIPELINE SAFETY					
1	3/22/2012	Collecting Data and Sharing Information on Federally Unregulated Gathering Pipelines Could Help Enhance Safety, GAO-12-388	Collect data from operators of federally unregulated onshore hazardous liquid and gas gathering pipelines subsequent to analysis of benefits and industry burdens associated with such data collection.	Sent Final Rule to OST: Pipeline Safety: Safety of On-Shore Hazardous Liquid Pipelines. Published NPRM: Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines.	OST approve Final Rule and forward to OMB. Review NPRM with appropriate technical advisory committee.
2	1/23/2013	Better Data and Guidance Needed to Improve Pipeline Operator Incident Response, GAO-13-168	Improve reliability of incident response data and use these data to evaluate whether to implement performance-based framework for incident response times.	Issued a 60-day notice inviting comments on proposed revisions to relative incident and accident report forms.	Finalize incident report forms to improve reliability of incident response data.
3	1/23/2013	Better Data and Guidance Needed to Improve Pipeline Operator Incident Response, GAO-13-168	To assist operators in determining whether to install automated valves, use PHMSA's existing information-sharing mechanisms to alert pipeline operators of inspection and enforcement guidance that provides additional information on hazmat.	Publicly posts its enforcement guidance.	Complete valve and rupture detection NPRM and forward to OST.

Exhibit E. Outstanding Recommendations and Mandates

	Issue Date	Report Title and Number	Open GAO Recommendation	Actions Taken	Actions Needed
4	6/27/2013	Guidance and More Information Needed before Using Risk-Based Reassessment Intervals, GAO-13-577	To improve how operators calculate reassessment intervals, Secretary of Transportation should direct PHMSA's Administrator to develop guidance for operators to use in determining risks and calculating reassessment intervals.	Analyzed resources needed to implement risk-based reassessment intervals and drafted memo and guidance describing considerations.	Submit completed memo and guidance to GAO.
5	6/27/2013	Guidance and More Information Needed before Using Risk-Based Reassessment Intervals, GAO-13-577	To better identify resource requirements needed to implement risk-based reassessment intervals beyond 7 years for gas transmission pipelines, Secretary of Transportation should direct PHMSA's Administrator to collect information on feasibility of addressing potential challenges of implementing risk-based reassessment intervals beyond 7 years, for example by preparing report or developing legislative proposal for pilot program, in consultation with Congress, that studies impact to regulators and operators of potential rule change.	Conducting research to assess requirements needed to implement risk-based reassessment intervals beyond 7 years for gas transmission.	Submit completed memo and guidance to GAO.
6	8/21/2014	Department of Transportation is Taking Actions to Address Rail Safety, but Additional Actions are Needed to Improve Pipeline Safety, GAO-14-667	DOT should move forward with proposed rulemaking to address safety risks, including emergency response planning, from newer gathering pipelines.	Sent Final Rule to OST: Pipeline Safety: Safety of On-Shore Hazardous Liquid Pipelines. Published NPRM: Pipeline Safety: Safety of Gas Transmission and Gathering Pipelines.	OST approve Final Rule and forward to OMB. Review NPRM with appropriate technical advisory committee.

Exhibit E. Outstanding Recommendations and Mandates

	Issue Date	Report Title and Number	Open GAO Recommendation	Actions Taken	Actions Needed
HAZARDOUS MATERIALS SAFETY					
7	9/11/2013	CARGO TANK TRUCKS: Improved Incident Data and Regulatory Analysis Would Better Inform Decisions about Safety Risks, GAO-13-721	Address limitations in accuracy and completeness of information used to assess impact of wet line incidents, such as by specifying circumstances when to seek missing cause and cost information, and using sources other than carrier to acquire information (such as investigations by local law enforcement or other federal agencies), particularly for most severe incidents for which accurate incident information is critical to oversight.	Established dashboard in reporting system to identify potential wetline incidents; created system to send incident reports directly to modal partners and internal subject matter experts.	Create specific wetlines validation codes for incident reporting.

EXHIBIT F. MAJOR CONTRIBUTORS TO THIS REPORT

<u>Name</u>	<u>Title</u>
Wendy M. Harris	Program Director
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APPENDIX. AGENCY COMMENTS



U.S. Department
of Transportation
**Pipeline and
Hazardous Materials
Safety Administration**

Memorandum

Date: September 26, 2016

Subject: INFORMATION: Management Response to Office of
Inspector General Draft Report on “Insufficient Guidance
Oversight and Coordination Hinder PHMSA’s Full
Implementation of Mandates and Recommendations”

From:

Marie Therese Dominguez
PHMSA Administrator

To:

Barry J. DeWeese
Assistant Inspector General for Surface Transportation Audits

The Pipeline and Hazardous Materials Safety Administration’s (PHMSA) mission is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives. PHMSA is committed to ensuring that mandates and recommendations regarding pipeline and hazardous materials transportation safety are fully implemented in a timely manner. We completed an organizational assessment in February 2016 and many of the OIG’s findings are consistent with the results of our own evaluation. Following that assessment, PHMSA began implementing a number of changes to its organizational structure. Specifically, we established the following new positions and office:

- A career Executive Director/Chief Safety Officer position to ensure consistency and continuity of operations. We also created two separate positions—Chief Financial Officer and an Associate Administrator of Administration; and
- A new agency office, the Office of Planning and Analytics (OPA), to enhance planning and project management, data analysis, and rulemaking capabilities for the entire agency.

In addition, the following significant efforts are currently underway or completed, and will greatly enhance PHMSA’s oversight of mandates and recommendations:

- Developing agency-wide approaches and standard operating procedures to monitor and track actions from mandates, audits, recommendations, and rulemaking actions through the new Office of Planning and Analytics. This office will also work to improve collaboration within and outside PHMSA through revised or new standard operating procedures (SOPs) to ensure all parties understand and execute their duties consistently, while maintaining flexibility to exercise priorities differently. Further, the Office of Planning and Analytics will document and track agency-wide activities through new or revised policies, steering committees, and merged or modified online tracking systems.
- Establishing a Regulatory Steering Committee, a governance structure co-chaired by PHMSA's Deputy Administrator and Executive Director and composed of senior leadership across the Agency. The committee is charged with overseeing the regulatory development process and prioritizing and allocating resources for PHMSA's rulemakings. The committee will ensure a more timely and effective response to mandates and recommendations.
- Updated the status of each mandate and recommendation in Exhibit E of the OIG's draft report to include actions taken and actions needed with target dates.
- Successfully coordinated with other Department of Transportation (DOT) Operating Administrations (OAs) on a number of rulemakings and audits, and improved its coordination processes through new and or revised SOPs, operational workflow documents, and steering committees.

These significant changes will help PHMSA effectively centralize, streamline and better document its decision-making process, while maintaining the accountability and expertise of its various specialized offices.

Based upon our review of the draft report, we concur with recommendations 1, 2, 4 (with a corresponding adjustment to align with our comments to recommendation 3) and 5, as written. We plan to complete actions to implement Recommendation 1 by March 31, 2017; Recommendation 2 by January 31, 2017; Recommendation 4 by December 31, 2017; and Recommendation 5 by December 31, 2017. Regarding Recommendation 3, we concur with the intent of the recommendation but propose an alternative course of action with a target implementation date of December 31, 2017. We propose developing and implementing a standardized process for collaborating across DOT instead of developing and implementing written agreements for coordinating with other Operating Administrations. The written process will include roles and responsibilities, communication protocols, and required documentation on decisions and will be coordinated with the OAs. In accordance with recommendation 4, we would communicate guidance on the implementation of that written process to the Office of Hazardous Materials Safety.

We will continue to strengthen our oversight controls and policies for timely implementation of mandates and recommendations and appreciate the opportunity to comment on the OIG draft report. Please contact Mindy Shalaby, Acting Audit Liaison, at 202-366-0078 with any questions or if you require additional information.