ACTIONS TAKEN AND NEEDED IN IMPLEMENTING MANDATES AND RECOMMENDATIONS REGARDING PIPELINE AND HAZARDOUS MATERIALS SAFETY

Department of Transportation

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Memorandum

U.S. Department of Transportation
Office of the Secretary
of Transportation
Office of Inspector General

Subject: INFORMATION: Report on Actions Taken and Needed in Implementing Mandates and Recommendations Regarding Pipeline and Hazardous Materials Safety Department of Transportation Report Number AV-2006-003

Date: October 20, 2005

From: Kenneth M. Mead
Inspector General

Reply to Attn. of: J-1

To: The Secretary
Deputy Secretary
Chief of Staff
Administrator Designate, Pipeline and Hazardous Materials Safety Administration
Chairman, National Transportation Safety Board

As required by the Norman Y. Mineta Research and Special Programs Improvement Act,[1] the Office of Inspector General (OIG) conducted a review of the Department of Transportation's (DOT) progress in implementing congressional mandates and other safety recommendations for improving pipeline and hazardous materials safety. The Act requires the Inspector General to provide a report to the Secretary of Transportation and the Administrator of the Pipeline and Hazardous Materials Safety Administration (PHMSA) containing a list of outstanding congressional mandates and open safety recommendations made by the National Transportation Safety Board (NTSB) or OIG regarding pipeline and hazardous materials safety.

On February 1, 2005, we gave the Secretary a preliminary list of outstanding congressional mandates and open safety recommendations. This report is an update on the actions taken and actions needed to implement outstanding congressional mandates and open NTSB and OIG recommendations regarding pipeline and hazardous materials safety. In light of Hurricane Katrina, we were

[1] The Act (Public Law Number 108-426) created, among other things, the Pipeline and Hazardous Materials Safety Administration within the Department of Transportation.

concerned as to whether any of the outstanding mandates or recommendations we identified in this report were relevant in preventing, preparing for, responding to, and recovering from Katrina, and we confirmed that they were not. Our scope and methodology are presented in Exhibit A.

RESULTS IN BRIEF

To address most congressional mandates and NTSB safety recommendations, the Department and its Operating Administrations issue rules, complete studies, or do both. Since 1999, the Department has made significant progress in issuing rules, especially old rules and congressionally mandated rules with deadlines. The Department completed 39 percent more rulemakings in 2004 than it did in 1999. As we previously reported,[2] the principal reason for that progress has been the priority given to rulemaking by the Secretary, Deputy Secretary, Chief of Staff, and General Counsel. Congressional interest has also placed emphasis on rulemaking, and several OIG audit reports have identified ways to improve the rulemaking process, such as implementing a Department-wide rulemaking tracking and monitoring system to identify problems occurring both Department-wide and at the individual Operating Administrations.

Also, in our June 2004 testimony on pipeline safety before the House Subcommittee on Highways, Transit and Pipelines,[3] we reported that the Office of Pipeline Safety (OPS), which is part of PHMSA (formerly the Research and Special Programs Administration), has made considerable progress in closing out mandates from legislation enacted in 1992, 1996, and 2002 and in closing out NTSB recommendations, some of which had been open since the early 1990s. This progress was the direct result of a high level of management attention and priority in the past few years to complete the mandates and recommendations.[4]

Still, there remain some long-standing pipeline and hazardous materials congressional mandates, some more than a decade old (ranging from 2.7 to 12.8 years for pipeline safety mandates and 2.5 to 14.8 years for hazardous materials safety mandates). There also remain some long-standing NTSB pipeline and hazardous materials safety recommendations, ranging from 0.8 to 14.8 years for pipeline safety recommendations and 0.7 years to 16.1 years for hazardous materials safety recommendations.

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[2] OIG Report Number SC-2005-031, "Follow-up Audit of DOT's Rulemaking Process and Tracking System," December 21, 2004. OIG reports can be found on our website: www.oig.dot.gov.

[3] OIG Report Number CC-2004-061, "Actions Taken and Actions Needed To Improve Pipeline Safety," June 16, 2004.

[4] We are not able to quantify the progress in implementing hazardous materials mandates and NTSB recommendations by the other Operating Administrations because we have not conducted comprehensive audits of their hazardous materials programs.

The outstanding mandates and open recommendations encompass a wide variety of safety issues that are important to the integrity of the pipeline system and to the safe transportation of hazardous materials. Unlike congressional mandates where the Department must take the necessary actions to address the mandates, a safety recommendation is NTSB's suggested course of action to an Operating Administration to correct a transportation safety deficiency. The Operating Administrations can chose to adopt a NTSB recommendation, adopt one in part, or decline to carry one out. For the latter two choices, the Operating Administrations must provide NTSB with a reason for adopting the recommendation in part or not at all.

The *outstanding mandates* we identified include safety issues such as the need to (1) prescribe standards for using the direct assessment method[5] to inspect pipelines for potentially dangerous defects, such as corrosion; and (2) amend existing regulations, as appropriate, to provide for the safe transportation by rail of high-level radioactive waste and spent nuclear fuel as the number of shipments of these materials increases annually.

The *open NTSB recommendations* we identified include safety issues such as the need to (1) require that excess flow valves, which automatically close off and restrict leaking gas, be installed in all new and renewed gas service lines when the operating conditions are compatible with readily available valves to reduce the consequences of service line ruptures; and (2) amend the training requirements for shippers and carriers of hazardous materials by air because hazardous materials transport and the aviation industry have changed significantly since the Federal Aviation Administration (FAA) promulgated them more than 25 years ago.

In light of Hurricane Katrina, we wanted to establish whether any of the outstanding mandates or safety recommendations included in our review were relevant in preventing, preparing for, responding to, or recovering from Katrina. We did not find any that were relevant. One open NTSB pipeline safety recommendation addresses the need for revising the emergency response planning requirements in the pipeline safety regulations to include coordination with electric and other utilities that may need to respond to a pipeline emergency.

OPS has taken action on this recommendation and is awaiting closure by NTSB. Specifically, OPS issued an advisory bulletin to alert pipeline operators of the need to preplan for emergency response with all utility companies whose proximity to the pipeline may affect the response. Existing regulations for both natural gas and hazardous liquid pipelines require operators to have emergency

[5] Direct assessment is an inspection process used to assess the integrity of pipelines by a combination of indirect examination (above-ground inspection using instruments that measure pipeline anomalies) and direct examination (excavation and visual inspection for integrity threats).

procedures for addressing pipeline emergencies and explicitly require that operators include procedures for planning with fire, police, and other public officials to ensure a coordinated response. The advisory bulletin states that pipeline operators need to coordinate emergency response planning with owners of electric and other utilities.

In addition to the advisory bulletin, OPS also asked the National Association of State Fire Marshals to prepare a guidance bulletin to reinforce for fire and emergency response personnel the importance of including all utilities in the Incident Command System and to arrange for state workshops on emergency response. OPS is also working with the Common Ground Alliance[6] to develop a best practice on emergency response.

The emergency response planning for Katrina's disruptions to the Nation's pipeline system in the Gulf Coast region were more economic in nature rather than safety related and involved keeping the supply of energy flowing from the Gulf Coast region to the Southeastern and Mid-Atlantic regions of the United States. The broader issue of emergency response planning will be the subject of various post-Katrina inquiries.

Senior officials should continue to focus on reducing the number of outstanding mandates and NTSB recommendations—by issuing rules, completing studies, or both. This is important because the Senate Appropriation Committee, in its report on DOT's 2006 appropriations, highlights its interest in Department efforts to reduce the backlog of delinquent reporting requirements (i.e., outstanding congressional mandates).

Senior officials also need to focus on meeting their statutory requirements when responding to NTSB recommendations. For example, instead of submitting formal written responses to NTSB recommendations within 90 days of receipt, as required by law, the Operating Administrations' average response time is 158 days. The Department's process for monitoring and tracking NTSB recommendations needs to be strengthened to assure that NTSB recommendations have been handled in a timely manner and properly addressed, including providing milestones for completing the recommendations.

[6] The Common Ground Alliance members include all underground facilities stakeholder groups (e.g., oil, gas, electric, telecommunications, water, excavation, and road building) whose common purpose is to prevent damage to underground infrastructure.

Working with the pertinent Operating Administrations[7] and NTSB, we have identified and verified the following lists of outstanding safety mandates and recommendations.

- **Open OIG pipeline and hazardous materials safety recommendations from 2004.** This list (see Exhibit B) includes actions taken and needed to close the five open pipeline safety recommendations regarding PHMSA's Pipeline Safety Program and eight open hazardous materials safety recommendations regarding FAA's Hazardous Materials Program.

  The OIG recommendations regarding pipeline and hazardous materials safety were in reports issued in June and November 2004, respectively. Although the recommendations are still open, PHMSA and FAA have made progress on them. For example, PHMSA has closed two recommendations and is expected to complete additional actions on the remaining five by the end of 2005. For actions requiring rulemaking, PHMSA expects to issue final rules by the end of 2006. FAA has taken actions on all eight recommendations, with more than half of the recommendations expected to be completed by the end of 2005.

- **Outstanding pipeline and hazardous materials safety mandates from legislation enacted from 1990 through 2004.** This list (see Exhibit C) includes actions taken and needed to close the 10 outstanding pipeline safety mandates and 6 outstanding hazardous materials mandates. Five of the 10 outstanding pipeline safety mandates have not been completed because 4 have congressional deadlines that have not come due and 1 lacks appropriated funds for implementation. The average elapsed time of the outstanding pipeline and hazardous materials mandates is 8.8 years and 9.0 years, respectively, with a range of 2.7 to 12.8 years for pipeline safety mandates and 2.5 to 14.8 years for hazardous materials safety mandates.

  Three of the six hazardous materials mandates have been outstanding for more than a decade. The Federal Railroad Administration (FRA) has taken the longest to address outstanding hazardous materials safety mandates, with an average elapsed time of almost 15 years. According to FRA, it has been faced with technological delays for the two outstanding mandates, with one mandate just completed on September 22, 2005.

- **Open NTSB pipeline and hazardous materials safety recommendations from 1989 through 2004.** This list (see Exhibit D) includes actions taken and needed to close the 13 open pipeline safety recommendations and 26 open hazardous materials recommendations.

[7] FAA, the Federal Motor Carrier Safety Administration, the Federal Railroad Administration, and PHMSA (its Office of Pipeline Safety and Office of Hazardous Materials Safety).

There are five classifications for "open" NTSB recommendations, which describe the quality of the Department's or its Operating Administrations' response and the actions taken to adopt or implement the recommendation: open-await response, open-response received, open-acceptable response, open-acceptable alternate response, and open-unacceptable response.

All 13 pipeline safety recommendations are currently classified as open-acceptable response, but the agreed-upon actions have either not been completed or actions taken are considered by OPS as being in the close-out phase (i.e., acceptable action taken by OPS, close-out letter to NTSB for review). Twenty of the 26 hazardous materials recommendations are classified as either open-acceptable response or open-acceptable alternative response, 1 is classified as open-response received, and 5 are classified as open-unacceptable response. The Department has implemented a process whereby a different Operating Administration meets with the Deputy Secretary, the Chief of Staff, and the General Counsel in a weekly regulatory review meeting to discuss, among other things, open-unacceptable NTSB recommendations.[8]

Department policy requires Operating Administrations to expeditiously pursue actions proposed in response to NTSB safety recommendations. There remain some long-standing NTSB pipeline and hazardous materials recommendations. We found that the average elapsed time of open NTSB pipeline and hazardous materials safety recommendations is 4.5 and 6.3 years, respectively, with a range of 0.8 to 14.8 years for pipeline safety recommendations and 0.7 years to 16.1 years for hazardous materials safety recommendations. PHMSA has more open NTSB safety recommendations than any other Operating Administration; four recommendations are more than a decade old, with one that has been open for over 16 years, as PHMSA, FRA, and industry continue to work together to implement this recommendation.

In addition, we found that the Operating Administrations could do a better job of meeting their statutory requirements for responding in a timely manner to open NTSB pipeline and hazardous materials safety recommendations. Specifically, we found that the Operating Administrations:

- With the exception of FAA, were not providing formal written responses to the recommendations within the required 90 days of receipt. The average elapsed time for these formal responses is 158 days, with a range of 17 to 1,020 days. While the Department and NTSB may have held informal discussions on the course of action to be taken on a recommendation before the 90-day due date, by law the

[8] This means that each Operating Administration meets with the Deputy Secretary, the Chief of Staff, and the General Counsel approximately every 10 weeks.

Secretary must give a formal written response to each recommendation within 90 days of receipt.

- Did not always provide in their formal written responses a proposed timetable for completing the agreed-upon corrective actions. In 64 percent (25 of 39) of NTSB pipeline and hazardous materials recommendations under review, we found that Operating Administrations' responses did not include timetables. Timetables establish completion dates and allow DOT to measure the Operating Administrations' progress in implementing the NTSB recommendations.

The Department's Assistant Secretary for Transportation Policy is responsible for monitoring the Operating Administrations' compliance with the statutory requirement for responding to all NTSB recommendations. The process for monitoring compliance is not done in real time and the Department might be better served by a system for monitoring and tracking NTSB recommendations that ensures timely and proper responses to them, including milestones for completing the recommendations. Milestones should then be monitored to ensure that progress is being made in implementing the recommendations.

Summary of Management Comments and OIG Response

On August 9, 2005, we met with officials from the Department and the Operating Administrations under review to discuss our results. We received their comments and, when necessary, made the appropriate changes.

The Department and the Operating Administration officials stated they did not believe that the report adequately reflected the work the Department has been doing to address the outstanding mandates and open NTSB recommendations. We made changes to the report identifying areas where progress had been made in closing mandates and recommendations, distinguishing between the Department's responsibilities for congressional mandates versus NTSB recommendations, and providing a more detailed description of the process for monitoring the Operating Administrations' responses to NTSB recommendations.

The Department's efforts to reduce the number of outstanding mandates have been effective, but there are still several pipeline and hazardous materials safety mandates that remain outstanding, some for more than a decade. We would expect the Department to maintain its focus on completing the actions necessary to reducing these mandates and are therefore not making formal recommendations at this time.

Our review was limited to pipeline and hazardous materials safety recommendations, which represent less than 9 percent of all NTSB recommendations handled by the Department. We want to give the Department the opportunity to determine if procedural deficiencies identified in this report extend beyond pipeline and hazardous safety recommendations and to determine if there is a need to develop a Department-wide system for monitoring and tracking NTSB recommendations similar to the system used to track its rulemakings, which has proven to be effective. Therefore, we are making no formal recommendations at this time.

RESULTS

To address most congressional mandates and NTSB safety recommendations, the Department and its Operating Administrations issue rules, complete studies, or do both. As shown in Table 1, studies and rulemakings make up 89 percent (49 of 55) of the outstanding mandates and open NTSB recommendations regarding pipeline and hazardous materials safety.

Table 1. Number of Outstanding Mandates and Open NTSB Recommendations Department-Wide

	Studies	**Rulemaking**	**Other**[a/]
Mandates			
Pipeline Safety	3	4	3
Hazardous Materials Safety	1	4	1
Total	**4**	**8**	**4**
NTSB Recommendations			
Pipeline Safety	3	9	1
Hazardous Materials Safety	2	23	1
Total	**5**	**32**	**2**

a/ This includes improvements in the oversight of pipeline and hazardous materials programs.

Some of the mandates cut across more than one mode of transportation and require the coordination of two or more Operating Administrations, while other mandates require the coordination of Federal agencies outside of DOT. These conditions can, and at times do, lead to delays in completing the studies and new rules. For example, one mandate from legislation enacted in 1990 requires that FRA conduct a study dealing with the safe transport of high-level radioactive waste and spent nuclear fuel. The study has required consultation with the Department of Energy, Nuclear Regulatory Commission, affected states, and shippers of high-level radioactive waste and spent nuclear fuel. FRA was first faced with a year-long funding shortage and then with modifications to the risk assessment model it used

to complete its initial study, but it has completed the study after 14 years. The report of the study's findings was submitted to Congress on September 22, 2005.

The Secretary has taken an active interest in improving the Department's rulemaking process and has emphasized to senior managers the need to ensure that rules are completed in a timely manner and that issues causing delays are identified and resolved. Still, there remain some long-standing pipeline and hazardous material mandates, with seven mandates more than a decade old. There also remain some long-standing NTSB pipeline and hazardous materials recommendations, with four recommendations having been open for more than 12 years.

Senior officials should continue to focus on reducing the number of outstanding mandates and open NTSB recommendations—by issuing rules, completing studies, or doing both. At the same time, senior officials need to focus on meeting their statutory requirements when responding to NTSB recommendations. Instead of submitting formal written responses to NTSB recommendations within 90 days of receipt, as required by law, their average response time is 158 days. The Department's process for monitoring NTSB recommendations needs to be strengthened to assure that NTSB recommendations have been handled in a timely manner and properly addressed, including providing milestones for completing the recommendations.

The Department Needs To Continue Reducing Old Mandates and NTSB Recommendations

As shown in Table 2, the average elapsed time of the outstanding pipeline and hazardous materials mandates is 8.8 years and 9.0 years, respectively, with a range of 2.7 to 12.8 years for pipeline safety mandates and 2.5 to 14.8 years for hazardous materials safety mandates. Three of the five pipeline safety mandates date back to legislation enacted in 1992 and have been outstanding for more than 12 years, while three of the six hazardous materials mandates have been outstanding for more than a decade.

Table 2. Number and Average Elapsed Time of Outstanding Mandates

Operating Administration	Number of Outstanding Mandates	Average Elapsed Time (years)	Range of Elapsed Time (years)[a/]
Pipeline Safety			
PHMSA—OPS	10[b/]	8.8	2.7 to 12.8
Hazardous Materials Safety			
FMCSA[c/]	3	7.3	3.8 to 11.0
FRA	1	14.8	14.8
PHMSA—OHMS[d/]	2	8.6	2.5 to 14.8
Hazardous Materials Total	**6**	**9.0**	**2.5 to 14.8**

a/ Range of elapsed time is expressed in years and was calculated by dividing 12 into the number of months outstanding from the date the legislation containing the mandate was enacted up to August 31, 2005. For example, 12.8 years is calculated by dividing 154 months by 12 (12.8333 years) and rounding the result to 12.8 years.

b/ Five of the 10 mandates have not been included in elapsed time because 4 have congressional deadlines that have not come due and 1 lacks appropriated funds for implementation.

c/ Federal Motor Carrier Safety Administration

d/ Office of Hazardous Materials Safety

In our June 2004 testimony on pipeline safety before the House Subcommittee on Highways, Transit and Pipelines, we reported that OPS has made considerable progress in closing out mandates from legislation enacted in 1992, 1996, and 2002 and in closing out NTSB recommendations, some of which had been open since the early 1990s. For example, of the 23 mandates from legislation enacted in the Pipeline Safety Improvement Act of 2002, OPS has completed its actions mostly on time for 15 of the 17 mandates with deadlines that had expired as of 2004. This progress was the direct result of a high level of management attention and priority in the past few years to implement the mandates.

Among the Operating Administrations, FRA has taken the longest to address outstanding hazardous materials safety mandates, with an elapsed time of almost 15 years. For its one mandate, FRA attributes the delays to funding shortages and substantial changes in the technology necessary to adequately address a transportation safety issue.

The average elapsed time of the open NTSB pipeline and hazardous materials safety recommendations is 4.5 years and 6.3 years, respectively, with a range of 0.8 to 14.8 years for pipeline safety recommendations and 0.7 to 16.1 years for hazardous materials safety recommendations (see Table 3).

Table 3. Number and Average Elapsed Time of Open NTSB Recommendations

Operating Administration	Number of Open NTSB Recommendations	Average Elapsed Time (years)	Range of Elapsed Time (years)[a/]
Pipeline Safety			
PHMSA—OPS	13	4.5	0.8 to 14.8
Hazardous Materials Safety			
DOT	1	7.0	7.0
FAA	5	7.8	5.8 to 9.3
FRA	7	5.5	1.4 to 16.1
PHMSA—OHMS[b/]	13	6.1	0.7 to 16.1
Hazardous Material Total	**26**	**6.3**	**0.7 to 16.1**

a/ Range of elapsed time is expressed in years and was calculated by dividing 12 into the number of months outstanding from the date the legislation containing the mandate was enacted up to August 31, 2005. For example, 7.0 years is calculated by dividing 84 months by 12.

b/ Office of Hazardous Materials Safety

PHMSA has more open NTSB recommendations than any other Operating Administration, with four recommendations that are more than a decade old. The oldest recommendation has been open for over 16 years, as PHMSA, FRA, and industry continue to work together to implement it. NTSB recognizes that some recommendations will require multi-year, long-term efforts to complete research and studies. In our opinion, recommendations open for more than 5 years, especially those open for more than 10 years, are not being pursued expeditiously.

The significance of both the mandates and NTSB recommendations cannot be overstated, as nearly all are the direct result of a major safety accident involving fatalities, injuries, or both. But unlike congressional mandates for which the Department must take the necessary actions to complete the mandates, a safety recommendation is NTSB's suggested course of action to an Operating Administration to correct a transportation safety deficiency. The Operating Administrations can chose to adopt a NTSB recommendation, adopt one in part, or decline to carry one out. For the latter two choices, the Operating Administrations must provide NTSB with a reason for adopting the recommendation in part or not at all.

There are five classifications of "open" recommendations to describe the quality of the response of the Department or its Operating Administrations and the actions taken to adopt or implement a NTSB recommendation: open-await response, open-response received, open-acceptable action, open-acceptable alternate response, and open-unacceptable response.

All 13 pipeline safety recommendations are classified as open-acceptable response, but the agreed-upon actions have either not been completed or actions taken are considered by OPS as being in the close-out phase (i.e., acceptable action taken by OPS, close-out letter to NTSB for review). Twenty of the 26 hazardous materials recommendations are classified as either open-acceptable response or open-acceptable alternative response, with 1 classified as open-response received and 5 classified as open-unacceptable response.

An open-unacceptable response indicates that NTSB expresses disagreement with an Operating Administration's procedures to adopt a recommendation or the Operating Administration's alternative response. Open recommendations can also be classified as open-unacceptable if NTSB believes that actions taken to close the recommendations are not being completed in a timely manner. The Department has implemented a process whereby a different Operating Administration meets with the Deputy Secretary, the Chief of Staff, and the General Counsel in a weekly regulatory review meeting to discuss, among other things, open-unacceptable NTSB recommendations.

The Department Needs To Focus on Meeting Its Statutory Requirements for Responding to NTSB Pipeline and Hazardous Materials Safety Recommendations

The NTSB is an independent Federal agency charged, in part, with investigating pipeline and hazardous materials accidents involving a fatality, serious injury, or substantial property damage. NTSB recommendations, which are issued to DOT and its Operating Administrations, are intended to prevent future accidents and promote safety. DOT policy, as required by law,[9] directs its Operating Administrations to reply to NTSB recommendations within 90 days of receipt. For recommendations with which the Operating Administration concurs, the response must include an implementation timetable. DOT policy also requires that all actions proposed in response to NTSB's recommendations be pursued expeditiously.

We found that the Department's Operating Administrations could do a better job of meeting this statutory obligation. As shown in Table 4, we found that the Department and the Operating Administrations:

- With the exception of FAA, were not providing formal written responses to the recommendations within the required 90 days. In 74 percent (144 of 194) of the cases we reviewed, the Department and the Operating Administrations did not respond to NTSB within 90 days. While the Department and NTSB may

[9] Title 49, United States Code, Section 1135, "Secretary of Transportation's Responses to Safety Recommendations."

have held informal discussions on the course of action to be taken on a recommendation before the 90-day due date, the law states that the Secretary must give a formal written response to each recommendation within 90 days of receipt.

- The average elapsed time of the formal written response for NTSB pipeline and hazardous materials recommendations was 175 days and 146 days, respectively, with a range of 60 to 317 days for pipeline safety recommendations and 17 to 1,020 days for hazardous materials safety recommendations. In one case, it took the Department almost 3 years to provide a formal written response.

Table 4. Average Response Time on Open and Closed NTSB Pipeline and Hazardous Materials Safety Recommendations from 1989 to 2004

Operating Administration	No. of Initial Responses Within 90 Days	No. of Initial Responses Past 90 Days	Average Time (days)	Range of Time (days)[a/]
Pipeline Safety				
DOT	0	4	110	98 to 144
PHMSA—OPS	7	70	178	60 to 317
Subtotal for Pipeline	7	74	175	60 to 317
Hazardous Materials Safety				
DOT	0	3	444	121 to 1,020
FAA	19	0	64	46 to 75
FMCSA[b/]	2	12	197	52 to 481
FRA	7	18	161	23 to 613
PHMSA—OHMS[c/]	15	37	138	17 to 413
Subtotal for Hazardous Materials	43	70	146	17 to 1,020
Total DOT-wide	**50**	**144**	**158**	**17 to 1,020**

a/ The initial response time was calculated from the date the recommendation was issued to the date the Department or Operating Administration provided its initial written response to NTSB.

b/ Federal Motor Carrier Safety Administration

c/ Office of Hazardous Materials Safety

FAA is the only Operating Administration that has an Agency policy[10] implementing the Department's policy. FAA policy requires that the initial response letter be ready for the Administrator's signature no later than 70 days after receipt of the recommendations. Since 1989, FAA has taken an average of 64 days to provide an initial response to NTSB hazardous materials safety

[10] FAA Order 1220.2F, "FAA Procedures for Handling National Transportation Safety Board Recommendations," March 22, 1995.

recommendations, with a range of 46 to 75 days. The other Operating Administrations could follow FAA's lead and develop and implement additional written procedural guidance and oversight to assure that key safety recommendations are handled in a timely manner.

We also found that the Operating Administrations, including FAA, did not always provide in their formal written responses a proposed timetable for completing the agreed-upon actions to the recommendations. In 64 percent (25 of 39) of pipeline and hazardous materials NTSB recommendations under review, no timetables were provided. Timetables establish completion dates and allow DOT to measure the Operating Administrations' progress in implementing the NTSB recommendations.

Improvements Are Needed in the Department's Tracking and Monitoring of NTSB Safety Recommendations

The Department's Assistant Secretary for Transportation Policy is responsible for monitoring the Operating Administrations' compliance with the statutory requirement for responding to all NTSB recommendations. Under the current process, the Assistant Secretary's Office of Policy Development relies primarily on quarterly electronic updates from NTSB's database to monitor the Operating Administrations' progress in completing the NTSB recommendation.

The Assistant Secretary's process for monitoring compliance is not done in real time, and the Department might be better served by a system for monitoring and tracking NTSB recommendations to ensure timely and proper responses to them, including milestones completing the recommendations. As we found, the average elapsed time for these formal responses is 158 days, with a range of 17 to 1,020 days. Also, in 64 percent (25 of 39) of the NTSB pipeline and hazardous materials recommendations under review, we found that Operating Administrations' responses did not include timetables.

MANAGEMENT COMMENTS AND OIG RESPONSE

We provided a discussion draft of this report to the Department and the Operating Administrations under review on July 29, 2005. On August 9, 2005, we met with officials from the Department and Operating Administrations to discuss our results and receive their oral comments. When necessary, we made appropriate changes to the report.

The Department and the Operating Administration officials stated they did not believe the report adequately reflected the work the Department has been doing to address the outstanding mandates and open NTSB recommendations. We made

changes to the report distinguishing between the Department's responsibilities with respect to congressional mandates and NTSB recommendations, providing a more detailed description of the process for monitoring the Operating Administrations' compliance with the statutory requirement for responding to all NTSB recommendations, and identifying areas where progress had been made in closing mandates and recommendations.

As a result of our discussions with Department officials and a computer demonstration of how the Department uses the quarterly updates from the NTSB database to monitor compliance, we made changes to the report to reflect the current process for monitoring NTSB recommendations. However, the process does not have a "tickler system" to flag when a response is due or overdue, and monitoring is not done in real-time.

The Department's efforts to reduce the number of outstanding mandates have been effective, but there are still several pipeline and hazardous materials safety mandates that remain outstanding, some for more than a decade. We would expect the Department to maintain its focus on completing the actions necessary to reducing these mandates and are therefore not making formal recommendations at this time.

Our review was limited to pipeline and hazardous materials safety recommendations, which represent less than 9 percent of all NTSB recommendations handled by the Department. We want to give the Department the opportunity to determine if procedural deficiencies identified in this report extend beyond pipeline and hazardous safety recommendations and to determine if there is a need to develop a Department-wide system for monitoring and tracking NTSB recommendations similar to the system used to track its rulemakings, which has proven to be effective. Therefore, we are making no formal recommendations at this time.

We appreciate the courtesies and cooperation of the Department, the Operating Administrations, and NTSB representatives during this review. If I can answer

any questions or be of further assistance, please feel free to contact me at (202) 366-1959 or Robin K. Hunt, Deputy Assistant Inspector General for Aviation and Special Program Audits, at (415) 744-0420.

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cc: Assistant Secretary for Transportation Policy
Deputy Administrator, PHMSA
Acting Assistant Administrator/Chief Safety Officer, PHMSA
Associate Administrator for Pipeline Safety, PHMSA
Associate Administrator for Hazardous Materials Safety, PHMSA
Assistant Administrator for Security and Hazardous Materials, FAA
Associate Administrator for Safety, FRA
Associate Administrator for Enforcement and Program Delivery, FMCSA
Martin Gertel, M-1

EXHIBIT A. SCOPE AND METHODOLOGY

The review was conducted from December 2004 to April 2005, and Tables 1 through 4 were updated as of August 31, 2005. Exhibits B, C, and D were updated periodically, as needed. We conducted our review in accordance with Generally Accepted Government Auditing Standards prescribed by the Comptroller General of the United States.

As required by the Norman Y. Mineta Research and Special Programs Improvement Act, the OIG conducted an audit of the Department's progress in implementing congressional mandates and other safety recommendations for improving pipeline and hazardous materials safety. The Act requires the Inspector General to provide a report to the Secretary of Transportation and the Administrator of PHMSA containing a list of outstanding congressional mandates and open safety recommendations made by the NTSB or OIG regarding pipeline and hazardous materials safety.

This was a Department-wide review of DOT's progress in implementing congressional mandates and other safety recommendations for improving pipeline and hazardous materials safety. The review was conducted at the Department's Operating Administrations and at NTSB in Washington, DC.

This report covers the Department's congressional mandates identified in the following legislation:

- The Hazardous Materials Transportation Uniform Safety Act of 1990
- The Sanitary Food Transportation Act of 1990
- The Intermodal Surface Transportation Efficiency Act of 1991
- The Pipeline Safety Act of 1992
- The Hazardous Materials Transportation Authorization Act of 1994
- The Accountable Pipeline Safety and Partnership Act of 1996
- The DOT and Related Agencies Appropriations Act of 1997
- The Transportation Equity Act for the 21st Century
- The USA Patriot Act of 2001
- The Pipeline Safety Improvement Act of 2002
- The Consolidated Appropriations Resolution of 2003
- The Consolidated Appropriations Act of 2005

In February 2005, we sent a memorandum to the Secretary with our preliminary lists. In this report, we have updated and verified the information provided in that memorandum. To determine what actions the Department and Operating Administrations had taken to implement the mandates and recommendations, we interviewed appropriate Department officials in the Office of the Secretary of

Transportation, FAA, the Federal Motor Carrier Safety Administration, FRA, and PHMSA. In addition, we reviewed pertinent records to substantiate actions taken.

We also determined the Operating Administrations' compliance with statutory requirements for NTSB recommendations issued from 1989 through 2004. We held discussions with NTSB officials and examined DOT policies, procedures, and records dealing with NTSB recommendations.

EXHIBIT B. OPEN OIG PIPELINE AND HAZARDOUS MATERIALS SAFETY RECOMMENDATIONS FROM 2004

Pipeline Safety						
	Issue Date	**Report Title and No.**	**Lead Agency**	**Open OIG Recommendation**	**Actions Taken**	**Actions Needed**
1	06/14/04	Actions Taken and Needed for Improving Pipeline Safety, SC-2004-064	PHMSA	Complete OPS actions on the remaining six mandates from legislation enacted in 1992 and 1996.	Three of six mandates have been completed. The status of the other three can be found in Exhibit C, Pipeline Safety 1, 2, and 3.	Complete the three remaining mandates
2	06/14/04	Actions Taken and Needed for Improving Pipeline Safety, SC-2004-064	PHMSA	Require operators of natural gas distribution pipelines to implement some form of pipeline integrity management or enhanced safety program with the same or similar integrity management elements as programs for the hazardous liquid and natural gas transmission pipelines.	OPS is implementing an action plan to address distribution pipeline integrity. PHMSA has scheduled several public meetings to gather technical information and has published workshop findings on its website.	Complete analysis and implement safety elements
3	06/14/04	Actions Taken and Needed for Improving Pipeline Safety, SC-2004-064	PHMSA	Finalize and implement "best practices" for PHMSA's internal review process, including procedures to review data quality and to ensure that the operators are providing current, complete, and accurate accident information. OPS should also take enforcement action against those operators who are not complying with the reporting requirements.	PHMSA completed a regional review system in October 2002 and published instructions for completing revised accident and annual reports in January 2004. Best practices for internal review process are being finalized.	Finalize best practices
4	06/14/04	Actions Taken and Needed for Improving Pipeline Safety, SC-2004-064	PHMSA	Complete OPS actions to close out the remaining five NTSB recommendations identified in the report.	PHMSA submitted a letter to NTSB requesting closure on three of the five open recommendations. The status of the other two recommendations can be found in Exhibit D, Pipeline Safety 6 and 9.	Complete actions to close recommen-dations

Pipeline Safety						
	Issue Date	**Report Title and No.**	**Lead Agency**	**Open OIG Recommendation**	**Actions Taken**	**Actions Needed**
5	06/14/04	Actions Taken and Needed for Improving Pipeline Safety, SC-2004-064	PHMSA	Seek clarification on the delineation of roles and responsibilities between OPS and the Department of Energy (DOE).	PHMSA is working with the Transportation Security Administration on the elements of the memorandum of agreement.	Finalize and implement a memorandum of agreement

Exhibit B. Open OIG Pipeline and Hazardous Materials Safety Recommendations From 2004

Hazardous Materials Safety						
	Issue Date	**Report Title and No.**	**Lead Agency**	**Open OIG Recommendation**	**Actions Taken**	**Actions Needed**
1	11/19/04	Audit of FAA's Hazardous Materials Program, SC-2005-015	FAA	Institute guidelines and timeframes for conducting hazardous materials investigations, conducting legal reviews, and issuing Notices of Proposed Civil Penalties through the coordinated efforts of the Hazardous Materials Division and Office of the Chief Counsel.	On September 26, 2005, FAA issued Change 31 to Order 2130.3A instituting guidelines and timeframes for completing investigation and enforcement cases. FAA expects to further amend Order 2130.3A (as Order 2130.3B) by the end of 2005	Complete amendment and issue Order 2150.3B
2	11/19/04	Audit of FAA's Hazardous Materials Program, SC-2005-015	FAA	Implement a nationwide plan to distribute equitably the number of hazardous materials enforcement cases per attorney.	FAA has implemented a plan.	Submit supporting documents and letter requesting closure of recommen-dation
3	11/19/04	Audit of FAA's Hazardous Materials Program, SC-2005-015	FAA	Develop and implement alternate means of administering hazardous materials enforcement cases, such as the ticketing system used by PHMSA.	FAA expects to publish a Notice of Proposed Rulemaking (NPRM) by March 30, 2006.	Issue final rule
4	11/19/04	Audit of FAA's Hazardous Materials Program, SC-2005-015	FAA	Finalize and implement the FAA voluntary disclosure reporting program. FAA needs to take a systematic approach in effectively managing the program, to include disseminating all useful information to the air carriers, hazardous materials shippers, and DOT's Operating Administrations with hazardous materials oversight and enforcement responsibilities.	FAA has drafted a voluntary disclosure advisory circular and expects to publish it by the end of 2005.	Issue advisory circular

Exhibit B. Open OIG Pipeline and Hazardous Materials Safety Recommendations From 2004

Hazardous Materials Safety						
	Issue Date	**Report Title and No.**	**Lead Agency**	**Open OIG Recommendation**	**Actions Taken**	**Actions Needed**
5	11/19/04	Audit of FAA's Hazardous Materials Program, SC-2005-015	FAA	Implement a pilot project with the Transportation Security Administration (TSA) and one or more air carriers to determine the effectiveness and cost of an automated operating system to record and process violations of hazardous materials regulations discovered during the screening of passengers' carry-on and checked baggage. In the interim, collaborate with TSA to implement system-wide procedures for notifying FAA of hazardous materials incidents associated with passengers' carry-on baggage.	FAA has drafted a pilot project, and it is under review by the Department of Homeland Security.	Implement pilot project
6	11/19/04	Audit of FAA's Hazardous Materials Program, SC-2005-015	FAA	Issue an advisory circular notifying all air carriers that they must report to FAA all unauthorized hazardous materials found in passengers' checked baggage and take enforcement actions against those air carriers not complying with the reporting requirements.	FAA is waiting for PHMSA to make regulatory changes that will require air carriers to give FAA the address of the violator. Once PHMSA changes the rule, FAA will draft an advisory circular.	Issue advisory circular
7	11/19/04	Audit of FAA's Hazardous Materials Program, SC-2005-015	FAA	Develop and implement a covert testing program to evaluate air carriers' compliance with the required acceptance procedures for hazardous materials shipments by air. Preferably, a joint program would be established in which FAA works with TSA.	FAA is looking at past practices and is drafting a test protocol. A timeline for prototype testing is being developed.	Implement program
8	11/19/04	Audit of FAA's Hazardous Materials Program, SC-2005-015	OST	Establish and implement a process for resolving hazardous materials regulatory disputes between FAA and PHMSA to ensure that the unique safety requirements for shipments of hazardous materials by air are being effectively addressed.	OST, FAA, and PHMSA are developing a plan of action.	Implement process for resolution

Exhibit B. Open OIG Pipeline and Hazardous Materials Safety Recommendations From 2004

EXHIBIT C. OUTSTANDING PIPELINE AND HAZARDOUS MATERIALS SAFETY MANDATES FROM LEGISLATION ENACTED FROM 1990 THROUGH 2004

Pipeline Safety						
	Public Law Title and No.	**Section**	**Lead Agency**	**Outstanding Mandate**	**Actions Taken**	**Actions Needed**
1	Pipeline Safety Act of 1992, P.L. 102-508	109(b)	PHMSA	12.8 years outstanding. Define and regulate natural gas gathering lines.	NPRM published in March 1999. Supplemental NPRM published on October 3, 2005. Comment period ends January 3, 2006. Next steps to be determined following evaluation of comments.	Issue final rule
2	Pipeline Safety Act of 1992, P.L. 102-508	208(b)	PHMSA	12.8 years outstanding. Define and regulate hazardous liquid gathering lines.	PHMSA plans to issue NPRM by April 2006.	Issue final rule
3	Pipeline Safety Act of 1992, P.L. 102-508	307(b)	PHMSA	12.8 years outstanding. Prepare a report to Congress on a study of underwater abandoned pipeline facilities.	Study completed. Report to Congress is in the final stages of clearance.	Submit report to Congress
4	Pipeline Safety Improvement Act of 2002, P.L. 107-355	5	PHMSA	2.7 years outstanding. Each owner or operator of a gas or hazardous liquid pipeline facility is to carry out a continuing program to educate the public on the use of a one-call notification system before excavation and on other damage prevention activities. The completed program shall be submitted and periodically reviewed by the Secretary or appropriate state agency. The Secretary may issue standards prescribing the elements of an effective public education program.	Advisory bulletins published in September and November 2003. NPRM on additional requirements for public education programs issued on June 24, 2004. Final rule published in Federal Register on May 19, 2005. PHMSA and state agencies have drafted a plan to review the criteria. PHMSA will contract with a clearinghouse to receive and review the programs prior to the June 2006 deadline.	Finalize the criteria and complete review of programs

Pipeline Safety						
	Public Law Title and No.	**Section**	**Lead Agency**	**Outstanding Mandate**	**Actions Taken**	**Actions Needed**
5	Pipeline Safety Improvement Act of 2002, P.L. 107-355	13	PHMSA	Not later than 3 years after enactment of this section, the Secretary shall review the qualification program of each pipeline operator and verify its compliance with the standards and criteria described in subsection (b) and that it includes the elements described in subsection (d).	Operator qualification protocols issued in July 2003. Inspections required under statute are 99.4% completed. PHMSA and states plan to complete program evaluations by the deadline, December 17, 2005.	Complete inspections and program evaluations
6	Pipeline Safety Improvement Act of 2002, P.L. 107-355	13	PHMSA	Not later than 4 years after enactment of this section, the Secretary shall transmit to Congress a report on the status and results to date of the personnel qualification regulations.	Report to Congress is due December 2006. PHMSA held a public meeting in December 2004 to review the outline of the report.	Submit report to Congress
7	Pipeline Safety Improvement Act of 2002, P.L. 107-355	13	PHMSA	Not later than 3 years after enactment of this Act, the Secretary shall: (a) develop tests and other requirements for certifying qualifications of individuals who operate computer-based systems for controlling the operations of pipelines, and (b) establish a pilot program for three pipeline facilities in which individuals operating computer-based systems controlling pipeline operations are required to be certified.	On April 15, 2005, PHMSA published a notice seeking participants for the pilot study. Applications for participation were accepted through May 16, 2005. Pilot study is to be completed by December 17, 2005. Deadline for report to Congress is December 2006.	Conduct pilot program and submit report to Congress
8	Pipeline Safety Improvement Act of 2002, P.L. 107-355	14	PHMSA	The operator shall complete a baseline integrity assessment of his or her facility not later than 10 years after the enactment date of this subsection, and 50 percent of such facilities shall be assessed not later than 5 years after the enactment date.	Baseline integrity assessments are scheduled to be completed by the deadlines, December 2007 and December 2012. PHMSA is reviewing assessment plans during its on-site inspections of integrity management programs.	Complete baseline assessments
9	Pipeline Safety Improvement Act of 2002, P.L. 107-355	23	PHMSA	2.7 years outstanding. The Secretary shall issue regulations prescribing standards for inspection of a pipeline facility by direct assessment no later than 1 year after enactment date of this subsection.	NPRM issued on October 21, 2004. Public meeting held in December 2004. Final rule is in PHMSA coordination and is expected to be issued by fall of 2006.	Issue final rule

Exhibit C. Outstanding Pipeline and Hazardous Materials Safety Mandates From Legislation Enacted From 1990 Through 2004

Pipeline Safety						
	Public Law Title and No.	**Section**	**Lead Agency**	**Outstanding Mandate**	**Actions Taken**	**Actions Needed**
10	Pipeline Safety Improvement Act of 2002, P.L. 107-355	25[a/]	PHMSA	The Secretary shall initiate a study to determine whether cable-suspension pipeline bridges pose structural or other risks warranting special inspection standards. The report of the study shall be transmitted to Congress within 2 years after enactment of the Act. The Secretary may carry out this section using only amounts that are specifically appropriated to carry out this section.	Congress has not appropriated any funds for the study.	Request funding for the study

a/ An unfunded mandate

Exhibit C. Outstanding Pipeline and Hazardous Materials Safety Mandates From Legislation Enacted From 1990 Through 2004

Hazardous Materials Safety						
	Public Law Title and No.	**Section**	**Lead Agency**	**Outstanding Mandate**	**Actions Taken**	**Actions Needed**
1	Hazardous Materials Transportation Authorization Act of 1994, P.L. 103-311	112	FMCSA	11.0 years outstanding. Amend regulations to prohibit the driver of a motor vehicle transporting hazardous materials in commerce and the driver of any commercial motor vehicle from driving the motor vehicle onto a highway-rail grade crossing without having sufficient space to drive completely through the crossing without stopping.	NPRM issued in July 1998. FMCSA continues to work with OST to fulfill this mandate. The next step and estimated completion date have not yet been determined.	Issue final rule
2	Transportation Equity Act for the 21st Century, P.L. 105-178	5209 (a)	FMCSA	7.2 years outstanding. The Secretary shall carry out a comprehensive program to deploy intelligent transportation systems that improve the safety and productivity of commercial vehicles and drivers and also reduce costs associated with commercial vehicle operations and Federal and state commercial vehicle regulatory requirements.	FMCSA has implemented a program to deploy core Commercial Vehicle Information Systems and Networks (CVISN) capabilities. Seven states have received full deployment, and 32 states are underway. In accordance with congressional priority, FMCSA will complete the core CVISN deployment before expanding CVISN deployment.	Encourage all states to adopt and deploy CVISN capabilities
3	USA PATRIOT Act of 2001, P.L. 107-56	1012	FMCSA	3.8 years outstanding. A state may not issue to any individual a license to operate a motor vehicle transporting in commerce a hazardous material unless the Secretary has first determined, after a background check, that the individual does not pose a security risk warranting denial of the license. The term "Secretary" originally referred to the Department of Transportation, but these functions have been transferred to the Secretary of Homeland Security and have subsequently been delegated to TSA.	Interim final rule published on May 5, 2003. Second interim final rule published on April 29, 2005, which amended the requirement date in the 2003 interim rule to cross-reference the TSA's compliance date. To ensure FMCSA's regulations always remain current with any changes made by TSA that affect the applicability date, FMCSA must await the issuance of TSA's final rule before it issues its final rule.	Issue final rule

Exhibit C. Outstanding Pipeline and Hazardous Materials Safety Mandates From Legislation Enacted From 1990 Through 2004

Hazardous Materials Safety						
	Public Law Title and No.	**Section**	**Lead Agency**	**Outstanding Mandate**	**Actions Taken**	**Actions Needed**
4	Hazardous Materials Transportation Uniform Safety Act of 1990, P.L. 101-615	15(b)	FRA	14.8 years outstanding. Consider the findings of the Railroad Transportation Study and amend existing regulations, as appropriate, to provide for the safe transportation by rail of high-level radioactive waste and spent nuclear fuel by various methods of rail transportation, including dedicated trains.	FRA is working with stakeholders to analyze the results of the study. A determination on whether to issue an NPRM will be made by summer 2006.	Amend regulations, as necessary, based on study results
5	Sanitary Food Transportation Act (SFTA) of 1990, P.L. 101-500	4, 5, 6, 7, and 8[a/]	PHMSA	14.8 years outstanding. Issue regulations on the transportation of cosmetics, devices, drugs, food, and food additives in motor vehicles and rail vehicles that are used to transport nonfood products that could make food products unsafe to humans or animals, including lists of safe nonfood products that can be transported with food, unsafe nonfood products that cannot be transported with food, and extremely dangerous products that may be transported only in dedicated vehicles.	NPRM issued in 1993. Supplemental NPRM issued on December 21, 2004, to ensure parties follow existing food safety requirements. The Hazardous Materials Safety and Security Reauthorization Act of 2005 transferred SFTA responsibilities to the Department of Agriculture and the Department of Health and Human Services. PHMSA plans to issue a notice to withdraw the supplemental NPRM by November 2005.	Issue notice to withdraw supplemental NPRM
6	Consolidated Appropriations Resolution of FY 2003, Division 1, P.L. 108-7	334	PHMSA	2.5 years outstanding. Require DOT to contract with the National Academy of Sciences (NAS) to conduct a study of the procedures by which DOE selects routes for shipping spent nuclear fuel from research nuclear reactors between or among existing DOE facilities currently licensed to accept spent nuclear fuel.	DOT awarded a contract to NAS in March 2005. NAS expects to complete its study and issue a report in January 2006.	Complete study and publish report

a/ In OIG Report Number TR-1998-100, "Review of Departmental Actions Concerning the Sanitary Food Transportation Act of 1990," issued on March 27, 1998, we recommended that SFTA be transferred to a more appropriate Federal agency with the expertise and knowledge to effectively regulate food transportation safety, specifically the Food and Drug Administration in the Department of Health and Human Services.

Exhibit C. Outstanding Pipeline and Hazardous Materials Safety Mandates From Legislation Enacted From 1990 Through 2004

EXHIBIT D. OPEN NTSB PIPELINE AND HAZARDOUS MATERIALS SAFETY RECOMMENDATIONS FROM 1989 THROUGH 2004

Pipeline Safety					
	Rec. No. Issue Date	**Lead Agency**	**Open NTSB Recommendation**	**NTSB Classification and Actions Taken by Lead Agency**	**Actions Needed**
1	P-90-29 issued 10/01/90	PHMSA	14.8 years outstanding. With the assistance of the Minerals Management Service, U.S. Coast Guard, and U.S. Army Corps of Engineers, develop and implement effective methods and requirements to bury, protect, inspect the burial depth of, and maintain all submerged pipelines in areas subject to damage by surface vessels and their operations.	Open–acceptable response. Study completed in January 1998. Final rule requiring periodic underwater inspection published on August 10, 2004. On August 17, 2004, PHMSA submitted a letter to NTSB requesting closure. NTSB responded by encouraging PHMSA to conduct further studies on risks associated with offshore areas.	Complete additional evaluation
2	P-98-02 issued 04/30/98	PHMSA	7.3 years outstanding. Determine the extent of the susceptibility to premature brittle-like cracking of older plastic piping that remains in use for gas service nationwide.	Open–acceptable response. Database of in-service plastic piping material failures is being developed. Data collection will continue until January 25, 2006.	Complete data collection and analysis
3	P-98-25 issued 10/16/98	PHMSA	6.8 years outstanding. Require pipeline system operators to precisely locate and place permanent markers at sites where their gas and hazardous liquid pipelines cross navigable waterways.	Open–acceptable response. Common Ground Alliance has finalized the recommended best practice. The best practice can be found on PHMSA and Alliance websites. PHMSA submitted a letter to NTSB requesting closure.	NTSB approval of close-out letter
4	P-98-30 issued 11/18/98	PHMSA	6.8 years outstanding. Assess the potential safety risks associated with rotating pipeline controller shifts and establish industry guidelines for the development and implementation of pipeline controller work schedules that reduce the likelihood of accidents attributable to fatigue.	Open–acceptable response. Advisory bulletin published on August 11, 2005. PHMSA submitted a letter to NTSB requesting closure.	NTSB approval of close-out letter

Pipeline Safety					
	Rec. No. Issue Date	**Lead Agency**	**Open NTSB Recommendation**	**NTSB Classification and Actions Taken by Lead Agency**	**Actions Needed**
5	P-99-12 issued 06/01/99	PHMSA	6.2 years outstanding. Establish within 2 years scientifically based hours-of-service regulations that set limits on hours of service, provide predictable work and rest schedules, and consider circadian rhythms and human sleep and rest requirements.	Open–acceptable response. PHMSA continues its assessment of human fatigue in pipeline operations in a variety of research and standards efforts. Study results are expected in June 2006. Advisory bulletin published on August 11, 2005. PHMSA will await NTSB feedback on P-98-30.	Complete study and amend regulation, as necessary, based on study results
6	P-01-02 issued 06/22/01	PHMSA	4.2 years outstanding. Require that excess flow valves be installed in all new and renewed gas service lines, regardless of a customer's classification, when the operating conditions are compatible with readily available valves.	Open–acceptable response. PHMSA is considering incorporating requirements for these valves in the upcoming integrity management rule for gas distribution pipeline. NTSB does not agree with that approach. A public meeting was held June 17, 2005, to discuss the use of these valves in gas distribution pipelines.	Amend regulations, as necessary
7	P-02-01 issued 08/02/02	PHMSA	3.0 years outstanding. Establish quantitative criteria, based on engineering evaluations, for determining whether a wrinkle may be allowed to remain in a pipeline.	Open–acceptable response. Study on wrinkle bends completed. Final report issued in May 2003. PHMSA plans to post criteria on its website.	Submit letter to NTSB requesting closure
8	P-02-04 issued 10/11/02	PHMSA	2.8 years outstanding. Develop and issue guidance to pipeline operators on specific testing procedures that can be used to approximate actual operations during the commissioning of a new pumping station or the installation of a new relief valve and determine during annual tests whether a relief valve is functioning properly.	Open–acceptable response. Advisory bulletin published on August 10, 2005. PHMSA submitted a letter to NTSB requesting closure.	NTSB approval of close-out letter
9	P-03-01 issued 02/27/03	PHMSA	2.5 years outstanding. Revise regulations to require that new or replaced pipelines be designed and constructed with features to mitigate internal corrosion.	Open–acceptable response. PHMSA is preparing an NPRM and expects to publish it in November 2005.	Issue final rule

Exhibit D. Open NTSB Pipeline and Hazardous Materials Safety Recommendations From 1989 Through 2004

Pipeline Safety					
	Rec. No. Issue Date	**Lead Agency**	**Open NTSB Recommendation**	**NTSB Classification and Actions Taken by Lead Agency**	**Actions Needed**
10	P-04-01 issued 07/01/04	PHMSA	1.1 years outstanding. Remove the exemption in regulations that permits pipe to be placed in natural gas service after pressure testing when the pipe cannot be verified to have been transported in accordance with the American Petroleum Institute's (API) recommended practice.	Open–acceptable response. PHMSA plans to publish an advance NPRM in 2006 requesting comments on the impact of removing the exemption. This notice will also address recommendations P-04-02 and P-04-03.	Amend regulation, as necessary, based on comments
11	P-04-02 issued 07/01/04	PHMSA	1.1 years outstanding. Amend regulations to require that natural gas pipeline operators and hazardous liquid operators follow API-recommended practice for transportation of pipe on marine vessels.	Open–acceptable response. PHMSA will request comments in 2006 on the feasibility of adopting the API-recommended practice for transportation of pipe on marine vessels.	Amend regulations, as necessary, based on comments
12	P-04-03 issued 07/01/04	PHMSA	1.1 years outstanding. Evaluate the need for a truck transportation standard to prevent damage to pipe and, if needed, develop the standard and incorporate it into regulations for both natural gas and hazardous liquid line pipe.	Open–acceptable response. PHMSA will also request comments in 2006 on the need to develop a standard on truck transportation to prevent damage to pipe.	Develop standards and amend regulations, as necessary, based on evaluation
13	P-04-07 issued 11/04/04	PHMSA	0.8 years outstanding. Revise the emergency response planning requirements in the pipeline safety regulations to include coordination with electric and other utilities that may need to respond to a pipeline emergency.	Open–acceptable response. Advisory bulletin published on May 23, 2005. Common Ground Alliance is developing best practices to be placed on the OPS website. PHMSA submitted a letter to NTSB requesting closure.	NTSB approval of close-out letter

Exhibit D. Open NTSB Pipeline and Hazardous Materials Safety Recommendations From 1989 Through 2004

Hazardous Materials Safety					
	Rec. No. Issue Date	**Lead Agency**	**Open NTSB Recommendation**	**NTSB Classification and Actions Taken by Lead Agency**	**Actions Needed**
1	A-98-71 issued 08/12/98	DOT	7.0 years outstanding. Require, within 2 years, that persons offering any shipment for air transportation provide written responses on shipping papers to inquiries about hazardous characteristics of the shipment and develop other procedures and technologies to improve the detection of undeclared hazardous materials offered for transportation.	Open–unacceptable response. DOT has drafted a close-out letter to NTSB.	Submit letter to NTSB requesting closure
2	A-96-26 issued 05/31/96	FAA	9.3 years outstanding. Require all air carriers, based on the evaluation performed under A-96-25, to revise as necessary their practices and training for accepting passenger baggage and freight shipments and for identifying undeclared or unauthorized hazardous materials that are offered for transport.	Open–acceptable response. NPRM published on May 8, 2003. Final rule issued on October 7, 2005.	Submit letter to NTSB requesting closure
3	A-97-65 issued 09/09/97	FAA	7.9 years outstanding. Require that routine work cards used during maintenance of Part 121 aircraft (a) provide, for those work cards that call for the removal of any component containing hazardous materials, instructions for disposal of the hazardous materials or a direct reference to the maintenance manual provision containing those instructions and (b) include an inspector's signature block on any work card that calls for handling a component containing hazardous materials.	Open–acceptable alternative response. NPRM published on May 8, 2003. NTSB agrees with FAA's argument that an inspector's stamp/signature block is not needed. Final rule issued on October 7, 2005.	Submit letter to NTSB requesting closure
4	A-97-70 issued 09/09/97	FAA	7.9 years outstanding. Include, in its development and approval of air carrier maintenance procedures and programs, explicit consideration of human factor issues (e.g., training, procedures development, redundancy, supervision, and the work environment) to improve the performance of personnel and their adherence to procedures.	Open–acceptable response. In September 1998, FAA published a report and incorporated its finding into Advisory Circular 120-16D, "Air Carrier Maintenance Programs," in 2003. NTSB requested that FAA revise it to include references to FAA-published guidance materials on maintenance human factors.	Issue final rule and revise advisory circular

Exhibit D. Open NTSB Pipeline and Hazardous Materials Safety Recommendations From 1989 Through 2004

Hazardous Materials Safety					
	Rec. No. Issue Date	**Lead Agency**	**Open NTSB Recommendation**	**NTSB Classification and Actions Taken by Lead Agency**	**Actions Needed**
5	A-97-73 issued 09/09/97	FAA	7.9 years outstanding. Require air carriers to ensure that maintenance facility personnel, including mechanics, and shipping, receiving, and stores personnel at air carrier-operated or subcontractor facilities, are provided initial and recurrent training in hazardous materials recognition and proper labeling, packaging, and shipment procedures with respect to the specific items of hazardous materials that are handled by the air carrier's maintenance functions.	Open–acceptable response. NPRM published on May 8, 2003. Final rule issued on October 7, 2005.	Submit letter to NTSB requesting closure
6	R-04-04 issued 03/15/04	FRA	1.4 years outstanding. Conduct a comprehensive analysis to determine the impact resistance of the steels in the shells of pressure tank cars constructed before 1989.	Open–unacceptable response. Southwest Research Institute is preparing a report on testing methods to address impact resistance of tank shells. A task force will begin steel testing once the methods are evaluated. NTSB did not agree with the task force decision to gather steel samples from only pre-1989 tank cars as they are scrapped and not from tank cars remaining in service.	Complete analysis
7	R-04-05 issued 03/15/04	FRA	1.4 years outstanding. Based on the results of FRA's comprehensive analysis of impact resistance of the steels in the shells of pressure tank cars, as addressed in Safety Recommendation R-04-04, establish a program to rank those cars according to their risk of catastrophic fracture and separation and implement measures to eliminate or mitigate this risk.	Open–acceptable response. FRA plans to implement this recommendation once R-04-04 is complete.	Establish program
8	R-04-06 issued 03/15/04	FRA	1.4 years outstanding. Validate the predictive model that FRA is developing to quantify the maximum dynamic forces acting on railroad tank cars under accident conditions.	Open–acceptable response. FRA is sponsoring ongoing programs to evaluate train forces associated with derailments. FRA expects to complete model validation in early 2006.	Validate the model

Exhibit D. Open NTSB Pipeline and Hazardous Materials Safety Recommendations From 1989 Through 2004

Hazardous Materials Safety					
	Rec. No. Issue Date	**Lead Agency**	**Open NTSB Recommendation**	**NTSB Classification and Actions Taken by Lead Agency**	**Actions Needed**
9	R-04-07 issued 03/15/04	FRA	1.4 years outstanding. Develop and implement design-specific fracture toughness standards, such as a minimum average Charpy value, for steels and other materials of construction for pressure tank cars used to transport U.S. DOT class 2 hazardous materials, including those in "low temperature" service.	Open–unacceptable response. FRA does not have data readily available related to samples such as Charpy specimens. FRA is researching this area.	Develop and implement tank-car design standards

Exhibit D. Open NTSB Pipeline and Hazardous Materials Safety Recommendations From 1989 Through 2004

Hazardous Materials Safety					
	Rec. No. Issue Date	**Lead Agency**	**Open NTSB Recommendation**	**NTSB Classification and Actions Taken by Lead Agency**	**Actions Needed**
10 11	R-89-53[a/] R-89-48[a/] issued 07/14/89	PHMSA and FRA	16.1 years outstanding. Assist and cooperate in amending regulations to require that closure fittings on hazardous materials rail tanks be designed to maintain their integrity in accidents that are typically survivable by the rail tank.	Open–acceptable response. PHMSA, FRA, and industry continue to work together to implement this recommendation. FRA is reviewing final research report on structural strength of various tank-car fittings and the need for fitting protection devices to reduce probability of lading loss.	Complete review and amend regulations, as necessary, based on report's results
12	H-92-01 issued 03/20/92	PHMSA	13.4 years outstanding. Provide cargo tank manufacturers specific written guidance about (a) the factors and assumptions that must be considered when calculating the loads on cargo tank rollover protection devices in determining compliance with existing DOT performance standards and (b) acceptable means to shield and protect the top-mounted closure fittings on all bulk liquid cargo tanks.	Open–acceptable response. The Truck Trailer Manufacturers has revised Recommended Practice 87-92: "DOT 106, DOT 407 and DOT 412 Cargo Tank Rollover Accident Damage Protection." PHMSA and FMCSA plan to review it and may incorporate it into the hazardous materials regulations.	Complete review and amend regulations, as necessary
13 14	R-92-22[a/] R-92-23[a/] issued 12/31/92	PHMSA and FRA	12.7 years outstanding. Develop and promulgate requirements for the periodic testing and inspection of rail tank cars that help to ensure the detection of cracks before they expand to critical length by establishing inspection intervals that are based on the defect size detectable by the inspection method used, the stress level, and the crack propagation characteristics of the structural component.	Open–acceptable response. Final rule published in September 1995, based on accumulated and average mileage on tank cars. To address damage-tolerance, FRA funded two research projects. FRA is reviewing the final report on one project and is awaiting a report on the other.	Complete review and amend regulations, as necessary, based on reports' results
15	H-98-27 issued 05/18/98	PHMSA	7.3 years outstanding. Prohibit the carrying of hazardous materials in external piping of cargo tanks, such as loading lines, that may be vulnerable to failure in an accident.	Open–acceptable response. NPRM issued on December 30, 2004. PHMSA is evaluating comments received on NPRM.	Issue final rule

a/ The same recommendation was assigned to two Operating Administrations.

Exhibit D. Open NTSB Pipeline and Hazardous Materials Safety Recommendations From 1989 Through 2004

Hazardous Materials Safety					
	Rec. No. Issue Date	**Lead Agency**	**Open NTSB Recommendation**	**NTSB Classification and Actions Taken by Lead Agency**	**Actions Needed**
16 17	A-99-80[a/] A-99-85[a/] issued 11/16/99	PHMSA and FAA	5.8 years outstanding. Evaluate the fire hazards posed by lithium batteries in an air transportation environment and require that appropriate safety measures be taken to protect aircraft and occupants.	Open–acceptable response. NPRM issued in April 2002. Interim final rule issued on December 15, 2004. PHMSA and FAA are evaluating the hazards associated with secondary lithium batteries. Based on results, additional rulemaking may be necessary.	Amend regulations, as necessary, based on evaluation's results
18	A-99-82 issued 11/16/99	PHMSA	5.8 years outstanding. Require that packages containing lithium batteries be identified as hazardous materials, including appropriate marking and labeling of the packages and proper identification in shipping documents, when transported on aircraft.	Open–acceptable response. NPRM issued in April 2002. PHMSA is evaluating the economic impact of the NPRM on small businesses and published a report on it on June 15, 2005. Comments are being evaluated and based on results, NPRM may be amended.	Amend regulation, as necessary, based on evaluation's results
19 20	R-01-02[a/] R-01-03[a/] issued 03/12/01	PHMSA and FRA	4.4 years outstanding. With the assistance of the Association of American Railroads and the Railway Progress Institute, evaluate the deterioration of pressure relief devices through normal service and then develop inspection criteria to ensure that the pressure relief devices remain functional between regular inspection intervals. Incorporate these inspection criteria into the DOT hazardous materials regulations.	Open–acceptable response. The Association of American Railroads task force has collected 1,800 inspection reports on pressure relief devices. PHMSA will consider regulatory changes once the tank car committee completes its review of the data.	Complete evaluation and determine the need for rulemaking
21	I-02-01 issued 07/16/02	PHMSA	3.1 years outstanding. With the assistance of the Environmental Protection Agency and the Occupational Safety and Health Administration (OSHA), develop safety requirements that apply to the loading and unloading of railroad tank cars, highway cargo tanks, and other bulk containers that address the inspection and maintenance of cargo transfer equipment, emergency shutdown measures, and personal protection requirements.	Open–unacceptable response. Final rules published on October 30, 2003, and April 15, 2005. PHMSA will not request closeout until pending litigation is resolved. PHMSA plans to request a classification of "closed-acceptable alternative action."	Submit letter to NTSB requesting closure

a/ The same recommendation was assigned to two Operating Administrations.

Exhibit D. Open NTSB Pipeline and Hazardous Materials Safety Recommendations From 1989 Through 2004

Hazardous Materials Safety					
	Rec. No. Issue Date	**Lead Agency**	**Open NTSB Recommendation**	**NTSB Classification and Actions Taken by Lead Agency**	**Actions Needed**
22	I-02-02 issued 07/16/02	PHMSA	3.1 years outstanding. After the adoption of safety requirements developed in response to Safety Recommendation I-02-1, implement an oversight program to ensure compliance with these requirements.	Open–unacceptable response. Final rules published on October 30, 2003, and April 15, 2005. PHMSA will not request closeout until pending litigation is resolved. PHMSA plans to request a classification of "closed-acceptable alternative action."	Submit letter to NTSB requesting closure
23	H-02-23 issued 09/26/02	PHMSA	2.9 years outstanding. Modify regulations to clearly require that valves, piping, and fittings for cylinders that are both horizontally mounted and used to transport hazardous materials are protected from multidirectional forces that are likely to occur during accidents, including rollovers.	Open–acceptable response. The Compressed Gas Association completed a technical bulletin on performance standards for tube trailers. Upon receiving the standards, PHMSA will make a determination whether to incorporate them into the hazardous materials regulations (HMR).	Review standards and amend regulations, as necessary
24	H-02-24 issued 09/26/02	PHMSA	2.9 years outstanding. Require cylinders that transport hazardous materials and are horizontally mounted on semi-trailers be protected from impact with the roadway or terrain to reduce the likelihood of their being fractured and ejected during a rollover accident.	Open–acceptable response. The Compressed Gas Association completed a technical bulletin on performance standards for tube trailers. Upon receiving the standards, PHMSA will make a determination whether to incorporate them into the HMR.	Review standards and amend regulations, as necessary
25	H-04-23 issued 07/01/04	PHMSA	1.1 years outstanding. Require periodic nondestructive testing of nurse tanks to identify material flaws that could develop and grow during a tank's service and result in a tank failure.	Open–acceptable response. PHMSA completed its evaluation concerning the safety performance of nurse tanks and is currently considering alternative measures, including periodic testing, to improve nurse tank safety with a view toward proposing such measures in upcoming rulemaking.	Complete evaluation and amend regulations
26	R-04-10 issued 12/15/04	PHMSA	0.7 years outstanding. In cooperation with OSHA and the Environmental Protection Agency, develop regulations that require safe operating procedures to be established before hazardous materials are heated in a railroad tank car for unloading.	Open–response received. PHMSA, FRA, OSHA, and the Environmental Protection Agency are considering options such as a joint advisory notice or a rulemaking action.	Develop and issue regulations, as necessary

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