

THE HAZARDOUS MATERIALS SAFETY PERMIT PROGRAM IMPLEMENTATION REPORT TO CONGRESS

Pursuant to Section 33014 of the
Moving Ahead for Progress in the 21st Century Act (P.L. 112-141)
March 2014

INTRODUCTION

Section 33014 of the Moving Ahead for Progress in the 21st Century Act (MAP-21) requires the Secretary of the U.S. Department of Transportation (DOT) to conduct a study of the implementation of the hazardous materials safety permit (HMSP) program. The Secretary must also provide a report on the study to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives.

The HMSP program was established by the Hazardous Materials Transportation and Uniform Safety Act (HMTUSA) of 1990 to promote safety by “mandat[ing] and establish[ing] criteria for the issuance of Federal permits for motor carriers hauling hazardous materials which present either a high degree of risk in transportation or are of significant concern to the public.”¹ This program has jurisdiction over intrastate, interstate, and foreign motor carriers transporting specified types and amounts of particularly dangerous hazardous materials and is administered by the Federal Motor Carrier Safety Administration (FMCSA), which is the DOT modal administration charged with reducing crashes, injuries, and fatalities involving commercial motor vehicles (CMV). A motor carrier is required to obtain an HMSP to carry the following hazardous materials:

- Highway Route Controlled Quantity Class 7 material.
- More than 55 pounds of a Division 1.1, 1.2, or 1.3 Explosive, or a placarded amount of a Division 1.5 Explosive.
- Certain Poison by Inhalation Hazard (PIH) materials, including anhydrous ammonia.
- Liquefied compressed natural gas and methane in containers exceeding 3,500 water gallons.

HMSP carriers make up a very small percentage of the motor carrier industry. FMCSA regulates approximately 525,000 active interstate carriers, as documented in the Motor Carrier Management Information System (MCMIS).² Approximately 75,000 carriers (which includes inter- and intrastate) haul some amount of hazardous materials and almost 11,000 of these

¹ Senate Rpt. 101-449. Hazardous Materials Transportation and Uniform Safety Act of 1990, August 30, 1990.

² MCMIS snapshot for calendar year 2012. FMCSA maintains MCMIS, which contains information on the safety fitness of commercial motor carriers (truck and bus) and hazardous materials shippers subject to the Federal Motor Carrier Safety Regulations and the Hazardous Materials Regulations (HMR). MCMIS is available at <http://mcmiscatalog.fmcsa.dot.gov/>.

carriers transport materials requiring placards.³ There are 1,497 carriers hauling hazardous materials that require an HMSP.

In order to transport hazardous materials requiring an HMSP, a carrier must maintain a specified level of safety, as measured by crashes and out-of-service (OOS) rates, in addition to several other minimum requirements as shown below:

1. Demonstrate financial responsibility pursuant to the limits set forth in Title 49 Code of Federal Regulations (CFR) Part 387.⁴
2. Have a current registration with the Pipeline and Hazardous Materials Safety Administration (PHMSA).
3. Provide security and communications plans acceptable to FMCSA.
4. Have a “satisfactory” safety fitness rating.
5. At the time of initial application and renewals, the carrier must not exceed a threshold rate for the prior 12 months as shown below:
 - a. A crash rate in the top 30 percent of the national average, or
 - b. A driver, vehicle, hazardous materials, or total OOS rate in the top 30 percent of the national average.

An HMSP is effective for 2 years, unless suspended or revoked by FMCSA, and may be renewed so long as the carrier continues to meet the requirements of holding an HMSP.

STUDY OVERVIEW

When conducting the study required by section 33014 of MAP-21, FMCSA utilized a multi-faceted approach. First, FMCSA conducted interviews with industry associations representing HMSP permit holders, subject matter experts, as well as FMCSA personnel responsible for administering the HMSP program. Second, FMCSA reviewed all available data on the HMSP program and studied the applicability of the Compliance, Safety, Accountability Safety Measurement System (SMS) to the HMSP program.

The results of these interviews and recommendations are below. The key recommendations resulting from this study can be categorized as follows:

- Move towards use of the SMS data and system instead of the present crash and OOS rates.
- Provide a means for corrective actions and/or a second level of review for carriers with little roadside data and high OOS or crash rates.
- Improve the accuracy of the data.
- Enhance the user-friendliness of FMCSA’s registration system.
- Increase transparency, consistency, communications, and automated processes.

³ See: 49 CFR Part 172 Subpart F - Placarding

⁴ Depending upon the type and amount of hazardous materials transported, the carrier will need to have a minimum of either \$1 million or \$5 million worth of financial responsibility coverage.

HMSP INDUSTRY SAFETY OVERVIEW

The overall safety performance of carriers with an HMSP is superior to the safety performance of other carriers with hazardous materials inspections. Further, non-HMSP carriers that haul hazardous materials performed better than the overall population of carriers.

Based on a MCMIS snapshot for calendar year 2012, hazardous materials carriers (not inclusive of HMSP carriers) had 4 percent fewer crashes per power unit, nearly 35 percent fewer inspections resulting in driver OOS orders, and 14 percent fewer inspections resulting in vehicle OOS orders compared to all other motor carriers.

When comparing HMSP carriers to non-HMSP carriers that carry hazardous materials, the HMSP carriers had 10 percent fewer crashes per power unit, 41 percent fewer inspections resulting in driver OOS orders, 29 percent fewer inspections resulting in vehicle OOS orders, and 61 percent fewer inspections resulting in hazardous materials OOS orders.

The following table is an abbreviated version of this information, comparing HMSP carrier performance to that of all carriers. As the table clearly shows, the rates for the carriers in the HMSP program are lower than the rates for the wider carrier population and well below the threshold rates for issuance of an HMSP. This indicates that the carriers in the HMSP program are maintaining a higher level of overall safety than the universe of all carriers.

**Threshold Rates and Average Rates from 2012
(HMSP Carriers vs. All Carriers)**

Rates in 2012	Actual for All Carriers	Fixed Threshold Rate⁵	Actual for HMSP Carriers
Crash Rate (Crashes per Power Unit)	.0198	.1360	.0192
Driver OOS Rate	4.68%	9.68%	1.56%
Vehicle OOS Rate	18.87%	33.33%	11.10%
Hazardous Materials OOS Rate	3.59%	6.82%	1.43%

HAZARDOUS MATERIALS REQUIRING A SAFETY PERMIT

DOT regulates the transportation of all hazardous materials under the Hazardous Materials Transportation Act of 1975 (HMTA) and helps ensure that U.S. regulations are harmonized with international regulations.⁶ The list of shipping names for regulated hazardous materials appears at 49 CFR 172.101. As new hazardous materials are developed, PHMSA may add these materials to the list through rulemaking.

⁵ Rates were established in Federal Register Vol. 77 No. 124 June 27, 2012 Rules and Regulations 38215.

⁶ HMTA1975, signed into law January 1975. Major amendments were the HMTUSA 1990 and the HMTA 1994.

The HMRs cover the classification, handling, and packaging of hazardous materials. They are risk-based, and each and every product shipped must be evaluated under a strict set of criteria. Determinations must include how to classify, name, and package the material to prevent accidental releases during transportation and how to identify the material should a package be breached.

The minimum list of hazardous materials requiring an HMSP was designated by Congress in the HMTUSA to include materials presenting the highest hazards in transportation. FMCSA expanded the list to include materials posing the greatest risk for human casualties and damage to property and the environment if released by a terrorist or militant.⁷

In preparing this report, FMCSA asked industry stakeholders and subject matter experts whether the current list of HMSP commodities should be revised. These stakeholders largely indicated that they are comfortable with the current list. A few stakeholders suggested additional materials that FMCSA determined were not supported by risk analysis.

PERMITS ISSUED

The following describes the status of HMSPs issued since the inception of the program in 2005:

- 2,875 carriers have been issued HMSPs, currently 1,497 carriers hold an HMSP.
- 1,567 of those HMSPs were issued immediately upon application; a majority of the remainder was issued once the carrier met all of the specified requirements for a complete application, such as filing the proper insurance or completing their PHMSA registration.

In preparing this report, FMCSA reviewed the safety performance of all HMSP holders in calendar year 2012. If the Agency had required these carriers to reapply for their permit based on their 2012 safety performance a total of 67 carriers would not have been eligible for renewal based on crash rates, OOS rates or some other disqualifying factor.

The study also indicated that a majority of carriers denied an HMSP, including a portion of the 2,875 carriers mentioned above, are not actually required to have the HMSP in order to transport their hazardous materials cargo. Upon being informed of this, the carrier withdraws voluntarily from the program.

PERMITS RECOMMENDED FOR SUSPENSION OR REVOCATION

Since inception of the program in 2005, the following have been issued:

- Six 30-day suspensions relating to six carriers.
- Seven revocations relating to seven carriers.⁸

⁷ Hazardous Materials Safety Permit: Final Rule: Federal Register Vol. 69 No. 125 Wednesday, June 30, 2004 Rules and Regulations.

⁸ HMSPs are revoked only after the HMSP has been suspended once before for any of the reasons in 49 CFR 385.421. Revocations are in place for no less than 365 days.

- 212 recommendations for suspension relating to 199 different carriers, or suspension actions in the database. (Note: A recommended suspension provides the carrier the opportunity to correct the situation prior to suspension.)

An HMSP may be either suspended or revoked for failing to comply with the list of requirements in 49 CFR 385.421. These include failing to file for renewal, providing false or misleading information on an application, loss of operating rights, and others. A majority of the suspensions were for a very short duration because the carrier can correct the problem almost immediately, such as submitting proof of PHMSA registration. Six took longer to remedy the issue, resulting in suspensions of 30-days or longer. Seven revocations occurred when there was a second violation of any of the conditions in 49 CFR 385.421 and the carrier has been previously suspended for any of the listed conditions.

It is also important to note that many carriers fail to properly file their insurance or update their PHMSA registration in a timely manner and would have their HMSP suspended or revoked if not for intervention by FMCSA staff. Prior to issuing the notice of suspension or revocation, FMCSA staff manually holds the notification letter and contacts the carrier to provide the opportunity to comply before the suspension or revocation goes into effect.

PERMITS NEVER SUSPENDED, REVOKED, OR DENIED

Of the 1,567 approved carriers issued an HMSP upon their first application without ever being denied a permit:

- 775 are still active HMSP carriers.
- 506 are active carriers but now are non-HMSP carriers.
- 286 are no longer active carriers.

CRITERIA USED TO DETERMINE STATE EQUIVALENCY

Pursuant to 49 CFR 385.407(a), FMCSA may recognize a motor carrier as having met the requirements of obtaining an HMSP if the issuing "...State has adopted and implemented safety fitness procedures that are equivalent to the procedures ..." of FMCSA's Part 385 safety fitness regulations. This flows from a fundamental requirement of the HMSP program that a carrier must have a satisfactory safety fitness rating to qualify. Currently, however, only FMCSA issues safety fitness ratings.

Five States work together to provide for a uniform procedure for registering and permitting motor carriers transporting hazardous materials in their States through the Alliance for Uniform Hazmat Procedures (Uniform Program), which was authorized by the HMTUSA and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (P.L. 109-59). The States participating in the Uniform Program are Michigan, Nevada, Ohio, Oklahoma, and West Virginia. While all of the States in the program collect information on, and fees from, the carriers, only Ohio and West Virginia issue permits based on the outcome of safety and compliance reviews.

FMCSA does not currently recognize a hazardous materials permit issued by these States as being equivalent to an HMSP and, therefore, has not established regulatory standards to accept State programs as equivalent to the Federal HMSP. It appears as if States view this as duplicative and see no need to develop a permit program.

RECOMMENDATIONS FOR PROGRAM IMPROVEMENT

Agency Goals:

In total, the following recommendations will move the HMSP program forward and:

- Eliminate the use of OOS and crash rates for determining the ability of a carrier to renew its HMSP.
- Improve FMCSA's ability to utilize SMS to regularly review the roadside performance of HMSP carriers for intervention.
- Increase the number of interventions on high-risk HMSP carriers⁹ to ensure regular review of the carriers' Safety Fitness Determination.
- Increase FMCSA's oversight on carriers with little or no roadside inspection data.
- Allow DataQs, a responsive online system for filing and resolving concerns about safety data maintained and disseminated by FMCSA, to have a more positive impact on HMSP holders (Note: the success rate for DataQs challenges was 53.4 percent in FY 2013).
- Improve the safety of carriers enrolled in the HMSP program.

Recommendation 1: Fully Utilize the SMS as Part of the HMSP Program.

The study results indicated that currency and accuracy of the data used to determine compliance with the HMSP requirements are major concerns of all involved. While the current fixed rate calculation for the OOS rates is an improvement over the recalculation of the rates every 2 years, wider use of the available data will provide a more complete picture of motor carriers' compliance and safety history. The following changes will be considered after conducting further analysis to determine the impacts on the use of SMS in the HMSP program:

- Utilize OOS and crash rates only on initial application of an HMSP for determination of immediate denial to enter the program.
- Place HMSP holders in the lowest SMS threshold category. At this time, this would lower the intervention threshold for HMSP carriers to align them with the standards for passenger carriers. This change addresses the potential for great harm resulting from a crash of a CMV carrying an HMSP load.
- Increase oversight of the HMSP holders by monitoring crash and OOS thresholds from the once every 2 year renewal process to monthly reviews using SMS updates. As a result, if the carrier has exceeded either the HMSP SMS thresholds,

⁹ High-Risk HMSP carriers is yet to be defined, but at a minimum includes those carriers already identified in CSA as High-Risk: Crash or Fatigue or Unsafe BASIC ≥ 85 , plus 1 other deficient BASIC above the "all other" motor carrier threshold; or, any 4 or more BASICs above the "all other" motor carrier threshold.

the Behavioral Analysis Safety Improvement Categories (BASIC) intervention thresholds that will be decided for this purpose, or the OOS or crash rates for 3 consecutive months, the carrier could be identified for intervention.

- Utilize the results of the intervention to determine the carrier's ability to continue to operate under the HMSP.

Augmented monthly screening will provide a more powerful tool for identifying HMSP carriers with serious safety problems, overall or in one particular area of safety performance (i.e., crash rate, driver, vehicle, hazardous materials, or total OOS rates). Data sufficiency analysis would be used to preclude inappropriate action against safe carriers mistakenly identified due to the randomness of limited data. This augmented SMS approach will:

- Eliminate the hardline denial of HMSP renewals for carriers demonstrating OOS and crash rates above those currently established.¹⁰ This has been one of the industry's major concerns;
- Provide, through the Part 385 administrative review process already in place, a second level of review for upgrading a less-than-satisfactory safety rating; and
- Provide a strengthened, continuous monitoring process for HMSP carriers during the 2-year duration of the HMSP to identify high-risk carriers that should receive a compliance review to evaluate whether they still qualify to hold a safety fitness rating of "satisfactory."

Briefly, the proposed procedure would work such that the OOS rates are applied for the carrier's initial application. Once the carrier has a permanent HMSP, SMS will indicate whether an intervention is needed. If an intervention is indicated, it is recommended that a compliance review be performed. A rating of Satisfactory as a result of the compliance review will allow the carrier to continue to hold its HMSP. However, if less than Satisfactory, the carrier may apply the Part 385 process for upgrading a safety rating, thus the second level of review.

Recommendation 2: Institute an Ongoing Requirement to Conduct Compliance Reviews for HMSP Carriers with Insufficient Data to Utilize SMS.

HMSP carriers should not be allowed to go more than 4 years without receiving a compliance review if sufficient safety performance data are not otherwise available. This will ensure that the carrier has a current Safety Fitness Determination or "Rating." Additionally, greater reliance on the safety rating process also addresses industry concerns about the lack of a second level of review and corrective action plan in the HMSP program. The safety rating process includes both an Administrative Review and the ability to petition for a change in safety rating based on corrective action (49 CFR 385.15 and 385.17, respectively).

¹⁰ Vehicle OOS – 33.33; Driver OOS – 9.68; Hazardous Materials OOS – 6.82; Crash Rate – 0.136 (Crashes / # of Power Units).

Recommendation 3: Evaluate the Potential for an Automated Process for Monitoring Compliance with Financial Responsibility Requirements.

The HMSP program review indicated that there is a significant workload and opportunity for error when it came to determining compliance with the financial responsibility requirements. As discussed above, many applications are initially denied or suspended due to the lack of financial responsibility only to be approved after FMCSA manually determines compliance. Currently, the HMSP program is only able to manually verify compliance with insurance requirements at the time of application and renewal. An unscrupulous carrier could lower its insurance coverage below the HMSP-required level without detection. An automated system to monitor and ensure that HMSP carriers have and continue to maintain the required minimum financial responsibility could improve compliance with the financial responsibility requirements.

Recommendation 4: Replace File Structure for HMSP Program.

In undertaking the HMSP program evaluation, there were significant issues with the program's ability to readily retrieve, organize and manage program data. Updating the file structures and supporting software used for the HMSP program would facilitate the program's ability to organize and retrieve permit level data for various programmatic actions and allow the program to generate reports that could routinely and more effectively evaluate program performance and trends. The initial step would be to develop functional requirements for supporting the HMSP program.

Recommendation 5: Integration into the Motor Carrier Safety Assistance Program (MCSAP).

The study identified a concern on the part of the enforcement community over the States' inability to enforce the HMSP program requirements. Revision to 49 CFR Part 350, conditions for receiving MCSAP funds to include requiring States to adopt and enforce the HMSP regulations contained at 49 CFR 385 Subpart E, would address this issue. The program would be strengthened and required State enforcement would allow FMCSA to identify carriers that are subject to the HMSP program, but who either do not have an HMSP or have suspended or revoked permits. This is especially true at the intrastate carrier level. In order to provide for a uniform and effective program, roadside inspections should be geared to systematically identify all carriers subject to the HMSP in all States.

Recommendation 6: Minor Revision to the PHMSA Registration Form.

The lack of a direct connection between FMCSA's systems and the PHMSA registration database created significant confusion and the potential for improper permit denials based on lack of PHMSA registration. Having the USDOT number appear as a mandatory field on the PHMSA registration form would significantly improve FMCSA's ability to interface with their systems. A valid PHMSA registration is an integral requirement for obtaining and retaining an HMSP and requiring the USDOT number on the PHMSA form will streamline the HMSP process. By making the USDOT number a mandatory field on the PHMSA registration information captured in PHMSA's database, MCMIS and the Hazardous Materials Intermodal Portal would be able to automatically and accurately match information.

CONCLUSION

FMCSA adopted a vision for the future that strives for zero CMV crashes, injuries, and fatalities by moving toward a crash-free and fully accountable transportation lifecycle. To this end, FMCSA provides these recommendations for augmenting existing HMSP efforts through rulemaking, policy changes, file structure and software changes, an enhanced screening methodology to identify HMSP carriers posing the highest safety risk, and implementing enforcement processes to address HMSP carriers' unsafe behavior. These efforts remain contingent upon completion of other FMCSA priorities and the availability of dedicated resources to effectively implement an enhanced HMSP program. FMCSA will continue to work toward implementing the changes described in accordance with the requirements of MAP-21.