

**Department of Transportation
Office of the Chief Information Officer
Supporting Statement**

Flammable Hazardous Materials by Rail Transportation
OMB Control No. 2137-0628

Introduction

PHMSA is requesting the Office of Management and Budget's (OMB) approval to establish a new information collection entitled, "Flammable Hazardous Materials by Rail Transportation," as a result of a May 8, 2015 Final Rule [80 FR 26643] entitled "Enhanced Tank Car Standards and Operational Controls for High-Hazard Flammable Trains (HHFTs)" (PHMSA-2012-0082; RIN: 2137-AE91). This information collection addresses the burden associated with information and recordkeeping requirements pertaining to the sampling and testing certification program, routing analysis, and incident reporting for flammable liquids by rail transportation.

Part A. Justification

1. Circumstances that make collection of information necessary.

This is a request for a new information collection for information and recordkeeping requirements pertaining to the sampling and testing certification, routing analysis, and incident reporting for flammable liquids by rail transportation.

Expansion in United States energy production has led to significant challenges in the transportation system. In addition, expansion in oil production has led to increasing volumes of product transported to refineries. With a growing domestic supply, rail transportation, in particular, has emerged as a flexible alternative to transportation by pipeline or vessel. The increase in shipments of large quantities of flammable liquids by rail has led to an increase in the number of train accidents, posing a significant safety and environmental concern. This increase in the number of shipments transporting oil by rail makes it necessary for the Pipeline and Hazardous Materials Safety Administration (PHMSA) to adopt regulations that collect additional information about shipments of oil by rail to ensure the safety of public. Specifically, a sampling and testing program will ensure that shipments of mined gases and liquids, including crude oil, are shipped in the appropriate rail car. A routing and safety security analysis for HHFTs related to crude oil transportation will require rail carriers to compile annual data on specified shipments of hazardous materials, use the data to analyze safety and security risks along rail routes where those materials are transported, assess alternative routing options, and make routing decisions based on those assessments. Finally, operators of HHFTs are required to file an incident report for a release of product during transportation.

These regulations are promulgated under the Federal hazardous materials transportation law, 49 U.S.C. 5101-5127.

2. How, by whom, and for what purpose the information is to be used.

Rail carriers, shippers, PHMSA's Office of Hazardous Materials Safety (OHMS), the Federal Railroad Administration (FRA), and the Association of American Railroads (AAR) may use this information to ensure that rail tank cars transporting flammable liquids are properly classified, ensure trains are routed appropriately, and collect all relevant incident data.

49 CFR 173.41: Sampling and testing program for mined gas and liquid

New § 173.41 requires a sampling and testing program for mined gases and liquids, including crude oil. A sampling and testing program is used to ensure that shipments of mined gases and liquids, including crude oil, are shipped in the appropriate rail car. This new section requires a sampling and testing program which specifies at a minimum:

- (1) A frequency of sampling and testing that accounts for variability of the material, including the time, temperature, method of extraction (including chemical use), and location of extraction;
- (2) Sampling at various points along the supply chain to understand the variability of the material during transportation;
- (3) Sampling methods that ensure a representative sample of the entire mixture, as packaged, is collected;
- (4) Testing methods to enable complete analysis, classification, and characterization of the material under the HMR.
- (5) Statistical justification for sample frequencies;
- (6) Duplicate samples for quality assurance purposes; and
- (7) Criteria for modifying the sampling and testing program.

49 CFR 174.310(b)(1): Routing Analysis

New § 174.310(b)(1) requires rail operators to conduct a routing and safety security analysis for HHFTs related to crude oil transportation. Specifically, PHMSA is requiring rail carriers to compile annual data on specified shipments of hazardous materials, use the data to analyze safety and security risks along rail routes where those materials are transported, assess alternative routing options, and make routing decisions based on those assessments. This data will in turn be used by State and/or regional Fusion Centers that have been established to coordinate with state, local, and tribal officials on security issues and which are located within the area encompassed by the rail carrier's rail system.

49 CFR 171.16 Incident Reporting

Incident reports are currently required in accordance with § 171.16 of the HMR. This includes requiring operators of HHFTs to file an incident report for a release of product during transportation. Due to an increase in the shipments of crude oil by rail, PHMSA expects an increase in the number of hazardous materials incidents specific to crude oil transportation in the future.

Tank car paperwork burden under §§ 173.241, 173.242, 173.242

This reporting requirement would require owners of non-jacketed DOT-111 tank cars in Packing Group I service in an HHFT who are unable to meet the January 1, 2017 deadline to submit a report to DOT the following information regarding the retrofitting progress:

- The total number of tank cars retrofitted to meet the DOT-117R specification;
- The total number of tank cars built or retrofitted to meet the DOT-117P specification;
- The total number of DOT-111 tank cars (including those built to CPC-1232 industry standard) that have not been modified;
- The total number of tank cars built to meet the DOT-117 specification; and
- The total number of tank cars built or retrofitted to a DOT-117, 117R, or 117P specification that are Electronically Controlled Pneumatic (ECP) brake ready or ECP brake equipped.

This information is used by PHMSA to ensure that the transition of tank cars to the new specification is occurring in a timely manner.

3. Extent of automated information collection.

Electronic filing and recordkeeping is authorized.

4. Efforts to identify duplication.

There is no duplication as the information is unique to specific situations. Each response is unique and information derived from one may not be inferred to another.

5. Efforts to minimize the burden on small businesses.

The collection of this information is reviewed periodically to ensure that the amount of information needed is kept to a minimum.

6. Impact of less frequent collection of information.

The frequency of the collection of information is determined by those most affected, i.e., the offerors and shippers of crude oil by rail. It is not possible to conduct the collection less frequently and still ensure the necessary level of safety to life and property inherent in transporting hazardous materials. The information collected is essential for both PHMSA and FRA to ensure the safe transportation of crude oil by rail. Without adequate testing data, PHMSA and FRA cannot assure that crude oil is properly classified and packaged in accordance with the HMR. In addition, without proper routing analysis, states and local emergency responders may not have the adequate information to respond to a major incident involving crude oil transportation.

7. Special circumstances.

This collection of information is generally conducted in a manner consistent with the guidelines in 5 CFR 11320.5(d)(2). However, it is not possible to substantially reduce or eliminate the requirements contained in this collection and still maintain standards necessary to implement the grants program.

8. Compliance with 5 CFR 1320.8.

PHMSA and FRA published a Notice of Proposed Rulemaking (NPRM) under Docket No. PHMSA-2012-0082 on August 12, 2014 in the Federal Register [79 FR 45015] requesting public comments. The comment period closed on September 30, 2014. In response to the NPRM, PHMSA received only general comments from the following individuals related to information collection and no comments on the hourly burden. The general comments and PHMSA's responses in the Final Rule are summarized below:

American Fuel & Petrochemical Manufacturers (AFPM)

The AFPM commented that the criteria for modifying the sampling and testing program and what it seeks to address is vague. It added that this will be another unnecessary paperwork requirement with no corresponding benefit. AFPM claimed that its survey and other studies confirm that Bakken Crude oils are correctly classified. AFPM maintained that identification of flammable liquids by geographic, regional, or even a particular country of origin serves no known purpose except to impose unnecessary paperwork requirements.

In the Final Rule, we disagreed that expanding existing classification requirements will not impact transportation safety. Audits by PHMSA and FRA of crude oil facilities indicated the classification of crude oil transported by rail was often based solely on a Safety Data Sheet (SDS). While the classification of manufactured products is generally well-understood and consistent, unrefined petroleum-based products potentially have significant variability in their properties as a function of time, location, method of extraction, temperature at time of extraction, and the type and extent of conditioning or processing of the material. As such, PHMSA asserted its belief that it is necessary to require development and adherence to a consistent and comprehensive sampling and testing program, and to provide oversight for such a program.

Waterkeeper Alliance

The Waterkeeper Alliance noted that according to the proposed regulations, the new sampling and testing program must be "documented in writing and retained while it remains in effect." Waterkeeper stated that PHMSA is requiring that offerors keep on hand the most recent versions of the program documentation, provide that version to employees responsible for conducting the testing, and provide documentation to the DOT upon request. Waterkeeper recommended that PHMSA should, at a minimum, require this information be submitted to FRA (and the public, upon request) and be kept on hand with the railroad or offeror so that responsible packaging decisions can be made based on that data.

In the Final Rule, PHMSA clarified that it did not propose requiring third-party involvement with testing or submitting test results to a third party in the NPRM and, as such, is not adopting any such requirements. In addition, PHMSA pointed out that it did not propose regulatory changes to classification test procedures in the NPRM, and as such, is not adopting any such requirements. Furthermore, PHMSA also pointed out that it did propose and finalize a requirement for the retention of test results.

PHMSA and FRA published a Final Rule under Docket No. PHMSA-2012-0082 on May 8, 2015 in the Federal Register [80 FR 26643]. No comments pertaining to this information collection were received.

PHMSA also published a 60 day notice under Docket No. PHMSA-2012-0082 on May 14, 2015 in the Federal Register [80 FR 27844]. PHMSA received comments on the 60-day notice for the revision to this collection from the American Fuel & Petrochemical Manufacturers (AFPM) and the Oklahoma Department of Transportation (DOT) both in support of the tank car retrofit reporting requirements. AFPM states that expanding the Final Rule's reporting requirement would improve understanding of how the retrofit activity is affecting rail transportation of flammable liquids and allow PHMSA to make data-driven decisions in advance of the compliance milestones in the retrofit schedule. The Oklahoma DOT states that it does not object to the tank car retrofitting reporting requirements but encourages PHMSA to reemphasize the importance of evaluating the causes of oil by rail accidents so as to prevent them in the future.

PHMSA published a 30 day notice under Docket No. PHMSA-2012-0082 on October 14, 2015 in the Federal Register [80 FR 61886]. No comments pertaining to this information collection were received.

Lastly, on November 18, 2015 [80 FR 2015] PHMSA published a response to the appeals in the Federal Register. This publication had no effect on the paperwork burden.

9. Payments or gift to respondents.

There is no payment or gift provided to respondents associated with this collection of information.

10. Assurance of confidentiality.

None of the data collected contain personally identifiable information (PII) or business confidential information. Therefore, no guarantees of confidentiality are provided to applicants.

11. Justification for collection of sensitive information.

Not applicable. No sensitive information is required.

12. Estimate of burden hours for information requested.

Total estimate of annual burden hours: (Includes Final Rule and Tank Car Paperwork Notice)

First-Year Annual Burden:

Total Annual Number of Respondents:	1,612
Total Annual Responses:	2,529
Total Annual Burden Hours:	103,815
Total Annual Burden Cost:	\$6,888,295.50

Subsequent Year Burden:

Total Annual Number of Respondents:	1,612
Total Annual Responses:	2,529
Total Annual Burden Hours:	28,255
Total Annual Burden Cost:	\$1,989,949.50

Calculation of Burden Hours and Cost:

First Year – Start Up

49 CFR 173.41 – Sampling and Testing Plans.

The Final Rule requires that a report compiling sampling and testing procedures and tracking testing results be produced and made available on request and updated as necessary. The first-year hourly burden necessary to document a sampling and testing program report is estimated at 40 hours per shipper.

PHMSA assumes a Chemical Engineer is the labor category most appropriate to describe the person responsible for sampling methodologies, testing protocols, and presenting test results. The median hourly wage for a Chemical Engineer is estimated at \$75.05. Based on data from the Hazmat Intelligence Portal (HIP), PHMSA estimates there are 1,804 entities that offer mined gases and liquids for transportation to which sampling and testing requirements would apply.

PHMSA estimates there are 1,804 offerors of mined liquids and gases and 40 hours for development and implementation of the sampling and testing program, resulting in 72,160 burden hours (1,804 offerors x 40 hours/ entity). For offerors subject to the sampling and testing program, PHMSA estimate the costs to develop and implement a sampling and testing program will be \$5,415,608 (1,804 offerors x 40 hours/entity x \$75.05/hour).

Subsequent Year – Update

The Final Rule requires companies that offer mined liquids and gases for transportation to update their sampling and testing program as necessary to account for changing circumstances. PHMSA assumes that companies will review and update their sampling and testing programs once a year and estimates 10 hours per shipper for annual updates. PHMSA estimates the costs to

update a sampling and testing would be on average \$1,353,902 per year (1,804 offerors x 10 hours/entity x \$75.05/hour).

Sampling and Testing Plans	Respondents	Responses	Hours per Response	Total Hours	Cost per hour	Total Cost
Sampling and Testing Plan - Year 1	1,804	1,804	40	72,160.00	\$75.05	\$5,415,608.00
Sampling and Testing Plan - Subsequent year burden	1,804	1,804	10	18,040.00	\$75.05	\$1,353,902.00

49 CFR 174.310(b)(1) – Routing Analysis

Routing – Collection by Line Segment

The Final Rule requires a rail carrier transporting high-hazard flammable trains to use the data it compiles annually to analyze the safety and security risks for the transportation route(s) used by its trains. In performing this analysis, the rail carrier must consult with state, local, and tribal officials, as appropriate, regarding security risks to high-consequence targets, countermeasures already in place, and the community emergency response capability along, or in proximity to, the route(s) utilized. This analysis will be conducted by both Class II and Class III railroads. The Surface Transportation board designates which class a railroad meets. A Class II is a railroad that hauls freight and is mid-sized in terms of operating revenue. Railroads considered by the Association of American Railroads (AAR) as "Regional Railroads" are typically Class II. A Class III or short-line railroad are typically local short-line railroads serving a small number of towns and industries or hauling cars for one or more larger railroads. Both Class II and Class III railroads are assumed to require 40 hours to collect the data they use to analyze routes. We expect 10 Class II and 160 Class III railroads to conduct an assessment of their line segments. The number of railroads to be analyzed is multiplied by the hourly labor rate (\$62.25) to develop costs for this requirement. PHMSA estimates the cost for routing analyses for Class II railroads will be \$24,900.00 (10 Class II Railroads x 40 hours/railroad x \$62.25/hour). PHMSA estimates the cost for routing analyses for Class III railroads will be \$398,400.00 (160 Class III Railroads x 40 hours/railroad x \$62.25/hour). The Table below presents the estimated hourly and cost burden estimates for this requirement.

Routing - Collection by Line Segment	Respondents	Responses	Hours per Response	Total Hours	Cost per hour	Total Cost
Class II Railroads	10	10	40	400.00	\$62.25	\$24,900.00
Class III Railroads	160	160	40	6,400.00	\$62.25	\$398,400.00
Subtotal	170	170		6,800		\$423,300.00

Routing – Security Analysis

The primary route security analyses conducted in Year 1 will cost more than the analyses done in subsequent years due to amount of information needed to initiate the analyses. Much of this information will carry on to the security analyses done in subsequent years. In addition, Class II railroads are estimated to have more routes per carrier than Class III railroads. Class II railroads also have a more complex route analyses to perform. It is estimated that 34 Class III railroads will analyze 128 routes. It is estimated that 10 Class II railroads will analyze 50 routes.

Class II railroads are estimated to require 80 hours per route to conduct the initial analysis of primary routes. PHMSA estimates the cost for Class II railroads will be \$249,000.00 (50 Class II railroad routes x 80 hours/railroad route x \$62.25/hour). A Class III railroad is estimated to require 40 hours per route. PHMSA estimates the cost for Class III railroads will be \$796,800.00 (320 Class III railroad routes x 40 hours/railroad route x \$62.25/hour). These hourly and cost burdens are presented in the Table below.

Routing Security Analysis - Year 1	Respondents	Responses	Hours per Response	Total Hours	Cost per hour	Total Cost
Class II Railroads	10	50	80	4,000.00	\$62.25	\$249,000.00
Class III Railroads	160	320	40	12,800.00	\$62.25	\$796,800.00
Subtotal	170	370		16,800		\$1,045,800.00

After the first year's route analyses are completed, it is expected that analyses performed on the same routes in subsequent years will require less time to complete. We anticipate the majority of the routes analyzed in Year 1 will continue to be used in future years. Rail companies would analyze the same number of routes in later years as described above in the initial year analysis section. Class II railroads are estimated to require 16 hours per route to update route analyses on an annual basis. A Class III railroad is estimated to require 8 hours per route. PHMSA estimates the total cost for Class II railroads will be \$49,800.00 (50 Class II railroad routes x 16 hours/railroad route x \$62.25/hour). PHMSA estimates the total cost for Class III railroads will be \$159,360.00 (320 Class III railroad routes x 8 hours/railroad route x \$62.25/hour). The hourly and cost burden estimates for this requirement are presented in the Table below.

Routing Analysis Year 2-20	Respondents	Responses	Hours per Response	Total Hours	Cost per hour	Total Cost
Class II Railroads	10	50	16	800.00	\$62.25	\$49,800.00
Class III Railroads	160	320	8	2,560.00	\$62.25	\$159,360.00
Subtotal	170	370		3,360		\$209,160.00

Routing Alternate Security Analysis

The alternate route security analyses conducted in Year 1 will cost more than the analyses done in subsequent years due to amount of information needed to initiate the analyses. Much of this information will carry on to the security analyses done in subsequent years. In addition, Class II railroads are estimated to have more routes per carrier than the Class III railroads. Class II railroads also have a more complex route analyses to perform. It is estimated that 64 Class III railroads will analyze 32 routes. It is estimated that 10 Class II railroads will analyze 40 routes.

Class II railroads are estimated to require 120 hours per route to conduct the initial analysis of primary routes. PHMSA estimates the cost for Class II railroads will be \$298,800.00 (40 Class II railroad routes x 120 hours/railroad route x \$62.25/hour). A Class III railroad is estimated to require 40 hours per route. PHMSA estimates the cost for Class III railroads will be \$199,200.00 (80 Class III railroad routes x 40 hours/railroad route x \$62.25/hour). These hourly and cost burden estimates are presented in the Table below.

Alternate - Routing Security Analysis - Year 1	Respondents	Responses	Hours per Response	Total Hours	Cost per hour	Total Cost
Class II Railroads	10	40	120	4,800.00	\$62.25	\$298,800.00
Class III Railroads	160	80	40	3,200.00	\$62.25	\$199,200.00
Subtotal	170	120		8,000		\$498,000.00

After the first year's alternate route analyses are completed, it is expected that analyses performed on the same routes in subsequent years will require less time to complete. We anticipate the majority of the routes analyzed in Year 1 will continue to be used in future years. Rail companies would analyze the same number of routes in later years as described above in the initial year analysis section. Class II railroads are estimated to require 12 hours per route to update alternate route analyses on an annual basis. A Class III railroad is estimated to require 4 hours per route. PHMSA estimates the total cost for Class II railroads will be \$29,880.00 (40 Class II railroad routes x 12 hours/railroad route x \$62.25/hour). PHMSA estimates the total cost for Class III railroads will be \$7,968.00 (32 Class III railroad routes x 4 hours/railroad route x \$62.25/hour). The hourly and cost burden estimates for this requirement are presented in the Table below.

<u>Alternate - Routing Security Analysis - Year 2-20</u>	<u>Respondents</u>	<u>Responses</u>	<u>Hours per Response</u>	<u>Total Hours</u>	<u>Cost per hour</u>	<u>Total Cost</u>
Class II Railroads	10	40	12	480.00	\$62.25	\$29,880.00
Class III Railroads	64	32	4	128.00	\$62.25	\$7,968.00
Subtotal	74	72		608		\$37,848.00

49 CFR 171.16 - Incident Reporting

From 2012-2015, PHMSA identified 45 incidents, for an average of 15 incidents per year, involving the derailment and release of crude oil/ethanol. Each report would be submitted by a single respondent and would take approximately 2 additional hours to submit per response in accordance with the current requirements. PHMSA estimates the total cost for incident reports will be \$1,888.50 (15 incidents x 2 hours per incident report x \$62.25/hour). The hourly and cost burden estimates for these requirements are presented in the Table below.

	<u>Respondents</u>	<u>Responses</u>	<u>Hours per Response</u>	<u>Total Hours</u>	<u>Cost per hour</u>	<u>Total Cost</u>
Crude Oil Incident Reporting	15	15	2	30.00	\$62.95	\$1,888.50

Tank car paperwork burden under §§ 173.241, 173.242, 173.242

For this information collection PHMSA identified 50 respondents, each submitting one response per year. PHMSA expects each report to take approximately .5 hours per response. PHMSA estimates the total cost for incident reports will be \$1,699.00 (50 reports x .5 hours per report x \$67.96/hour). The hourly and cost burden estimates for these requirements are presented in the Table below.

<u>Tank Car Paperwork Burden</u>	<u>Respondents</u>	<u>Responses</u>	<u>Hours per Response</u>	<u>Total Hours</u>	<u>Cost per hour</u>	<u>Total Cost</u>
Tank Car Retrofit Burden	50	50	0.5	25	\$67.96	\$1,699.00

13. Estimate of total annual costs to respondents.

This collection does not require participants to produce any additional paperwork other than what are described in question 12.

14. Estimate of cost to the Federal government.

The total estimated cost to the Federal Government is approximately: \$21,279.05

Sampling and Testing

Information collected under the sampling and testing program as well as the routing analysis is not received by the Federal Government. However, the sampling and testing plans as well as routing analysis may be reviewed by enforcement personnel on an as-need basis. PHMSA expects enforcement personnel to spend up to 416 hours per year reviewing this data. This review will be performed by a GS-13 employee making approximately \$50 per hour. This will result in a total cost of \$20,800 to the Federal Government.

Incident reporting under § 171.16

The projected estimated annualized cost to the Federal Government is approximately \$479.05. PHMSA estimates it will receive an average of 11 incident reports annually. The unit cost per incident report is calculated at \$43.55 which includes programmatic costs associated with government personnel and overhead.

15. Explanation of program changes or adjustments.

Not applicable. PHMSA is collecting information that has not been collected before, resulting in a new information collection request.

16. Publication of results of data collection.

There is no publication for statistical use and no statistical techniques are involved.

17. Approval for not displaying the expiration date of OMB approval.

Upon OMB approval of this new information collection request, this information collection OMB Control number will be displayed in the HMR, specifically under § 171.6, entitled, "Control Numbers under the Paperwork Reduction Act."

18. Exceptions to certification statement.

There is no exception to the certification of this request for information collection approval.