

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

Radioactive Materials Transportation Requirements  
OMB Control No. 2137-0510

(Expiration Date: July 31, 2014)

**Introduction**

This information collection was originally initiated as a result of an April 15, 1982 rulemaking [47 FR 16268], entitled “Performance Oriented Packaging” under Docket HM-181, which comprehensively established a set of performance-oriented packaging standards and packaging requirements for use during the transportation of hazardous materials. In addition, the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180) pertaining to radioactive materials transportation were revised and reprinted in its entirety to align the HMR with the International Atomic Energy Agency (IAEA) published under Docket HM-169A, “Hazardous Materials Transportation Regulations: Compatibility with Regulations of the International Atomic Energy Agency” final rule [60 FR 50292] on September 28, 1995.

This information collection addresses the burden associated with the requirements pertaining to radioactive materials under various provisions within the HMR. This is to request the Office of Management and Budget’s (OMB) renewed three-year approved clearance for the information collection entitled, “Radioactive Materials Transportation Requirements” (OMB Control No. 2137-0510), which is currently due to expire on July 31, 2014.

**Part A. Justification**

1. Circumstances that make collection of information necessary.

This is a request for renewal without change of an existing approval under OMB No. 2137-0510 for information and recordkeeping requirements prescribed in the HMR , specifically § 173.22(c) and Part 173, Subpart I, applicable to the transportation of radioactive materials (RAM) in commerce. It is necessary to impose these requirements to protect the life and health of the general public and property. This information collection supports the Departmental Strategic goal for Safety. These regulations are promulgated in accordance with the Federal hazardous materials transportation law, 49 U.S.C. 5101-5127. The various information collection and recordkeeping requirements applicable to RAM are discussed in the following paragraphs.

Section 173.22(c):

Shippers are required to notify consignees of the dates of shipment, expected arrival, and any special loading/unloading instructions prior to the first shipment of RAM to ensure preparation has been made to receive and safely handle incoming shipments of RAM and that there is no delay (lack of trained personnel to receive the shipment, facility is closed etc.).

#### Section 173.411:

This requirement is necessary to ascertain that a packaging marked as an Industrial Package (IP) and used for the transportation of low specific activity (LSA) and surface contaminated objects (SCO) of radioactive materials meets the performance criteria established to protect against the release of these materials into the environment. A shipper wishing to offer for transportation LSA or SCO radioactive material in an IP must maintain, for a period of one year following the latest shipment, documentation which assures the shipper that its package meets the performance standards specified in 49 CFR 178.350. It is important that the shipper retain these records. If there is an incident, it can be determined whether the shipment involved was in a packaging that had been properly designed and evaluated. Without these records, there would be no way to determine this information.

#### Section 173.415:

The requirement in § 173.415(a) is necessary to ascertain that a packaging marked as a DOT Specification 7A and used for the transportation of radioactive materials in a Type A quantity meets the performance criteria established to protect against the release of these materials to the environment. A shipper wishing to offer a Type A quantity of radioactive material in a Type A packaging for transportation must maintain, for a period of one year following the latest shipment, documentation which verifies that the package meets the performance standards specified in 49 CFR 178.350. It is important that the shipper retain these records so if there is an incident, it can be determined whether the shipment involved was in a packaging that had been properly designed and evaluated. Without those records, there would be no way to determine this information.

#### Sections 173.416(b) and 173.473(a):

These requirements are used to verify that shippers hold a specific foreign competent authority certificate and to verify that the terms of the certificate are being followed for shipments of RAM being made into this country.

#### Sections 173.417 and 173.471(a):

These requirements assure that shippers of RAM using a package approved by the U.S. Nuclear Regulatory Commission (NRC) do not deviate from the specification set forth for the package, nor ship materials for which the package is not authorized. This requirement eliminates duplication of the issuance of permits for Type B, fissile, and large quantity radioactive material packages by the Department which have been approved by the NRC.

#### Sections 173.417 and 173.473(d):

These requirements are used by the Department as a means of ensuring other member countries of the IAEA that shippers located within the U.S. are complying with the reciprocal agreement which exists regarding multilateral approvals necessary to ship certain "high level" radioactive materials packages to, or through, foreign countries. This is necessary since most industrial countries have adopted the IAEA safety regulations and will not accept radioactive materials shipments that do not follow those requirements. The reflection of these requirements in the

HMR permits DOT to use its enforcement authority granted under the Federal hazardous materials transportation law so that it may deal directly with non-complying shippers based in the U.S. The application itself alerts appropriate national authorities as to the nature of the material being transported so they may be satisfied that acceptable packaging and transport controls are utilized. There is no formal (written) approval given to these applications. If the foreign competent authority objects to particular aspects of the shipment, such as the period of time, proposed route, type of vehicle to be used, etc., it will notify the shipper and advise of conditions which would be considered acceptable. The shipper may then make appropriate changes, or when possible, avoid the objecting country by using another alternative.

Section 173.457:

These requirements in § 173.457(b) are necessary to assure that fissile class RAM when transported in exclusive-use transport vehicles are handled in a manner which provides nuclear criticality safety and protection to transport workers and the general public. Since carriers generally have less knowledge of the hazardous materials which they transport than the shippers whom they serve, it is important that the carrier be specifically advised as to which actions it may or may not take with regard to shifting the cargo, substituting equipment, taking on additional consignments, etc. Without such specific instructions carriers could inadvertently create hazardous situations endangering public health and safety.

Sections 173.471 and 173.472:

The requirement in 173.471(d) verifies that shippers wishing to package and ship RAM in accordance with the International Atomic Energy Agency's (IAEA) Regulations are adhering to those requirements and are knowledgeable of them. The requirements in §§ 172.471 and 172.472 are used by the Department and export shippers of RAM to verify to foreign competent authorities that the U.S. shipper is adhering to the IAEA's regulations. This is necessary since most countries have adopted these regulations and will not accept RAM shipments which do not follow these requirements. The U.S. has incorporated the IAEA requirements for RAM into the HMR.

Section 173.476 (a), (b), and (c):

The requirements in § 173.476(a) are used to ascertain that a material shipped as a special form radioactive material meets the criteria for a special form material and has been packaged in accordance with the specifications for this type of a material. It is necessary that the shipper retain these records so that if there is an incident it can be determined whether the shipment involved was a special form material and had been properly packaged. Without these records, there would be no way to determine this information. Section 173.476(b) requires that prior to the first export shipment of a special form Class 7 (radioactive) material from the United States, each offeror shall obtain a U.S. Competent Authority Certificate for the specific material. For special form material manufactured outside the United States, an IAEA Certificate of Competent Authority from the country of origin may be used to meet this requirement. In addition, § 173.476 also requires each request for a U.S. Competent Authority Certificate as specified by the IAEA regulations contain evidence of a quality assurance program and be submitted in writing, in triplicate, to the Associate Administration for Hazardous Materials Safety.

## Section 173.477:

This section requires each offeror of a package containing greater than 0.1 kg of uranium hexafluoride maintain on file for at least one year after the latest shipments, and provide to the Associate Administrator for Hazardous Materials Safety on request, a complete safety analysis, including documentation of any tests, demonstrating that the package meets the requirements of § 173.420. An IAEA Certificate of Competent Authority issued for the design of the packaging containing greater than 0.1 kg of non-fissile or fissile-excepted uranium hexafluoride may be used to satisfy this requirement. This requirement has a minimal effect on the burden as there are a very small number of offerors/shippers whose respective packages contain greater than 0.1 kg of uranium hexafluoride.

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

Federal, state, local and foreign governments, shippers, and carriers use these requirements to assure that shipments of RAM are made in a safe and expeditious manner. This is accomplished by:

- (a) Ascertaining that packages are properly constructed and tested to contain the RAM in incidents normal to transportation and in case of a severe accident.
- (b) Moving RAM via a route which is as direct as possible, but will, when possible, avoid heavy concentrations of populations, and is known to state and local emergency response personnel, so they are prepared to deal with an emergency if one should arise. The connecting carriers or receivers will know when to expect the RAM and be prepared to properly handle it.
- (c) Verifying that shipper and carrier personnel are knowledgeable of both the domestic and international requirements of the proper methods of packaging, loading, etc., of RAM.
- (d) Ascertaining that import shipments of RAM are made in a safe and proper method.

Failure of a shipper or a carrier to comply with the regulations pertaining to RAM could lead to exposure of the general public, as well as transportation and industry personnel, to excessive levels of radiation as well as radiation damage to property along the route and to other cargo. Also, improperly prepared export shipments would not be allowed into other countries.

### 3. Extent of automated information collection.

The burden has been made as simple as possible. The information requested is necessary to ensure safe operation. Information is considered critical in making evaluations and assuring safe transport, loading, and unloading of RAM. The Government Paperwork Elimination Act directs agencies to allow the option of electronic filing and recordkeeping by October 2003, when practicable. Electronic filing and recordkeeping is authorized; however, PHMSA does not require these records to be submitted to us, so is not practicable.

4. Efforts to identify duplication.

DOT recognizes that some of the information sought through these reporting requirements is currently being collected by the Nuclear Regulatory Commission (NRC). Essentially, those data pertain to shipments made under physical security requirements issued by NRC. DOT's regulations specifically except those shippers already reporting routing information to NRC from filing duplicative reports with DOT. An agreement has been established between DOT and NRC which provides for exchange of these data.

5. Efforts to minimize the burden on small businesses.

The collection of this information is reviewed periodically to ensure that the requirements involving safety in the transportation of RAM are kept to the necessary standards to protect all involved.

6. Impact of less frequent collection of information.

Due to the hazards involved, if collection of information and recordkeeping was required less frequently, the hazards to public safety would increase due to the probability of incidents during transportation. It is not possible to conduct the collection less frequently and still assure that RAM shipments are transported, loaded, and unloaded in such a manner to minimize the danger to life and property inherent in transporting these materials.

7. Special circumstances.

This collection of information is generally conducted in a manner consistent with the guidelines in 5 CFR 1320.5 (d)(2). However, it is not possible to substantially reduce or eliminate the requirements contained in this collection and still maintain standards necessary to assure safe transportation.

8. Compliance with 5 CFR 1320.8.

A 60-Day Notice and Request for comments on the renewal of this information collection was published in the Federal Register on October 25, 2013 [78 FR 64049] under Docket No. PHMSA-2013-0002 (Notice No. 13-14). The comment period closed on December 24, 2013. No comments were received pertaining to this information collection. A 30-Day Notice and Request for comments was published in the Federal Register on December 30, 2013 [78 FR 79561] also under Docket No. PHMSA-2013-0002 (Notice No. 13-22). No comments were received pertaining to this information collection.

9. Payments or gifts to respondents.

There is no payment of 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. Information is not of a sensitive nature.

12. Estimate of burden hours for information requested.

Total estimate of annual burden hours:

15,270

Total estimate of annual burden costs:

\$139,895.60

The estimate of annualized burden hours: 15,270 hours.

(1) Sections 173.416(a)(b); 173.417; 173.471(a); and 173.473(a):

Approximately 2,670 shippers of RAM will request authorization to ship in a package approved for use for another party. It will take approximately 0.5 hour to apply for authorization. This is an annual information collection burden of  $2,670 \times 0.5 = 1,335$  hours.

Approximately 75 shippers will forward a foreign Certificate of Competent Authority during a year. It will take approximately 0.5 hour to complete this requirement for a total annual information collection burden of  $75 \times 0.5 = 37.5$  hours. This is a total annual information collection burden of  $1,335 + 37.5 = 1,372.5$  hours.

Section 173.477 requires approximately 10 additional shippers to request authorization to ship a package of uranium hexafluoride in foreign commerce. It is estimated that there will be approximately 200 different packages that will require approval. It will take approximately 0.5 hour to apply for authorization. Therefore, the additional burden for these requirements is reflected in estimates in (b)(2)(3)(4) below:

(2) Sections 173.471(d)(e);173.472(a)(c)(f);173.473(d);173.476(b);173.477:

Approximately 210 shippers of special form material and uranium hexafluoride will request a Certificate of Competent Authority during a year. It will take approximately one hour to complete this requirement for a total annual information collection burden of  $210 \times 1 = 210$  hours. Additionally, approximately 100 shippers will forward applications and/or notification statements on an estimated 10 shipments each per year. Each shipment should require 4/10ths of an hour for completion for an aggregate burden of  $100 \times 10 \times 4/10 = 400$  hours. These estimates are based upon an appraisal made by the National Competent Authority for the U.S., located within DOT's Office of Hazardous Materials Safety and having a specific knowledge of export

traffic. In part, the estimates reflect data which is contained in the Final Environmental Statement on the Transportation of Radioactive Materials by Air and Other Modes (NUREG-0170). The total information collection burden for these requirements is  $210 + 400 = 610$  hours.

(3) Section 173.476(a); 173.477:

Approximately 1,010 shippers of special form material RAM and uranium hexafluoride will request authorization to ship it annually, accounting for a total of 1,200 requests. It will take approximately 0.5 hour per report for this requirement. Thus, the total annual recordkeeping burden is  $1,200 \times 0.5 = 600$  hours

(4) Section 173.415(a); 173.477:

Approximately 1,010 shippers of Type A quantity radioactive materials and uranium hexafluoride will ship 1.5 million such packages annually. It is estimated that 2,200 different packages or packaging designs will be utilized. It will take approximately 3.75 hours for this requirement. The estimates are derived from data contained in the Final Environmental Statement on the Transportation of Radioactive Materials by Air and Other Modes (NUREG-0170). Particular consideration was given to: the total number of Type A packages expected to be offered for transportation in the future; the variations which may occur through innovation in packaging needs and technological changes; time spent in actual testing or engineering evaluation of each packaging type, and documentation of those findings. Thus, the total annual recordkeeping burden for this requirement is approximately  $2,200 \times 3.75 = 8,250$  hours.

(5) Sections 172.427; 173.441(c); and 173.457(b):

Approximately 646 respondents will each take approximately 5 minutes to place required information on shipping documents. The total annual information collection burden for this requirement is  $646 \times 5/60 = 53.8$  or approximately 53.5 hours.

Approximately 100 shippers of bulk shipments of low specific activity radioactive materials, who offer for transportation in exclusive-use transport vehicles, transport an estimated 20 shipments each per year. It will take approximately five (5) minutes to comply with this requirement. Thus, the total annual information collection burden is  $100 \times 20 \times 5/60 = 167$  hours for bulk shipments of this material.

Particular consideration was given to: the small fraction (1%) of some 18,000 licensees authorized to possess the transfer nuclear materials, and who generates materials (e.g., a yellow cake slurry) in sufficient quantities to warrant the exclusive use of a transport vehicle; the total number of such shipments to be transported each year; and the time spent by the shipper in drafting instructions for the carrier must follow. There are approximately 650 shippers of packages of radioactive materials that emit relatively high levels of external radiation that are required to be offered in exclusive-use transport vehicles. It is estimated that 20 shipments are made each year. It will take approximately five (5) minutes to comply with this requirement. Thus, the total annual information collection burden is  $650 \times 20 \times 5/60 = 1,083$  hours.

Particular consideration was given to: the small fraction (5%) of some 18,000 licensees authorized to possess and transfer nuclear materials and who generate materials, (e.g., filter

resins from nuclear power plants) in sufficient quantities to warrant the exclusive-use of a transport vehicle; the total number of such shipments expected to be transported per year; and the time spent by the shipper in drafting instructions which the carrier is to follow in maintaining the load pattern, distance separation from the vehicles cab, and other similar precautions. Approximately 50 shippers of fissile class radioactive materials, each of whom offer for transportation in exclusive-use transport vehicles an estimated 20 shipments per year. Considering that most of their shipments are standardized, it is really only necessary for shippers to prepare the instructions once and then use them on a repetitive basis. Consequently, the average amount of time necessary to comply with this requirement is approximately five (5) minutes and the total annual burden amounts to  $50 \times 20 \times 5/60 = 84$  hours.

Particular consideration was given to: the small fraction (1%) of some 18,000 licensees authorized to possess and transfer nuclear materials and who generate and ship fissile class radioactive materials in sufficient quantities to warrant the exclusive-use of a transport vehicle; the total number of such shipments expected to be transported each year; and the time spent by shippers in drafting instructions which the carrier is to follow in maintaining a segregation of packages while in transit. The estimates for numbers of shippers and shipments are derived from data contained in the Final Environmental Statement on Transportation of Radioactive Materials by Air and Other Modes (NUREG-0170). The total information collection burden for these requirements is  $53.8 + 167 + 1,083 + 84 = 1,387.8$  hours.

(6) It is estimated that 500 shippers of low specific activity (LSA) and surface contaminated objects (SCO) will ship 1/4 million such packages annually. It is estimated that 1,000 different packages or packaging designs will be utilized. It will take approximately two (2) hours for this requirement. These estimates are based on an appraisal made by the national Competent Authority for the U.S. who is located within DOT's Office of Hazardous Materials Safety and has a good awareness of the radioactive material transportation community and the amount of time and effort to implement this type of program. In addition, this program is very similar to the one required by § 173.415(c) and the available information was extrapolated to this requirement. The difference is that fewer shippers will use SCO and LSA packagings than Type A packagings, and Type A packaging requirements in Section 173.415(a) are more stringent than the LSA and SCO packaging requirements. Thus, the total annual recordkeeping burden for this requirement is approximately  $1,000 \times 2 = 2,000$  hours.

(7) Section 173.411:

Approximately 500 shippers will spend approximately 2.1 hours to obtain and maintain test results and other required documentation for this requirement. The total annual information collection for this requirement is  $500 \times 2.1 = 1,050$  hours.

The estimate of annualized burden costs: \$139,895.60.

(1) Sections 173.417; 173.471(a); 173.416(a)(b); 173.473(a) = \$26,700

2,670 shippers at an estimated cost of \$10 for clerical and other expenses to register with the USNRC is approximately \$26,700.

An additional 10 respondents must comply with the requirements for uranium hexafluoride under



§ 173.477 in (a)(2)(3)(4) below:

(2) Sections 173.471(d); 173.472(a)(c)(f); 173.473(d);173.476(b); 173.477: = \$7,875.

Approximately 210 shippers, at an average estimated cost of \$37.50 each, annually for a total annual cost of \$7,875 will apply for a competent authority certificate, domestically or to foreign governments, and forward them to other countries.

(3) Sections 173.476(a); 173.477 = \$72,000.

Approximately 1,010 shippers maintain a total of 1,200 reports on safety analysis of the special form material and uranium hexafluoride shipped at an estimated cost of \$60 per report for the analysis and clerical expenses for an estimated annual cost of  $1,200 \times \$60 = \$72,000$ .

(4) Sections 173.415(a); 173.477 = \$25,250.

Approximately 1,010 shippers at an approximate cost of \$25 each for obtaining and maintaining tests results and other required documentation for an estimated annual cost of  $1,010 \times \$25 = \$25,250$ .

(5) Sections 173.427; 173.441(c); 173.457(b) = \$570.60.

Approximately 646 respondents will each take approximately 5 minutes to place required information on shipping documents at an estimated cost of \$10.60 per hour. The estimated annual cost of 53.8 hours  $\times$  \$10.60 = \$570.60.

(6) Section 173.411 = \$7,500.

Approximately 500 shippers at an approximate cost of \$15 each for obtaining and maintaining the test results and other required documentation for an estimated annual cost of  $500 \times \$15 = \$7,500$ .

13. Estimate of total annual costs to respondents.

There is no cost burden to respondents except those identified in item 12 above.

14. Estimate of cost to the Federal government.

The estimated annualized cost to the Federal government is \$7,063.

This was arrived at by calculating costs for those requirements for which the Federal government receives information:

Sections 173.471(e) and 173.472(f) = Estimated costs for review and issuance of approximately \$3,938.

Sections 173.416(c) and 173.473(a) = Estimated cost for review and issuance of \$1,875.

Section 173.476(b); 173.477 = Estimated costs for review and issuance = \$1,250.

These collections are reviewed by one professional at \$26.60 per hour who spends approximately 255 hours annually reviewing them at a cost of  $\$26.60 \times 255 = \$6,783$ , plus clerical costs of \$280 for a total annual cost of \$7,063.

15. Explanation of program changes or adjustments.

There is no change in burden associated with this request for renewal of this information collection.

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.

This information collection OMB Control number is prominently 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 PHMSA's certification of this request for information collection approval.