

DEPARTMENT OF TRANSPORTATION

Research and Special Programs
Administration

49 CFR Part 171

[Docket No. RSPA-99-5013 (HM-229)]

RIN 2137-AD21

**Hazardous Materials: Revisions to
Incident Reporting Requirements and
the Hazardous Materials Incident
Report Form****AGENCY:** Research and Special Programs
Administration, DOT.**ACTION:** Final rule.

SUMMARY: RSPA is revising the incident reporting requirements of the Hazardous Materials Regulations and the hazardous materials incident report form, DOT Form F 5800.1. The major changes adopted in this final rule include: Collecting more specific information on the incident reporting form; expanding reporting exceptions; expanding reporting requirements to persons other than carriers; reporting undeclared shipments of hazardous materials; and reporting non-release incidents involving cargo tanks. These revisions will assure an increase in the usefulness of data collected for risk analysis and management by government and industry and, where possible, provide relief from regulatory requirements.

DATES: *Effective Date:* This final rule is effective July 1, 2004.

Compliance Date: Only the revised DOT Form F 5800.1 (01-2004) specified in this final rule will be accepted for incidents occurring on, or after July 1, 2004. Filers must use the previous DOT Form F 5800.1 (Rev 6/89) form for all incidents up to, and including June 30, 2004.

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I. Background

Quality data that supports causal, trend, and risk analysis is fundamental to an effective safety program. The importance of data to the hazardous materials transportation safety program was highlighted in both a Department-wide initiative (ONE DOT Flagship Initiative on Hazardous Materials Handling/Incidents; "HazMat Flagship") which began in 1999 and a Department-wide Hazardous Materials Program Evaluation (HMPE) completed in 2000. The HazMat Flagship Initiative identified a set of new and ongoing actions relating to hazardous materials transportation that have the greatest potential impact on safety and program operation and that benefit from a cooperative approach. The HMPE used a multi-modal team to conduct a Department-wide program evaluation to document and assess the effectiveness of the Department's hazardous materials transportation safety program. The team's final report can be found at: <http://hazmat.dot.gov/hmpe.htm>.

Both the HazMat Flagship initiative and the HMPE emphasized the need to obtain more accurate and complete data on incidents. The hazardous materials transportation safety program relies on DOT Form F 5800.1, Hazardous Materials Incident Report, to gather basic information on incidents that occur during transportation and that meet specified criteria in § 171.16 of the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180). The Research and Special Programs Administration (RSPA, we) last revised this form in 1989. In 2001, we received approximately 17,500 incident reports. RSPA uses the data and information reported by carriers to:

- Evaluate the effectiveness of the existing regulations;
- Determine the need for regulatory changes to cover changing transportation safety problems; and

- Identify major problem areas that should receive priority attention.

In addition, both government and industry use this information to chart trends, identify problems and training inadequacies, evaluate packagings, and assess ways to reduce releases.

Although the current incident report form provides useful information and is generally recognized as being fundamentally sound, there is room for improvement. We believe the opportunity exists to obtain better, more detailed information on events, such as more descriptive information to help determine root causes of events; to offer better linkages so that data can be coupled; and to better structure the report form to facilitate complete and accurate responses.

Our experience using data generated by the current form has identified certain deficiencies. Rulemakings such as Docket HM-225A, "Revision to Regulations Governing Transportation and Unloading of Liquefied Compressed Gases," and Docket HM-213B, "Safety Requirements for External Product Piping on Cargo Tanks Transporting Flammable Liquids," have demonstrated the difficulties involved with using DOT Form F 5800.1 data to determine precise failure modes and causes. These rulemakings also underscore the unreliability of reported incident cost information and the need to update this and other data as better information becomes available after initial submission of the form.

A study performed by the Argonne National Laboratory and the University of Illinois (National Risk Assessment for Selected Hazardous Materials Transportation) for RSPA used incident data as a basic input into the study, and recommended changes in a number of areas of incident data collection. Also, risk practitioners in government and industry offered suggestions for improved reporting of incident data in a white paper produced under the auspices of the Transportation Research Board.

The National Transportation Safety Board (NTSB) has issued several recommendations related to data collection and processing identified during the course of their investigations:

(1) NTSB Recommendation H-92-6 suggests establishment of a program to collect information necessary to identify patterns of cargo tank equipment failures, including the reporting of all accidents involving a DOT specification cargo tank, with or without a release of hazardous materials.

(2) NTSB recommendation R-89-52 suggests implementing regulations to ensure that there is formal feedback

from carriers to shippers when an incident has occurred.

(3) NTSB recommendation H-99-58 asks RSPA to establish a specific time period for reporting incidents meeting criteria in § 171.15 (telephonic notification).

Undeclared hazardous materials shipments, particularly in the air mode, are a serious safety concern within the Department. This issue received significant attention in the HazMat Flagship, and was recognized by the HMPE as an important area where better understanding of the frequency and impact of such shipments is essential. Data obtained through reporting discoveries of such shipments, whether or not the material is released, can help in defining the extent of the problem and in developing programs to mitigate the risk involved. DOT Form F 5800.1 is an efficient way to collect this data. Such data, even though it represents only undeclared hazardous materials that are discovered rather than the full spectrum of undeclared hazardous material shipments, can play a significant role in monitoring trends and measuring the effects of efforts to reduce undeclared shipments.

We are cognizant of the burden often imposed by regulatory requirements. As we developed changes to the incident reporting requirements, we attempted to minimize any additional burden associated with the revised requirements. For instance, we are adding exceptions to reporting requirements for small releases of materials that pose the least hazard where sufficient data already exists to manage risk. Further, we have deleted certain data fields that ask for information that is obtainable from other sources, for example, land use at the incident site. In addition, we are allowing electronic submission of the form, such as through an internet-based form or through a bulk data transfer, in order to facilitate the process. An internet-based form will ask only the questions the reporter is required to complete, based on previous answers. Accepting the data through a bulk file transfer allows larger companies to configure reporting software for their particular operations, maintain the information electronically, and eliminate paper and postage.

As a result of a meeting between DOT and members of several trade associations concerning hazardous materials incident reporting, the Association of American Railroads (AAR) sponsored a workgroup with segments of the transportation community to discuss the DOT Form F 5800.1 and the reporting requirements

of §§ 171.15 and 171.16. The workgroup meetings were held during the winter of 1997-98. Participants included representatives from all four transportation modes, RSPA, shippers, container manufacturers, and labor. The workgroup submitted recommendations to RSPA. We developed questions based on input from these meetings, the DOT modal agencies, other concerned individuals, and on our own initiative.

On March 23, 1999, we published an advance notice of proposed rulemaking (ANPRM; 64 FR 13943) that asked a series of questions regarding the need to change current reporting requirements or the incident report form. We received approximately 40 comments from industry associations, State and local governments, non-profit associations, and carriers. Based on these comments, we developed proposed regulatory language and published a notice of proposed rulemaking (NPRM; 66 FR 35155) on July 3, 2001. We identified ten general issues in the NPRM, which are reviewed in Section III of this document. RSPA received over 30 comments on the NPRM. RSPA's decisions on the proposals of the NPRM and review of these comments are discussed in Section III, below.

II. Current Requirements

Currently, § 171.15 requires carriers to immediately notify the National Response Center (NRC) after any incident that occurs during transportation in which, as a direct result of hazardous materials:

- (1) A person is killed;
- (2) A person receives injuries requiring his or her hospitalization;
- (3) Estimated carrier or other property damage exceeds \$50,000;
- (4) An evacuation of the general public occurs lasting one or more hours;
- (5) One or more major transportation arteries or facilities are closed or shut down for one hour or more;
- (6) The operational flight pattern or routine of an aircraft is altered;
- (7) Fire, breakage, spillage, or suspected contamination occurs involving shipments of radioactive material or infectious substances (etiologic agents);
- (8) There has been a release of a marine pollutant in a quantity exceeding 450 L (119 gallons) for liquids or 400 kg (882 pounds) for solids; or
- (9) A situation exists of such a nature (e.g., a continuing danger to life exists at the scene of the incident) that, in the judgment of the carrier, it should be reported to the National Response Center even though it does not meet any other immediate notification criteria. Carriers may report any of these

incidents involving aircraft to the Federal Aviation Administration (FAA) Security Field Office. In addition, certain incidents involving infectious substances must be reported to the Centers for Disease Control and Prevention (CDC).

Each carrier required to make a report under § 171.15 is also required to complete DOT Form F 5800.1 in accordance with § 171.16. Additionally, unless excepted, a carrier is required to submit DOT Form F 5800.1 for any incident occurring during transportation that results in an unintentional release of a hazardous material from its package or the discharge of any quantity of hazardous waste.

We use the data and information reported by carriers to:

- (1) Evaluate the effectiveness of the existing regulations;
- (2) Determine the need for regulatory changes to cover changing transportation safety problems; and
- (3) Identify major problem areas that should receive priority attention. In addition, both government and industry use this information to chart trends, identify problems and training inadequacies, evaluate packagings, and assess ways to reduce releases.

In considering how to improve the incident report form, our primary objective was to ensure that useful information is collected in an efficient manner. We believe it is possible to improve the structure and format of the form to make it easier to understand and complete. To reduce the reporting burden on persons responsible for completing the incident report, we believe certain existing fields that ask for information that is obtainable from other sources can be deleted. We also believe it is appropriate to add information in certain areas where it can help determine future program direction and support measures of program effectiveness. For example, a good description of packaging performance, documenting both failures and successes, helps us define future requirements. In addition, undeclared hazardous materials is an area of significant safety concern to DOT, and the ability to identify the frequency and source of such shipments is an important factor in reducing their occurrence. A complete description of changes to the content of the form is provided in the following sections.

III. Summary of Issues, Comments and Changes

In the NPRM, RSPA proposed changes on the following ten issues. In this final rule, we discuss comments submitted to the docket, concerns raised by

commenters, and our decisions on each issue below:

- (A) Electronic filing
- (B) Revisions to the form
- (C) One-call reporting
- (D) Expansion of reporting requirements to persons other than carriers
- (E) Exceptions to incident reporting
- (F) Criteria for telephonic notification
- (G) Updates to reports
- (H) Reporting when no hazardous material is released during an incident
- (I) Undeclared shippers of hazardous materials that do not result in a release
- (J) Notifying shippers of incidents.

A. Electronic Filing

In the NPRM, we proposed to adopt a variety of electronic filing methods, including facsimile (fax), electronic mail (e-mail), and internet-based forms. Electronic filing of incident reports is consistent with the requirements of the Government Paperwork Elimination Act (GPEA), which generally mandates that, by October 2003, agencies accept electronic documents and electronic signatures for the transactions that they conduct with the public and regulated parties.

All commenters support an electronic filing option. Commenters state that fax, e-mail, and internet submissions should be available to facilitate reporting. However, some commenters also state that electronic filing should be optional rather than mandatory.

We agree that electronic filing of incident reports would reduce the reporting burden on industry and increase reporting flexibility. However, because of logistical obstacles, all means of electronic filing will not be immediately available. We are in the process of developing the capability to allow electronic submission of the form and bulk transfer, and will issue an advisory notification upon completion. Although initial systems available to receive electronic submissions are limited, they will be expanded in the future as new systems are implemented within the Department or as new technologies become available.

We will continue to accept filing of a paper form, but we will not require the reporter to submit duplicate copies of the form. In addition, we have revised language in the regulations concerning the retention of the report in order to facilitate electronic storage. We have removed the provision requiring approval from the Department of Transportation to retain copies at a location other than the reporter's principal place of business. Instead, we allow the reporter to store the report at

a location other than the principal place of business if the report is available to the reporter's principal place of business 24 hours after a request by a representative of the Department. Often, electronic documents may be stored on a computer server that is not physically located at the person's place of business. Additionally, the storage location is not of paramount concern, provided the document can be produced in the specified time. This change allows more flexibility for storing electronic and physical copies of the reports.

B. Revisions to the Form

The proposed modifications to the data form were published in the **Federal Register** in a notice of proposed rulemaking (NPRM). These proposed modifications introduced new and revised data elements in the form. These revisions are intended to minimize burdens on the end user, while necessitating that the form be completed accurately.

As a result of these new requirements, as well as RSPA's intent to maximize the accuracy and completeness of the forms we receive, RSPA procured the services of the QED Group, LLC (QED) of Washington, DC to recruit both experienced and non-experienced users of the previous form to test the form proposed in the NPRM. QED convened a series of focus groups to provide RSPA with constructive feedback on the revised form.

The first focus group meeting took place on October 25, 2002, with a morning session attended by ten experienced filers and an afternoon session attended by four less experienced filers. Neither group indicated that major revisions to the layout of the draft form were necessary. However, we derived the following observations from this meeting:

- The form layout should be more compact than the version in the NPRM, but attention should still be paid to font size.
- The form should avoid the use of shaded regions, as these interfere with faxing.
- The form should explicitly identify the form and/or series number of the accompanying instructions, as well as URL information for instructions available online.
- Any such online instructions should contain links to the sections of the CFR cited, and should also contain links to definitions.
- There were no major issues or concerns with the graphics or other visual cues.
- Infrequent filers were concerned that the conditions for form filing were

not presented all in one place. They suggested a different grouping of instructions, something along the lines of a "Who—Why—When?" section. Infrequent filers preferred a format similar to a flowchart (perhaps on a separate instruction page or worksheet) to walk them through the incident characteristics and help them arrive at a filing decision.

Considerations of an electronic form were not a major element of the discussions in this session. The most significant finding regarding the design of the electronic form was that large companies would prefer direct data exchange to a piecemeal filing of form information via the Web. Small companies, however, welcomed the Web interface primarily because of the potential for live HTML links to instructions, definitions and supporting regulations.

The second focus group meeting took place on November 22, 2002, with a morning session attended by seven experienced filers and an afternoon session attended by six less experienced filers.¹ The full QED report can be found in the Docket. Some of the comments received from this group included:

- In general, participants reacted very positively to the new electronic form. Participants appreciated having direct access to the instructions for completing the form in an electronic version.
- Replace the numeric values and alpha codes with check-boxes.
- Change the wording for the entry of failure codes for packaging from "Enter up to 3 Codes" to "Enter up to 3 sets of Codes." They also suggested that a vertical line be drawn between each grouping of "What Failed How Failed Cause(s) of Failure."
- Air carriers indicated that for a hazardous material incident involving passenger baggage, there should be an ability to indicate the type of bag containing the item involved in the release, as well as any packaging within the bag.
- Language should be changed in Part 6 from "Describe the package failure" to something else since the report may not be in response to the failure of a package but due to some other hazardous material incident.
- Participants indicated that they would like the ability to save templates. These templates could be linked to a company- or location-specific password, and would store information such as reporting entity address, mode, and

¹ Other scheduled attendees of both sessions experienced work-related emergencies or had other difficulties that prevented them from participating in the focus group.

possibly even material information (for single-material handlers). Alternatively, some participants indicated that they would like to be able to host versions of these forms (with company-specific information already filled in) on their own intranets and post the reports to DOT databases from their own systems.

- Participants would like to enter the UN number of the hazardous material, and have a scripted lookup function enter everything else into the various fields from a table.

- Provide additional “skip patterns” and validation logic—for example, if the release is caused by a “puncture,” the program should make “shell thickness” a required data field and not allow the form to be saved or submitted if it is incomplete. Participants also mentioned that they would like relevant previous responses to gray out everything not applicable after item 23, and that item 23 itself should be linked to the response to 1(b). Similarly on item 27, if there are no fatalities, the numbers could be greyed out and “tab” could skip to the next valid item.

- Add ability to upload supplementary documentation/pictures, etc. on the part 6 page using an interface not unlike that for adding attachments to Web-based mail.

- Part 7 might be better as a dropdown box, since filers will probably supply a response that can be autocoded this way. This might save DOT time in having to back-code responses that fall into regular patterns such as “enhanced training, accelerated repair schedule,” *etc.*

- Participants stated that default values would be a good idea for the form. Having a default value for “unknown” might make it easier for DOT to identify missings/unknowns/not applicables, a frequent source of problems in data analysis from survey research.

- Measurement units entered throughout the form should be confined to a standard list and should exist in fields separate from the quantities field.

RSPA received numerous comments and questions on the proposed form layout. Several commenters mentioned the increase in the number of pages of the form. As we explained in the NPRM, the page numbers increased due to the addition of approximately 15 data fields to the basic incident information and the addition of more white space. The number of pages in the final version of the form actually only increased from 2 to 4 pages.

In considering how to organize and lay out the incident report form, our primary objective is to ensure that useful information is captured in an

efficient manner. We are deleting certain existing fields that ask for information obtainable from other sources or that can be extrapolated from other fields. The questions “Is material a hazardous substance?” “Was the RQ met?” and the “Land Use and Community Type” fall into this category. Similarly, the “Highway Type” and “Number of Lanes at a Vehicle Accident/Derailment site” can be determined from other sources. In addition, the type of labeling or placarding fields offer limited benefit to safety improvements, and have not been included in the revised form.

Additional information in certain areas is needed to help determine future program direction and to support measures of program effectiveness. Separate fields for information on packing group, hazardous wastes, and toxic by inhalation materials would allow us to better identify the materials involved in incidents. Further, we believe the inclusion of cross-reference fields, such as the NRC report number and the shipper’s and carrier’s hazardous materials registration number, will help broaden the ties the incident data has with other Federal hazardous materials data.

We also believe gathering additional information on the types of persons who respond to incidents, the types of persons who are killed, injured or need to be evacuated, as well as how long evacuations or closures last, will contribute to incident risk analysis. The more detailed questions concerning air transport incidents and questions directed to specific types of packagings will allow for more focused review of where and how packages fail. Additionally, the ability to identify the frequency and source of undeclared hazardous materials shipments, an area of significant safety concern to DOT, is important to reduce their occurrence.

We are revising the packaging sections of the incident report form to eliminate duplicative and confusing formatting and to enable us to gather more specific packaging information. For example, we are replacing check boxes to identify damage to packagings with failure codes specific to each packaging type. The utilization of failure codes was one of the recommendations that came from the AAR workgroup discussed in Section I. The use of failure codes allows the preparer to select from a set of choices appropriate to the particular packaging type involved. Also, we believe use of terminology appropriate for the particular packaging type will help avoid confusion and ultimately make it easier for the preparer to complete the

incident report. Although we have not adopted failure codes of the exact type and form recommended by AAR, we have revised the format of the codes on the form so that the first code element for “What Failed” corresponds to the specific point of failure followed by location codes. This allows for easy translation of the codes. The single AAR code corresponds to a specific sequence of codes to be entered on this form. Further, we recognize that the experience we gain with the early use of these failure codes may result in periodic changes as the set matures. The instructions invite suggestions for improvements to the failure codes.

The expansion will add about 15 data fields to the basic incident information. We believe the benefits to be gained by collecting more detailed information will require only minimal additional time to report these mostly short yes/no or fill-in-the-blank fields. In addition, we have provided space for recommendations or actions. The purpose of this section is not to assess blame or serve as a definitive statement relating to the root causes of an incident, but rather to gather ideas on preventing the recurrence of incidents. Such information can help identify common problems and may be used to support regulatory changes. Further, we have reformatted the incident report form to facilitate completion (*e.g.*, more white space and a more logical flow from item to item). While this reformatting has added two additional pages to the form, we believe that this design will improve accuracy and make the form easier to complete.

C. One-Call Reporting

In this final rule, we are adopting the proposal to eliminate the separate telephonic notification requirement to FAA for air shipments and to require all air carriers to report incidents subject to § 171.15(a) to the National Response Center (NRC). NRC would then make any subsequent notifications. NRC personnel are specifically trained on which notification requirements pertain to which entities, thus, this change should result in more accurate notification to parties with a need to know.

Only a few commenters addressed the one-call issue. In its comment, the California Highway Patrol (CHP) supported streamlining the calling process, but emphasized the need to alert state officials via 911. RSPA recognizes the difference between contacting emergency response officials and incident reporting to DOT. As the CHP states, “* * * it is the local emergency response agency(s) who

handle the entire incident and nearly every instance bears the initial response burden and often the greatest opportunity to mitigate the adverse consequences." We reiterate that the one-call for reporting to the NRC is for incident reporting. In the case of any incident involving hazardous materials that requires immediate emergency response, the local authorities should be immediately notified. In addition, adoption of this requirement does not relieve a person from reporting discrepancies of hazardous material shipments transported by air. Discrepancies are those air shipments involving hazardous materials which are improperly described, certified, labeled, marked, or packaged, in a manner not ascertainable when accepted. Section 175.31 of the HMR requires, as soon as practical, a person to report by telephone to the nearest FAA Security Field Office a discrepancy relative to the shipment of a hazardous material following the shipment's acceptance for transportation aboard an aircraft.

The United Parcel Service (UPS) indicated its support for continuing reporting to the FAA Security Field Office in place of reporting to the NRC. UPS stated that " * * direct notification to the FAA by the person in physical possession of the hazardous material will result in more accurate notification * * " than notification to the NRC. UPS notes that " * * nothing in the administrative record provides a reasoned discussion of why elimination of direct FAA notification would result in more accurate incident reporting." A Presidential review of Federal release prevention, mitigation, and response authorities, conducted under the requirements of section 112(r)(10) of the Clean Air Act, as amended in 1990, found that the current reporting system was complex and confusing. In 1993, the National Response Team (NRT), comprised of multiple federal agencies, submitted a Report to Congress entitled "A Review of Federal Authorities for Hazardous Materials Accident Safety." In this report the NRT recommended that streamlining the accident notification reporting requirements be further examined. The NRT found that the duplicative reporting requirements imposed by the various agencies was a burden.

The one-call reporting system is an attempt to streamline the process for federally mandated reporting of accidental discharges of hazardous materials. There are a variety of incident scenarios, that, under current Federal regulations, would require the reporting party to call multiple Federal agencies

to notify them of an accidental release. Under the one-call system, the NRC receives all Federal telephonic notifications of hazardous materials incidents and then notifies all appropriate parties, ensuring that incident data is collected and maintained. Centralizing the collection of release notifications will result in improved data quality by ensuring that all release notification data is collected in a consistent and comprehensive manner.

D. Expansion of Reporting Requirements to Persons Other Than Carriers

Currently, the requirements for telephonic and written reporting of transportation incidents apply to carriers only. Operators of transportation facilities, such as marine terminals, who may not perform carrier functions are not required to report transportation incidents involving hazardous materials. Most commenters to the NPRM agree that the person in physical control of a hazardous material when an incident occurs during transportation should be responsible for reporting that incident. The Norfolk Southern Railway Company supports the proposal and notes "the person in control * * * would be the person most knowledgeable about the incident."

Many commenters note that a pending RSPA rulemaking that will define when a material is "in transportation in commerce" (Docket HM-223, NPRM published on January 27, 2001; 66 FR 59220) is an important factor in determining when and what entities would be required to report incidents. DuPont comments " * * this issue cannot be resolved until the DOT publishes a final rulemaking on Docket HM-223 Applicability of the Hazardous Materials Regulations to Loading/Unloading and Storage." A commenter associated with the F 5800.1 Task Force supports " * * the idea that the party having physical control of the material is the one who should be required to complete the report * * " but notes the relationship of Docket HM-223. "If the final rule in HM-223 is promulgated as proposed, it would relieve parties, other than carriers from having to execute incident reports" notes the commenter. He continues "This would mean that consignors and consignees would not have to report incidents occurring during loading or unloading." The International Vessel Operators Hazardous Materials Association, Inc. (VOHMA) expands the concept further by questioning " * * who will actually be required to report an incident that occurs during the course of activities that might not be considered

to be 'in transportation' and in fact, [we] wonder if the responsibility might then fall back on the last carrier."

On October 30, 2003, we published a final rule under Docket HM-223 (68 FR 61906). Among other issues, the final rule clarifies the applicability of the HMR to specific functions and activities, including loading, unloading, and storage operations. Consistent with the Federal hazardous materials transportation law (49 U.S.C. 5101 *et seq.*), the final rule defines "transportation" to mean the movement of property and loading, unloading, or storage incidental to the movement. Transportation in commerce begins when a carrier takes physical possession of a hazardous material for the purpose of transporting it and continues until delivery of the package to its consignee or destination as evidenced by the shipping documentation under which the hazardous material is moving. The final rule defines "loading incidental to movement" to mean the loading by carrier personnel or in the presence of carrier personnel of packaged or containerized hazardous material onto a transport vehicle, aircraft, or vessel; for a bulk packaging, "loading incidental to movement" means the filling of the packaging with a hazardous material by carrier personnel or in the presence of carrier personnel. The final rule defines "unloading incidental to movement" to mean the removal of a packaged or containerized hazardous material from a transport vehicle, aircraft, or vessel or the emptying of a hazardous material from a bulk packaging after the hazardous material has been delivered to the consignee and prior to the delivering carrier's departure from the consignee facility or premises. Under the final rule, "storage incidental to movement" means storage by any person of a transport vehicle, freight container, or package containing a hazardous material between the time that a carrier takes physical possession of the hazardous material until the package containing the hazardous material is physically delivered to the destination indicated on a shipping document.

This final rule requires reporting of incidents under §§ 171.15 of 171.16 that occur during the time that the material is in transportation. Consistent with the definitions adopted in HM-223, incidents that occur during loading operations conducted by carrier personnel or in the presence of carrier personnel must be reported, as must incidents that occur during unloading operations conducted prior to a carrier's departure from the consignee's premises. Hazardous materials incidents

that occur during loading operations conducted by a shipper prior to a carrier's arrival at its facility to pick up the hazardous material or during unloading operations conducted by consignee personnel after the hazardous material has been delivered and the carrier has departed the premises are not required to be reported under §§ 171.15 and 171.16. Note in this regard that the HM-223 final rule changes the applicability of the HMR to rail tank car unloading operations conducted by consignee personnel, which are currently subject to the provisions of § 174.67. Under HM-223, such rail tank car unloading operations are not transportation functions and, thus, are not subject to incident reporting requirements.

Other commenters opposed the requirement in total. In addition to Docket HM-223 concerns, the Fertilizer Institute (TFI) and The National Propane Gas Association (NPGA) “* * * contend that this change will increase the burden on industry.” Additionally, they claim the “* * * change will decrease the efficiency of RSPA's data collection” because it is possible that more than one person will report the same incident. The Petroleum Marketers Association of America (PMMA) sees an increase in burden for industry and RSPA by “* * * requiring procedural changes, additional training, and time” for industry and the confusion caused by duplicative reporting will “* * * decrease the efficiency of RSPA's data collection efforts and will not benefit its risk assessment.”

RSPA already receives duplicate reports and currently has a system for identifying duplicative reporting, thus the impact to RSPA should be minimal. In our Regulatory Evaluation, available in the HM-229 Docket (RSPA-99-5013-87), we discuss the additional cost to industry by adopting this proposal. We anticipate a minimal increase in the number of reports concerning incidents that occur during loading and unloading because these activities are already reported by carriers. Given the volume of handlings, however, we conservatively estimate a 2% increase in the number of reports concerning incidents that occur during loading and unloading.

RSPA also expects an increase in the number of reported incidents occurring in facilities where hazardous materials are stored incidental to transportation. An RSPA study conducted in 1998 estimates that many of the 800,000 daily shipments of hazardous materials involve consolidations, intermodal or intramodal transfers and in-transit

storage, resulting in 1.2 million daily hazardous materials movements. We estimate that extending reporting requirements to in-transit storage facilities will increase the overall total number of reports by 10%.

The intent of this rule change is to collect spill information on incidents that occur while the hazardous material is in transportation. Since RSPA has jurisdiction over hazardous materials in transportation, excluding reporting on incidents that occur during in-transit storage creates an incomplete data set of hazardous materials incidents. In the past, RSPA has discovered such incidents only from sources such as press reports of the most serious incidents. The information will provide a more complete picture of incidents occurring throughout the transportation system.

In this final rule, we are requiring each person in physical control of a hazardous material while it is in transportation in commerce to report any incident that occurs while the material is in that person's possession. For example, an in-transit storage facility owner would have to report any event that meets the provisions of §§ 171.15 or 171.16 and that occurs during the time that a hazardous material is stored in transportation. Consistent with the definitions adopted in the HM-223 final rule, storage incidental to movement is storage by any person of a transport vehicle, freight container, or package containing a hazardous material between the time that a carrier takes physical possession of the hazardous material until the package containing the hazardous material is physically delivered to the destination indicated on a shipping document. Reports of incidents or releases that occur during incidental storage will provide more accurate and complete information regarding hazardous materials incidents.

In addition, we are revising § 171.21 to require the person responsible for reporting the incident, rather than the “carrier,” to make available all records and information pertaining to the incident.

E. Exceptions to Incident Reporting

As proposed in the NPRM, an incident meeting all of the following criteria would not be required to be reported:

- (1) The shipment has not been offered for transportation or transported by air;
- (2) None of the criteria in § 171.15(a) apply;
- (3) The material is not a hazardous waste;

(4) The material is properly classed as—

- (i) ORM-D; or
- (ii) A Packing Group III material in Class or Division 3, 4, 5, 6.1, 8, or 9;
- (5) Each package has a capacity of less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids;
- (6) The total aggregate release is less than 20 liters (5.2 gallons) for liquids or less than 30 kgs (66 pounds) for solids; and
- (7) The material does not meet the definition of an undeclared hazardous material in § 171.8.

In the NPRM, we proposed to except small spills of low hazard materials from the reporting requirements. We wanted to require that an aggregate spill of 20 liters (5.2 gallons) or over for liquids or 30 kg (66 pounds) or over for solids of otherwise excepted hazardous materials be reported. For example, if twelve 5-gallon containers of a flammable liquid hazardous material in PG III are spilled, no incident report would be required unless the aggregate amount released from the twelve containers of the hazardous material is at least 5.2 gallons or one of the conditions in § 171.15(a) is met. Based on reports received over the past five years, we expect that the proposed exceptions would result in a sizeable net reduction of the total number of incident reports filed each year.

Most commenters agreed with the proposed new exceptions and suggested that we include additional reporting exceptions. The Reusable Industrial Packaging Association (RIPA) suggested that non-bulk packagings and IBCs containing residues should not be reported if a spill of the residue occurs. Safety-Kleen requested that hazardous wastes be included in the reporting exceptions. RSPA does not agree with either commenter. Since this information is used to determine the effectiveness of packagings, excluding packagings larger than what was proposed, even if they only contain a residue of a hazardous material, leaves out incidents we wish to include in our data set. In addition, hazardous wastes are generally not included in most exceptions, even if the regulations for materials only meeting the definition of a hazardous waste and no other hazard class are relatively minimal.

Some commenters were against expanding the reporting exceptions or noted that we risk limiting the data we collect concerning spills. Chevron/Phillips warns “* * * the inclusion of many of the exceptions noted in HM229 [sic] may further reduce data that can be used to further risk management efforts.” The International Brotherhood

of Teamsters “* * * fears that RSPA will be relinquishing its authority to collect information about hazardous materials releases that can, and often do, lead to workers being exposed to hazardous materials.”

These expanded exceptions, as noted by several commenters, actually reduce some of the exceptions for paint and paint-related materials, and for limited quantities in Packing Group II. The Glidden Company calculates “* * * the significant increase in reporting will require * * * an additional 175 to 180 reports per year.” BASF states “* * * this proposed change will significantly increase the burden on the paint manufacturing industry * * *” and DuPont adds that the change “* * * would escalate the cost with no corresponding increase in safety.” Indeed, the exceptions presented in this final rule eliminate exceptions based on specific shipping names for paint and batteries. Instead, the exceptions in this final rule are based on the hazards the materials pose and quantities of those materials.

The original exceptions to spill reporting were implemented under Docket HM-36A (45 FR 73682) in 1980, before Packing Groups for materials were developed in Docket HM-181 (55 FR 57402 and 56 FR 66124). When Packing Groups were incorporated into the regulations, we did not revise § 171.16 to update the reporting exceptions in light of the Packing Group changes. In 1996, under a broad regulatory review, exceptions for limited quantities of Packing Group II and III materials were added under Docket HM-222B (61 FR 27166), but we did not conduct a thorough review of incident reporting, and the basis for reporting exceptions.

In reviewing the reporting requirements and the exceptions to reporting, we have determined that the data needs for releases of small amounts of low-hazard materials is low. We now have ample data from incidents over the past 20 years involving small releases of Packing Group III hazardous materials in small quantities to warrant a reporting exception. However, we have determined that incidents involving Packing Group II materials warrant reporting, even in these smaller quantities. These materials pose a greater hazard than Packing Group III materials, so packaging failures and other incidents will continue to be required to be reported in order to monitor and improve regulations. Thus, we have adopted the proposed exceptions published in the NPRM.

In addition, we are clarifying that the incident report requirements do not

apply to minimal amounts of hazardous materials escaping: (1) Due to disconnecting a loading or unloading line or from the operation of venting devices (for which venting is authorized); or (2) from the manual operation of seals in equipment such as pumps, compressors, and valves during the normal course of transportation if the release does not trigger any of the provisions for a telephonic notification described in § 171.15 of this subpart and does not result in property damage.

F. Criteria for Telephonic Notification

Under current § 171.15 requirements, one of the criteria that triggers the requirement for immediate notification is property damage that exceeds \$50,000. RSPA proposed removing this requirement. There were not many comments on this point. The CHP supported the proposal because “quite often the true total costs associated with an incident will not be determined for a substantial period of time following an incident.” We agree and are removing the monetary criterion.

We proposed to clarify the requirements for “immediate notification” by specifying that telephonic notification must be made as soon as practicable following the occurrence of an incident and in all instances within 12 hours after an event requiring notification. This revision also responds to NTSB recommendation H-99-58 to provide a specific time period to report an incident by telephone. NTSB recommended that a 2-hour time frame was preferable. Commenters note the difficulties in complying with a 2-hour response time. The Conference on Safe Transportation of Hazardous Articles, Inc. notes that “* * * immediate reporting requirements should focus on obtaining response services that are required to gain control of an incident.”

RSPA understands contacting emergency response entities may be of primary concern immediately following an incident; however, notification of federal authorities through the NRC is also essential. The NTSB comments that railroads, under 49 CFR 840.3, are required to provide telephonic notification to NRC within 2 hours in the event of an accident resulting in a fatality, release of hazardous materials, or evacuation of the public, and within 4 hours after an accident resulting in damages exceeding certain limits. RSPA understands the circumstances involving remote highway incidents may be more difficult to address in the constrained time frame. We do not want to detract from the immediate

emergency response efforts focused on amelioration of a spill, therefore we have clarified the requirements of “immediate” telephonic notification to be as soon as practical but no later than 12 hours after the occurrence of any incident.

G. Updates to Reports

In the NPRM, we proposed to require updates to the incident report form within one year under the following conditions:

- (1) A death results from injury caused by a hazardous material;
- (2) There was a misidentification of the hazardous material or package information on the incident report;
- (3) Damage, loss or related cost that was not known when the initial report was filed becomes known; or
- (4) Damage, loss, or related cost changes by \$25,000 or more.

RSPA received several comments on updating reports. UPS commented that the requirement would be a “* * * substantial burden for any carrier such as UPS * * *” because it would have to monitor thousands of incidents per year to determine if any developments trigger an update. In addition, it noted that the requirement would “* * * require a submitter to constantly update an incident report for one-year [sic] following its submission.” Farmland Industries, Inc. mentions that if RSPA removes “* * * cost as a requirement for telephonic reporting, consideration should be given to removing updated costs from an incident.”

DuPont does not support the proposal to update the report, even though the actual number of updates would be small. It does not believe “* * * that a majority of the hazardous materials incidents reported would require updating because the quantities released are minimal.” DuPont thinks the number of reports that would require updating are so minimal and “* * * question if the small percentage that would qualify warrant a regulatory requirement for updating the reports.”

Other entities supported an updating requirement, with caveats. The Norfolk Southern Railway Company does not oppose the proposal, but feels the requirement to update based on a change of \$25,000 in the costs of the incident would “* * * serve no real purpose” and would be burdensome to industry. Ashland, Inc. suggests that the costs requirement for updating the report be a \$250,000 change and only if the cost changes by more than 10%. The F5800.1 Task Force also suggested including a 10% threshold.

We believe that substantive changes to the outcome of an incident should be

updated to ensure the accuracy and quality of the data we collect. Updated information provides a more meaningful approach to causal, trend, or risk assessment analysis. We are adopting the proposal to require updated incident reports for up to one year after the date of an incident for the following: (1) Death resulting from injuries caused by a hazardous material; (2) corrections to the identification of the hazardous material or package information; and (3) certain updated damage costs as additional information becomes available. Cost information would be updated when: (1) costs not known at the time the report was filed became known; or (2) original damage/cost estimates were revised by more than \$25,000 or 10% of the original estimate, whichever is greater. In some cases, certain costs (such as decontamination and cleanup) may not be known within 30 days of the incident's occurrence, and would not be included in the initial incident report. In other cases, some costs (such as property damage) may be significantly higher than the original estimate. We estimate that about 800 incidents reported each year would require an update.

CHP mentions that updating the report should be streamlined for more accurate reporting. It is possible that in the future, with the advent of electronic data management systems, performing an update to the form may not require the re-submission of the DOT Form F 5800.1 form. Until that time, we will retain the current requirements for submitting updates.

Under § 171.21, persons required to report an incident are required to cooperate with any further investigation of that incident. In particular, incidents that we categorize as significant may require further investigation, or reports that are incomplete may require a follow-up.

H. Reporting When No Hazardous Material Is Released During an Incident

In the NPRM, we proposed to require certain incidents involving bulk packagings that do not result in release of a hazardous material to be reported. We stated that such information could provide a broader base for risk management in more critical transportation situations and that additional information could be used to gauge the performance and integrity of certain packagings. This proposal was in response to NTSB recommendation H-92-6, which requested that DOT implement a program to collect information necessary to identify patterns of cargo tank equipment failure, including the reporting of all accidents

involving a DOT specification cargo tank. This request stems from the February 4, 1992 special investigation report on cargo tank rollover protection (PB92-917002). NTSB examined seven highway accidents in which cargo tanks overturned and hazardous materials were released through damaged closures or fittings on top of the tanks; none of the cargo tank shells had been breached. Among its conclusions were the following:

* There is inadequate information about the forces that can be encountered in a rollover accident and the extent to which rollover protection devices for cargo tanks can reasonably be designed to withstand these forces because neither the RSPA, the FHWA [Federal Highway Administration, now Federal Motor Carrier Safety Administration, or FMCSA], nor the industry has provided engineering modeling or other analysis to determine the magnitude of forces acting upon a cargo tank under different accident conditions, and

* The FHWA [now FMCSA] and the RSPA accident data bases are not adequate to identify important trends of potential problems related to the design and construction of bulk liquid cargo tanks.

Subsequently, in its report, NTSB recommends that RSPA "implement, in cooperation with the FMCSA, a program to collect information necessary to identify patterns of cargo tank equipment failures, including the reporting of all accidents involving a Department of Transportation specification cargo tank." In an effort to minimize duplicative reporting of much of the same information, discussions with FMCSA and RSPA resulted in agreement that the F 5800.1 form would be suitable and appropriate to collect this type of information.

Most commenters oppose data collection for an incident that does not result in a release of hazardous materials. Commenters cite a number of reasons, the main ones being an increase in burden, an ambiguity in when a report was required, and the limited usefulness of the data collected under this proposal. The commenters made it clear that specific guidelines would be required to avoid what the National Tank Truck Carriers (NTTC) describe is a possible "compliance trap" due to varying definitions of "damage" from company to company and inspector to inspector. This point was raised numerous times. Utility Solid Waste Activities Group comments " * * * that a specific definition of 'damage' is needed to evaluate the impact of this proposal." PMMA adds " * * * the language of the proposed rule is vague."

TFI and NPGA argue not only that the requirement " * * * is vague and fails to give regulated parties the requisite certainty to enable compliance" but also that the proposal " * * * does not accomplish the desired goals of NTSB Recommendation H-92-6." The last comment seems to contradict NTSB's opinion, as NTSB was one of only two commenters agreeing with the proposal. The other was the Nuclear Energy Institute.

RSPA believes there is a need to collect this information as recommended by NTSB. The potential burden on operators is offset by the safety information that will be provided. For example, such reporting can provide information concerning packaging integrity, particularly the circumstances under which a packaging is able to withstand a collision or accident without releasing its contents. The incident data base is expanded to include "near miss" or "close call" incidents which, because of the quantity and type of hazardous materials present, have the potential for significant consequences.

Additionally, collecting this information allows for examination of the circumstances (packaging, procedures, training) to determine if there may be ways to avoid the actual set of incidents that pose the greatest risk. This information also provides an indication of a packaging's ability to survive forces encountered in the transportation environment. Finally, this data would provide "success stories" and illustrations of a packaging's robustness. The converse is also true. If most times that a packaging is in an accident and its damage results in a hazardous materials release, it may point to the inadequacy of the packaging requirements. Accurate data will prevent safety gaps as well as aid in determining how to allocate limited funds of the regulated community to provide the greatest safety benefits.

However, RSPA also agrees with some of the concerns of the commenters. For example, the ONEDO-Nalco Company argues that smaller bulk packagings, such as IBCs, are handled, loaded, and unloaded more frequently than larger containers so that minor damage " * * * is relatively common." TFI and NPGA noted that the NTSB recommendation focused only on cargo tanks, while RSPA's proposal expanded the concept to other bulk packagings. Therefore, in this final rule, RSPA is adopting the proposal only in regards to reporting damage to specification cargo tanks over a 1000-gallon capacity. In addition, we clarify what is reportable damage. Structural damage is damage considered

serious enough to bring into question the integrity of the cargo tank. A cargo tank that requires subsequent replacement or repair due to the damage sustained in the accident for other than cosmetic reasons falls into this category.	Lading retention system consists of the basic containment (e.g., tank) and any associated appurtenances or equipment (e.g., piping and valves) that, if seriously damaged, could result in the release of the contents of the cargo tank. Examples	of when an incident report is required and when one is not required follow. If there is doubt, the incident should be reported.
Incident report required	No incident report required	
Damage to an outlet valve that affects seating and requires replacement.	Handle broken or knocked off valve—but otherwise undamaged.	
Serious damage that, if worse, could have resulted in the loss of the contents of the cargo tank. Damage to outlet lines that contain hazardous materials during transportation are in this category.	Serious damage that, even if worse, would not have resulted in the loss of the contents of the cargo tank. Damage to outlet lines that are normally not charged during transportation are in this category.	
Cargo tank damage that requires professional inspection or recertification to ensure it is capable of meeting requirements..	Minor damage that obviously will not affect continuation of the cargo tank in service.	
Cargo tank damage that requires immediate or subsequent repair because of questions about cargo tank integrity.	Cargo tank damage that requires repair for cosmetic reasons only.	

RSPA may address this issue in a future rulemaking if it determines that data needs require additional information for other bulk packagings. For instance, it is our understanding that AAR maintains extensive accident data that could be correlated to damage and releases. Access to this data or reports based on the data may negate future need for its collection via DOT F 5800.1. We will explore options in this area with the rail industry. In addition, information on damage to certified cargo tanks of 1000 gallons or more capacity that do not result in a release will be analyzed over the next several years to determine its usefulness in practice and if further rulemaking is needed.

I. Undeclared Shipments of Hazardous Materials That Do Not Result in a Release

Reducing undeclared shipments of hazardous materials is a high priority of the Department. Undeclared shipments are apt to be in substandard packages and undermine hazard communication that is vital in an emergency. Undeclared shipments, particularly when offered for transportation or transported by air, pose a significant safety problem because of the potential for improper packing, handling, and failure to communicate the hazard. Emergency responders and transportation workers are unaware of the presence of undeclared hazardous materials. Certain hazardous materials that are forbidden for air transportation may make their way onto a passenger-carrying or cargo-only aircraft, and may inadvertently be handled in an unsafe manner by transportation workers. In a hazardous material release from an undeclared shipment, the crew does not know what the hazardous material is, or what response measures to take.

Commenters agreed that undeclared shipments posed a great danger,

however, many commenters did not support this proposal. While VOHMA agrees that undeclared shipments are “* * * one of our most significant problems,” it notes that carriers “* * * lack the resources to remove such seals, unpack the container to inspect the cargo within * * *.” VOHMA also notes in its comments that “[t]he carrier should not be held responsible by the regulations for declaring dangerous cargoes * * *.” Others supported the concern that this could put the carriers in a difficult position of being responsible to ensure that all shipments were prepared properly. Some commenters state that a reporting requirement specific to undeclared hazardous materials would expose their companies to undue liability and possible enforcement actions for accepting an undeclared shipment. Other commenters state that this requirement would place carriers in an enforcement role.

A number of commenters, including the Air Line Pilots Association, International (ALPA), CHP, and the NTSB support reporting undeclared shipments when discovered in transportation. ALPA states this problem is “* * * one of, if not the greatest potential risks to passengers, aircraft, and crew.”

We believe that information on undeclared shipments should be collected and that the incident report form is the most accessible method for collecting such data. Requiring reports of undeclared hazardous materials discovered in transportation can help in several ways. For example, problem shippers can be identified, and outreach and enforcement can be used to reduce the chance of recurrence. In addition, reporting can also help define the extent of the problem, establish trends, and help gauge the effectiveness of efforts to reduce undeclared shipments. Such a

requirement is consistent with the current emphasis by the Department on this area. Accordingly, RSPA is adopting, as proposed, the requirement to submit an incident report when an undeclared shipment of hazardous materials is discovered. This requirement applies to parties who are likely to discover undeclared shipments and who will benefit greatly from a reduction of such shipments, which is a goal of this rulemaking.

RSPA is sensitive to problems noted by commenters concerning the amount of information that is considered sufficient to give a person (other than the original offeror) actual or constructive knowledge of the presence of a hazardous material. In a separate proceeding (Docket No. RSPA-01-10380), RSPA is formulating additional guidance on the factors that enforcement agencies consider relevant to a determination whether a carrier knew or should have known that an “undeclared” shipment contained a hazardous material, based on comments submitted in writing and at a June 19, 2002 public meeting.

This rule does not change the “knowingly” standard for civil penalty liability in 49 U.S.C. 5123, nor does it create any increased duty to examine all packages for the presence of hazardous material or affect the responsibility of a carrier or other person to refuse to transport a package that it knows or should know contains a hazardous material. The requirement to report the discovery of an undeclared hazardous material is not intended to create a “compliance trap.” Enforcement action is focused on the person who initially offered the undeclared hazardous material for shipment, not the person who subsequently received a shipment that was not properly marked, labeled, placarded, and described on shipping papers. In addition, there is no basis for

enforcement action against a person who accepted or handled an undeclared hazardous material when it had no reason to know of the presence of the hazardous material.

J. Notifying Shippers of Incidents

We proposed to require the person responsible for completing an incident report to provide a copy of the report to the shipper whose packages were the subject of the report. This proposal responded to NTSB Recommendation R-89-52, that recommends requiring carriers reporting hazardous materials incidents under the provisions of § 171.16 to notify shippers whose hazardous materials shipments are involved. NTSB is concerned that shippers are not receiving information about packages that are prone to failure during transportation.

Some commenters who supported the proposal cited the importance this information could provide for the shipper in identifying problem packagings or methods. The Glidden Company indicated notification would provide it “* * * with valuable information into possible reasons how and why packages are damaged in transport.” This reasoning is echoed by BASF who stated that the notification would “* * * provide valuable information into possible reasons for package failure or damage during transport,” and also by Utility Solid Waste Activities Group who expressed “* * * such notification could provide a strong safety incentive and would help prevent additional incidents where the offeror’s packaging is at fault.”

Many other commenters opposed the proposal for a number of different reasons. One commenter stated that the incident report may not be forwarded to the appropriate company or person within that company, essentially eliminating the opportunity for corrective action. The Air Transport Association (ATA) stated that if there is a shipper’s name and address on the shipping paper, it may not be the location from which the material was originally shipped. In addition, as VOHMA noted, “Often, the carrier accepts the freight container from [a] forwarder listing that party as the shipper of record or consignor” thus, making the original shipper impossible to find by the reporter of the incident. NTTCC observed that carriers may not know the identity of the true shipper of a given product due to the intervention of forwarders, brokers, and third party logistics providers.

Other commenters stated that the reports were an increased burden for the reporter and many reports may be of

little or no interest to shippers. Safety-Kleen asserted that “* * * the majority of hazardous waste generators do not want to be notified when small amounts of material have leaked * * * this [proposal] places an unfair burden on the hazardous waste carriers.”

We believe that some type of shipper notification is incorporated into most standard business practices to account for shipment tracking, product loss, or damage reporting by carriers and consignees, and may be replicated by the proposed notification. The comments of several shippers supported this view. For example, Norfolk Southern Railway Company stated it “* * * already voluntarily provides copies to its shippers * * *” and that “* * * reports are sent to the shippers at the same time they are submitted to RSPA.” Chevron/Phillips noted that companies “* * * already support this activity and have detailed reporting requirements in contracts and service agreements.”

We agree with NTSB and others that there are benefits to shippers being made aware of incidents involving their packages; however, for the reasons discussed above we believe it is not appropriate to impose the burden of notification on incident reporters. We believe that RSPA, along with FAA, FMCSA, Federal Railroad Administration (FRA) and the United States Coast Guard (USCG) can do a better job of ensuring appropriate corrective action by selective notification of shippers and others, as warranted by analysis of incidents, and by working towards making incident report information generally available on RSPA’s website. Notification from DOT would carry more weight and prompt a more immediate response from shippers. Also, enhanced analysis of incidents, as enabled by this final rule, will allow us to better identify problems involving packagings, including those problems that may occur at different locations of a company, or among different companies.

How incident data can be analyzed was demonstrated in 2001, when the Intermodal Hazardous Materials Program (IHMP) office reviewed incident data for companies whose shipments were involved in a high proportion of incidents relative to other shippers. Incident data from January 1998 to October 2000 served as a basis of the review. The analysis of this data revealed that a large number of incidents reported by carriers during this 34-month period involved shipments from a small number (less than 40) companies. The IHMP Director

sent letters to these companies, informing them of their incidents and detailing the results of the IHMP incident analysis. Each letter included information on the numbers of yearly incidents, reporting carriers, types of commodities and packages involved, locations where the shipments originated, reported incident casual factors, and reported monetary damages.

The IHMP letters generated significant positive feedback from shippers and heightened their awareness to potential internal problem areas. Several companies expressed appreciation to DOT for notifying them about these incidents. Some shippers stated that they were unaware of these incidents, others that they had received only partial notifications from their carriers, and others were surprised to discover that summary incident data was readily available on RSPA’s Office of Hazardous Materials Safety website. Where appropriate, shippers took action to reduce the likelihood of reoccurrence of incidents.

RSPA believes that this type of review and contact by DOT better serves the affected parties. We anticipate conducting ongoing analyses to detect problems, and are working closely with the modal administrations to improve analysis and information sharing capabilities.

The modal administrations will have access to incident data and information and may conduct similar reviews if they elect to do so. RSPA has provided FAA’s Office of Internal Security and Hazardous Materials an electronic summary of all hazardous materials incidents reported since 1993. As FAA special agents conduct hazmat shipper inspections and shipper outreach visits, they will individually review a summary of relevant incident histories with each shipper. FAA and RSPA will develop a system to electronically share information concerning incidents, discrepancies, inspections, enforcement, exemptions, and registrations. This will assist in the identification and analysis of problems and trends related to transportation of hazardous materials and will be used to notify shippers, or others, when problems become evident. Until this system is developed and implemented, FAA will provide copies of incidents related to the air mode to the relevant shippers.

As previously indicated, summaries of incident information are currently available to all shippers and carriers at our website. Increasing awareness of this option and increasing ease of data access are additional avenues we will explore to ensure shippers are aware of

incidents involving materials they have offered for transportation.

Miscellaneous Issues

Publishing Reports on the Internet

RSPA received several comments concerning the availability of completed incident report forms through the internet via RSPA's website. Several commenters voiced concern about this issue, mainly citing privacy concerns. Currently, any completed incident report is considered a public document and available through RSPA. Making these public documents available through the internet would meet initiatives in the government to facilitate information collection through electronic means. However, any information that is currently withheld under existing law would remain withheld if incident reports are made available through the internet. RSPA will be reviewing this issue in the future; however, no additional rulemaking action is necessary to make these documents electronically available.

New Definitions

We are adopting a new definition in § 171.8 for "unintentional release". We are revising the definition for "undeclared hazardous material shipment" for further clarification.

Hazardous Waste Manifest

We are removing the requirement in § 171.16 to attach a hazardous waste manifest to the incident report form when a release involves a hazardous waste. The revised incident report form requires the hazardous waste manifest number to be reported and provides a field for entering the number. Through this reference, we will be able to access the hazardous waste manifest, if needed, through the appropriate officials. In addition, we are removing the requirements for: (1) An estimate of the quantity of waste removed from the scene; (2) the name and address of the facility to which it was taken; and (3) the manner of disposition of any removed waste. This information is already available as a result of EPA's hazardous waste manifest regulations; thus, continued reporting of this information to RSPA is unnecessary. Removing these requirements eliminates reporting information that is obtainable through other sources. Therefore, RSPA has adopted these amendments as proposed.

Record Retention Location

This final rule requires that an incident report must be retained for two years at either the reporter's principal

place of business or another record retention site provided the report is available at the reporter's principal place of business within 24 hours of request. We are adopting this amendment as proposed, which removes the requirement to seek an approval to store the report at a place other than the reporter's principal place of business. Adopting this proposal will provide flexibility in maintaining records without the need for an approval from DOT. In addition, this allows electronic versions to be retained, even though the server the document is located on is outside the principal place of business.

Incidents at Registered Cargo Tank Facilities

In the NPRM, we asked a series of questions concerning fatalities that may occur at registered cargo tank repair facilities during cargo tank inspection and repair operations. Such fatalities generally result because hazardous materials residue in the cargo tank is not removed before work is done on the tank. We did not propose any changes specific to this issue in the NPRM, but asked for comments to assist us in determining whether we should propose to collect information concerning such accidents in a future rulemaking. Most of the commenters that addressed this issue, including NTTC and the International Brotherhood of Teamsters, supported collecting data on these accidents. One commenter, Farmland Industries, suggested that RSPA does not have the authority to require reporting of incidents that are not related to the actual transportation of a hazardous material.

On December 29, 1970, Congress enacted the Occupational Safety and Health Act of 1970 (OSH Act) for the purpose of assuring safe and healthy workplaces. Under the OSH Act, every employer engaged in a business affecting commerce has a general duty to furnish each of its employees a workplace free from recognized hazards causing, or likely to cause, death or serious physical harm. In addition, employers are required to comply with all safety and health standards issued under the OSH Act that are applicable to working conditions involved in their businesses. In accordance with OSHA standards, cargo tank repair facilities must report accidents to OSHA or to a state agency responsible for occupational safety and health, if appropriate. OSHA data for the period 1985–1997 indicate that there were 17 fatalities during the period resulting from repair work performed on cargo tanks. The OSHA incident reports

clearly conclude that the cause of these incidents was a failure to comply with existing OSHA and/or HMR requirements. Because OSHA already collects fairly detailed reports concerning accidents at cargo tank repair facilities, we do not believe that imposing an additional reporting requirement is necessary or appropriate.

State Notification

We were contacted by a state official who requested that we require incidents meeting the immediate notification criteria in § 171.15 to be reported to the State in which the incident occurred. We disagree. A State may require immediate, oral accident/incident reports for local emergency response purposes. Further, any State may request that NRC notify it of incidents occurring within the State.

IV. Summary and Conclusion

The following are the major changes to the current HMR reporting requirements and to DOT Form F 5800.1 that we are making in this final rule:

(1) Reporting of incidents involving a specification cargo tank with a capacity of 1,000 gallons or greater that receives structural damage that may adversely affect the cargo tanks' ability to retain lading even when no hazardous material is released.

(2) Reporting discoveries of undeclared hazardous material shipments.

(3) Updating incident reports when significant new information becomes available.

(4) Requiring the person in physical control of a hazardous material during transportation to report an incident.

(5) Excepting small releases of specified materials that pose the least hazard from reporting requirements.

(6) Restructuring the form to utilize failure codes to obtain information on packaging failures.

V. Regulatory Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This final rule is not a significant regulatory action under Section 3(f) of Executive Order 12866 and, therefore, was not reviewed by the Office of Management and Budget. This rule is not a significant regulatory action under the Regulatory Policies and Procedures of the Department of Transportation (44 FR 11034). A regulatory evaluation that considers various regulatory alternatives is available for review in the public docket.

The costs of these regulations identified in the regulatory evaluation

are attributed to: (1) Expansion of reporting requirements to persons other than a carrier in possession of a hazardous material during transportation; (2) implementation of a requirement to update incident reports under certain conditions; and (3) expansion of reporting requirements to incidents involving cargo tanks where no hazardous material is released. Reductions in the total costs associated with incident reporting requirements are attributed to implementation of an electronic filing option and expansion of current exceptions to the reporting requirements. The expected reductions in total costs generally offset the anticipated cost increases; thus, the requirements of the final rule should result in only minimal increased costs of compliance.

While it is difficult to estimate the net benefit resulting from this rulemaking, we believe that the revisions to the incident reporting requirements will greatly enhance our ability to develop strategies to reduce the risks associated with the transportation of hazardous materials. The non-quantifiable benefit of increased safety through reducing the incidence of undeclared shipments is expected to be far greater than the negligible cost increase to the regulated community.

B. Executive Order 13132

This final rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 ("Federalism"). This final rule preempts state, local, and Indian tribe requirements, but does not propose any regulation with substantial direct effects on the states, the relationship between the national government and the states, or the distribution of power and responsibilities among the various levels of government. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.

The Federal hazardous materials transportation law, 49 U.S.C. 5101–5127, contains an express preemption provision (49 U.S.C. 5125(b)) that preempts state, local, and Indian tribe requirements on certain covered subjects. Covered subjects are:

- (1) The designation, description, and classification of hazardous materials;
- (2) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;
- (3) The preparation, execution, and use of shipping documents related to hazardous materials and requirements related to the number, contents, and placement of those documents;
- (4) The written notification, recording, and reporting of the

unintentional release in transportation of hazardous material; or

(5) The design, manufacture, fabrication, marking, maintenance, recondition, repair, or testing of a package or container represented, marked, certified, or sold as qualified for use in transporting hazardous material.

This final rule addresses covered subject item number 4 above and preempts state, local, and Indian tribe requirements not meeting the "substantively the same" standard. This final rule is necessary to increase the usefulness of data collected for risk analysis and management by government and industry and, where possible, provide relief from regulatory requirements.

Federal hazardous materials transportation law provides at § 5125(b)(2) that, if we issue a regulation concerning any of the covered subjects, we must determine and publish in the **Federal Register** the effective date of Federal preemption. The preemption date of this rule is January 1, 2004.

C. Executive Order 13175

This final rule has been analyzed in accordance with the principles and criteria contained in Executive order 13175 ("Consultation and Coordination with Indian Tribal Governments"). This final rule does not have tribal implications, does not impose substantial direct compliance costs, and is not required by statute. Consequently, the funding and consultation requirements of Executive Order 13175 do not apply.

D. Executive Order 13272

This final rule has been developed in accordance with Executive Order 13272 ("Proper Consideration of Small Entities in Agency Rulemaking") and DOT's procedures and policies to promote compliance with the Regulatory Flexibility Act to ensure that potential impacts of draft rules on small entities are properly considered.

E. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires an agency to review regulations to assess their impact on small entities unless the agency determines a rule is not expected to have a significant impact on a substantial number of small entities. Based on the assessment in the final regulatory evaluation, I hereby certify that, while the final rule applies to a substantial number of small entities, there will not be a significant economic impact on those small entities. A

detailed Regulatory Evaluation is available in the Docket.

Potentially affected small entities. The revisions in this final rule will apply to persons in physical control of a hazardous material during transportation in commerce. Such persons primarily include motor carriers, air carriers, vessel operators, rail carriers, temporary storage facilities, and intermodal transfer facilities. Unless alternative definitions have been established by the agency in consultation with the Small Business Administration, the definition of "small business" has the same meaning as under the Small Business Act (15 CFR Parts 631–657c). Therefore, since no such special definition has been established, RSPA employs the thresholds (published in 13 CFR 121.201) of 1,500 employees for air carriers (NAICS Subgroup 481), 500 employees for rail carriers (NAICS Subgroup 482), 500 employees for vessel operators (NAICS Subgroup 483), \$18.5 million in revenues for motor carriers (NAICS Subgroup 484), and \$18.5 million in revenues for warehousing and storage companies (NAICS Subgroup 493). Of the approximately 116,000 entities to which the proposals in this final rule would apply (104,000 of which are motor carriers), we estimate that about 90 percent are small entities. Based on historical data, we estimate approximately 17,810 annual responses.

Potential cost impacts. The revision to expand reporting requirements to any person in physical possession of a hazardous material while it is being transported in commerce will primarily affect storage and in-transit storage facilities. We estimate there are approximately 6,500 warehousing and storage entities subject to this requirement which will incur the total increased compliance costs of about \$84,000. We estimate that expanding the reporting requirements will increase the number of incident reports submitted each year by about 11.45 percent of the 17,810 total annual responses, or approximately 2,180 reports. Taken on a one-to-one report to entity ratio, we estimate a cost of approximately \$39/year/company.

The revision to require updating of incident reports under certain conditions applies to all persons subject to the HMR incident reporting regulations. We estimate that this final rule will result in about 800 additional updates to reports each year for a total annual cost of \$4,800. Taken on a one-to-one report to entity ratio, we estimate a cost of \$6.00/year/company.

The revision to require reporting of certain incidents involving cargo tanks that do not result in a release of hazardous materials will apply to about 104,000 motor carriers. We estimate that this revision will result in about an increase of about 16 percent of the 17,810 total annual responses, or approximately 2,975 additional incident reports each year. On a one-to-one report/entity basis, motor carriers will incur increased compliance costs of approximately \$114,240 or about \$38/year/company.

The revision to require reporting of undeclared shipments of hazardous materials discovered during transportation will apply to all persons subject to the HMR incident reporting regulations. We estimate that this final rule will result in an increase of approximately 8 percent of the 17,810 incidents reports submitted each year, or approximately 1,500 reports. Taken on a one-to-one report/entity ratio, we estimate the corresponding increased compliance costs of \$57,600 to be approximately \$38/year/company.

Potential cost savings. The revision in the final rule that will permit electronic filing of incident reports and expand the current exceptions from incident reporting requirements will offset the increased compliance costs described above. The potential savings attributable to the revisions to the final rule total about \$276,000. The additional potential costs attributable to the revisions to the final rule total about \$275,712, for a net savings of approximately \$300.

Consideration of alternate proposals for small businesses. The Regulatory Flexibility Act suggests that it may be possible to establish exceptions and differing compliance standards for small businesses and still meet the objectives of the applicable regulatory statutes. However, given the large numbers of small businesses, as defined for purposes of the Regulatory Flexibility Act, in hazardous materials transportation, we do not believe that it would be possible to establish such differing standards and still accomplish the objectives of federal hazardous materials transportation law. The information provided in hazardous materials incident reports serves as the basis for critical RSPA safety functions, including identification of safety problems, regulations development, training programs, outreach efforts, and enforcement strategies. The risks posed by a hazardous material offered for transportation or transported by a small entity are the same as the risks posed by the same hazardous material when offered for transportation or transported

by a large entity. Thus, it is entirely reasonable and appropriate for the HMR incident reporting requirements to apply equally to any person who offers for transportation or transports hazardous materials in commerce.

Conclusion. Based on the above analysis, we certify that while the revisions in this final rule will affect a significant number of small businesses or other small entities, there will be no substantial economic impact on these small businesses.

F. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid Office of Management and Budget (OMB) control number. Section 1320.8(d), Title 5, Code of Federal Regulations requires that RSPA provide interested members of the public and affected agencies an opportunity to comment on information collection and recordkeeping requests. RSPA has a current information collection approval under OMB No. 2137-0039, Hazardous Materials Incident Reports.

The average number of incident reports RSPA received for the years 1997–2000 is about 17,300, and for the years 1995–2000 is about 16,000. Our regulatory evaluation for this final rule uses a base number of 17,000 annual incident reports.

As a result of this final rule, there was a modest increase in annual burden and costs. OMB approved this information collection as proposed under this rule on August 30, 2001. The following figures are based on receiving 17,000 incident reports per year and only include estimates for written incident reports:

Total Annual Respondents: 1,781.

Total Annual Responses: 17,810.

Total Annual Burden Hours: 23,746.

Total Annual Burden Cost: \$569,904.

Requests for a copy of the information collection should be directed to Deborah Boothe or T. Glenn Foster, Office of Hazardous Materials Standards (DHM-10), Research and Special Programs Administration, Room 8102, 400 Seventh Street, SW, Washington, DC 20590-0001, Telephone (202) 366-8553.

G. Regulation Identifier Number (RIN)

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN number contained in the heading of this document can be used

to cross-reference this action with the Unified Agenda.

H. Unfunded Mandates Reform Act

This final rule imposes no mandates and thus does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It would not result in costs of \$100 million or more to either state, local, or tribal governments, in the aggregate, or to the private sector.

I. Environmental Assessment

The revisions in this final rule will increase the quality of data collected on hazardous materials spills, increasing our ability to evaluate potential packaging problems that result in releases to the environment. Thus, the revisions should produce a small net benefit to the environment by improving the data sources used in regulatory development. Therefore, we find that there are no significant environmental impacts associated with this final rule.

List of Subjects

49 CFR Part 171

Exports, Hazardous materials transportation, Hazardous waste, Imports, Reporting and record keeping requirements.

■ In consideration of the foregoing, we are amending 49 CFR part 171 as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

■ 1. The authority citation for part 171 continues to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

■ 2. In § 171.8 the following definitions are added in alphabetical order to read as follows:

§171.8 Definitions and abbreviations.

* * * * *

Undeclared hazardous material means a hazardous material that is (1) subject to any of the hazard communication requirements in subparts C (Shipping Papers), D (Marking), E (Labeling), and F (Placarding) of Part 172 of this subchapter, or an alternative marking requirement in Part 173 of this subchapter (such as §§ 173.4(a)(10) and 173.6(c)), and (2) offered for transportation in commerce without any clear indication of the presence of the hazardous material in or on at least one of the following: an accompanying shipping paper, the outer package, the transport vehicle or freight container, or another written statement by the person

offering the hazardous material for transportation.

* * * * *

Unintentional release means the escape of a hazardous material from a package on an occasion not anticipated or planned. This includes releases resulting from collision, package failures, human error, criminal activity, negligence, improper packing, or unusual conditions such as the operation of pressure relief devices as a result of over-pressurization, overfill or fire exposure. It does not include releases, such as venting of packages, where allowed, and the operational discharge of contents from packages.

* * * * *

■ 3. Section 171.15 is revised to read as follows:

§ 171.15 Immediate notice of certain hazardous materials incidents.

(a) *General.* As soon as practical but no later than 12 hours after the occurrence of any incident described in paragraph (b) of this section, each person in physical possession of the hazardous material must provide notice by telephone to the National Response Center (NRC) on 800-424-8802 (toll free) or 202-267-2675 (toll call). Notice involving an infectious substance (etiologic agent) may be given to the Director, Centers for Disease Control and Prevention, U.S. Public Health Service, Atlanta, GA, 800-232-0124 (toll free), in place of notice to the NRC. Each notice must include the following information:

- (1) Name of reporter;
- (2) Name and address of person represented by reporter;
- (3) Phone number where reporter can be contacted;
- (4) Date, time, and location of incident;
- (5) The extent of injury, if any;
- (6) Class or division, proper shipping name, and quantity of hazardous materials involved, if such information is available; and
- (7) Type of incident and nature of hazardous material involvement and whether a continuing danger to life exists at the scene.

(b) *Reportable incident.* A telephone report is required whenever any of the following occurs during the course of transportation in commerce (including loading, unloading, and temporary storage):

- (1) As a direct result of a hazardous material—
 - (i) A person is killed;
 - (ii) A person receives an injury requiring admittance to a hospital;
 - (iii) The general public is evacuated for one hour or more;

(iv) A major transportation artery or facility is closed or shut down for one hour or more; or

(v) The operational flight pattern or routine of an aircraft is altered;

(2) Fire, breakage, spillage, or suspected radioactive contamination occurs involving a radioactive material (see also § 176.48 of this subchapter);

(3) Fire, breakage, spillage, or suspected contamination occurs involving an infectious substance other than a diagnostic specimen or regulated medical waste;

(4) A release of a marine pollutant occurs in a quantity exceeding 450 L (119 gallons) for a liquid or 400 kg (882 pounds) for a solid; or

(5) A situation exists of such a nature (e.g., a continuing danger to life exists at the scene of the incident) that, in the judgment of the person in possession of the hazardous material, it should be reported to the NRC even though it does not meet the criteria of paragraph (b) (1), (2), (3) or (4) of this section.

(c) *Written report.* Each person making a report under this section must also make the report required by § 171.16 of this subpart.

Note to § 171.15: Under 40 CFR 302.6, EPA requires persons in charge of facilities (including transport vehicles, vessels, and aircraft) to report any release of a hazardous substance in a quantity equal to or greater than its reportable quantity, as soon as that person has knowledge of the release, to DOT's National Response Center at (toll free) 800-424-8802 or (toll) 202-267-2675.

■ 4. Section 171.16 is revised to read as follows:

§ 171.16 Detailed hazardous materials incident reports.

(a) *General.* Each person in physical possession of a hazardous material at the time that any of the following incidents occurs during transportation (including loading, unloading, and temporary storage) must submit a Hazardous Materials Incident Report on DOT Form F 5800.1 (01/2004) within 30 days of discovery of the incident:

- (1) Any of the circumstances set forth in § 171.15(b);
- (2) An unintentional release of a hazardous material or the discharge of any quantity of hazardous waste;
- (3) A specification cargo tank with a capacity of 1,000 gallons or greater containing any hazardous material suffers structural damage to the lading retention system or damage that requires repair to a system intended to protect the lading retention system, even if there is no release of hazardous material; or
- (4) An undeclared hazardous material is discovered.

(b) *Providing and retaining copies of the report.* Each person reporting under this section must—

(1) Submit a written Hazardous Materials Incident Report to the Information Systems Manager, DHM-63, Research and Special Programs Administration, Department of Transportation, Washington, DC 20590-0001. Submit an electronic Hazardous Material Incident Report to the Information System Manager, DHM-63, Research and Special Programs Administration, Department of Transportation, Washington, DC 20590-0001 at <http://hazmat.dot.gov>;

(2) For an incident involving transportation by aircraft, submit a written or electronic copy of the Hazardous Materials Incident Report to the FAA Security Field Office nearest the location of the incident; and

(3) Retain a written or electronic copy of the Hazardous Materials Incident Report for a period of two years at the reporting person's principal place of business. If the written or electronic Hazardous Materials Incident Report is maintained at other than the reporting person's principal place of business, the report must be made available at the reporting person's principal place of business within 24 hours of a request for the report by an authorized representative or special agent of the Department of Transportation.

(c) *Updating the incident report.* A Hazardous Materials Incident Report must be updated within one year of the date of occurrence of the incident whenever:

- (1) A death results from injury caused by a hazardous material;
- (2) There was a misidentification of the hazardous material or package information on a prior incident report;
- (3) Damage, loss or related cost that was not known when the initial incident report was filed becomes known; or
- (4) Damage, loss, or related cost changes by \$25,000 or more, or 10% of the prior total estimate, whichever is greater.

(d) *Exceptions.* Unless a telephone report is required under the provisions of § 171.15 of this part, the requirements of paragraphs (a), (b), and (c) of this section do not apply to the following incidents:

- (1) A release of a minimal amount of material from—
 - (i) A vent, for materials for which venting is authorized;
 - (ii) The routine operation of a seal, pump, compressor, or valve; or
 - (iii) Connection or disconnection of loading or unloading lines, provided

that the release does not result in property damage.

(2) An unintentional release of hazardous material when:

(i) The material is properly classed as—

(A) ORM-D; or

(B) a Packing Group III material in Class or Division 3, 4, 5, 6.1, 8, or 9;

(ii) Each package has a capacity of less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids;

(iii) The total aggregate release is less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids; and

(iv) The material is not—

(A) Offered for transportation or transported by aircraft,

(B) A hazardous waste, or

(C) An undeclared hazardous material.

(3) An undeclared hazardous material discovered in an air passenger's checked

or carry-on baggage during the airport screening process. (For discrepancy reporting by carriers, see § 175.31 of this subchapter.)

■ 5. Section 171.21 is revised to read as follows:

§ 171.21 Assistance in investigations and special studies.

(a) A shipper, carrier, package owner, package manufacturer or certifier, repair facility, or person reporting an incident under the provisions of § 171.16 must:

(1) Make all records and information pertaining to the incident available to an authorized representative or special agent of the Department of Transportation upon request; and

(2) Give an authorized representative or special agent of the Department of Transportation reasonable assistance in the investigation of the incident.

(b) If an authorized representative or special agent of the Department of

Transportation makes an inquiry of a person required to complete an incident report in connection with a study of incidents, the person shall:

(1) Respond to the inquiry within 30 days after its receipt or within such other time as the inquiry may specify; and

(2) Provide true and complete answers to any questions included in the inquiry.

Issued in Washington, DC on November 19, 2003 under the authority delegated in 49 CFR Part 1.

Samuel G. Bonasso,

Deputy Administrator, Research and Special Programs Administration.

Attachment 1—Hazardous Materials Incident Report

Note: This attachment will not appear in the Code of Federal Regulations.

BILLING CODE 4910-60-P



U.S. Department of Transportation
Research and Special Programs
Administration

Hazardous Materials Incident Report

Form Approval OMB No. 2137-0039

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 2137-0039. The filling out of this information is mandatory and will take 96 minutes to complete.

INSTRUCTIONS: Submit this report to the Information Systems Manager, U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, DHM-63, Washington, D.C. 20590-0001. If space provided for any item is inadequate, use a separate sheet of paper, identifying the entry number being completed. Copies of this form and instructions can be obtained from the Office of Hazardous Materials Website at <http://hazmat.dot.gov>. If you have any questions, you can contact the Hazardous Materials Information Center at 1-800-HMR-4922 (1-800-467-4922) or online at <http://hazmat.dot.gov>.

PART I - REPORT TYPE

1. This is to report: ☐ A) A hazardous material incident ☐ B) An undeclared shipment with no release
☐ C) A specification cargo tank 1,000 gallons or greater containing any hazardous materials that (1) received structural damage to the lading retention system or damage that requires repair to a system intended to protect the lading retention system and (2) did not have a release.
2. Indicate whether this is: ☐ An initial report ☐ A supplemental (follow-up) report ☐ Additional Pages

PART II - GENERAL INCIDENT INFORMATION

3. Date of Incident: _____ 4. Time of Incident (use 24-hour time): _____
5. Enter National Response Center Report Number (if applicable): _____
6. If you submitted a report to another Federal DOT agency, enter the agency and report number: _____
7. Location of Incident: City: _____ County: _____ State: _____ ZIP Code (if known): _____
 Street Address/Mile Marker/Yardname/Airport/Body of Water/River Mile _____
8. Mode of Transportation ☐ Air ☐ Highway ☐ Rail ☐ Water
9. Transportation Phase ☐ In Transit ☐ Loading ☐ Unloading ☐ In Transit Storage
10. Carrier/Reporter Name _____
 Street _____
 City _____ State _____ ZIP Code _____
 Federal DOT ID Number _____ Hazmat Registration Number _____
11. Shipper/Offendor Name _____
 Street _____
 City _____ State _____ ZIP Code _____
 Waybill/Shipping Paper _____ Hazmat Registration Number _____
12. Origin (if different from shipper address) Street _____
 City _____ State _____ ZIP Code _____
13. Destination Street _____
 City _____ State _____ ZIP Code _____
14. Proper Shipping Name of Hazardous Material: _____
15. Technical/Trade Name: _____
16. Hazardous Class/ Division: _____ 17. Identification Number: _____ (E.g. UN2764, NA 2020) 18. Packing Group: _____ (if applicable) 19. Quantity Released: _____ (Include Measurement Units)
20. Was the material shipped as a hazardous waste? ☐ Yes ☐ No If yes, provide the EPA Manifest Number: _____
21. Is this a Toxic by Inhalation (TIH) material? ☐ Yes ☐ No If yes, provide the Hazard Zone: _____
22. Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? ☐ Yes ☐ No
 If yes, provide the Exemption, Approval, or CA number: _____
23. Was this an undeclared hazardous materials shipment? ☐ Yes ☐ No
- At this point, the answer to Part I, Question 1 above determines which Part to complete next:
 If you checked 1A or 1C, go to Part IV. If you checked 1B, and the mode of transportation is Air, go to Part V. If you checked 1B, and the mode of transportation is not Air, go to Part III.

PART III - PACKAGING INFORMATION

24. Check Packaging Type (check only one - if more than one, list type of packaging, copy Part III, and complete for each type:

- | | | | |
|-----------------------------------|------------------------------|--|--------------------------------------|
| ☐ Non-bulk | ☐ IBC | ☐ Cargo tank Motor Vehicle (CTMV) | ☐ Tank Car |
| ☐ Cylinder | ☐ RAM | ☐ Portable Tank | ☐ Other _____ |

25. See instructions and enter the appropriate failure codes found at the end of the instructions. Be sure to enter the codes from the list that corresponds to the particular packaging type checked above. Enter the number of codes as appropriate to describe the incident. Enter the most important failure point in line 1. If there are more than two failure points, provide in this format in part VI.

- | | | |
|-----------------------|-------------------|--------------------------|
| 1. What Failed: _____ | How Failed: _____ | Causes of Failure: _____ |
| 2. What Failed: _____ | How Failed: _____ | Causes of Failure: _____ |

26a. Provide the packaging identification markings, if available.

Identification Markings: _____
(Examples: 1A1/Y1.4/150/92/USA/RB/93/RL, UN31H1/Y0493/USA/M9339/10800/1200, DOT - 105A - 100W (RAIL), DOT 406 (HIGHWAY), DOT 51, DOT 3-A)

26b. For Non-bulk, IBC, or non-specification packaging, if identification markings are incomplete or unavailable, see instructions and complete the following:

Single Package or Outer Packaging:	Single Package or Inner Packaging (if any):
Packaging Type: _____	Packaging Type: _____
Material of Construction: _____	Material of Construction: _____
Head Type (Drums only): ☐ Removable ☐ Non - Removable	

27. Describe the package capacity and the quantity:

Single Package or Outer Packaging:	Single Package or Inner Packaging (if any):
Package Capacity: _____	Package Capacity: _____
Amount in Package: _____	Amount in Package: _____
Number in Shipment: _____	Number in Shipment: _____
Number Failed: _____	Number Failed: _____

28. Provide packaging construction and test information, as appropriate:

Manufacturer: _____	Manufacture Date: _____
Serial Number: _____	Last Test Date: _____
Material of Construction: _____	(if Tank Car, CTMV, Portable Tank, or Cylinder)
Design Pressure: _____	(if Tank Car, CTMV, Portable Tank)
Shell Thickness: _____	(if Tank Car, CTMV, Portable Tank)
Head Thickness: _____	(if Tank Car, CTMV)
Service Pressure: _____	(if Cylinder)
If valve or device failed:	
Type: _____	Manufacturer: _____ Model: _____

29. If the packaging is for Radioactive Materials, complete the following:

Packaging Category:	☐ Type A	☐ Type B	☐ Type C	☐ Excepted	☐ Industrial
Packaging Certification:	☐ Self Certified	☐ U.S. Certification	Certification Number _____		
Nuclide(s) Present: _____	Transport Index: _____				
Activity: _____	Critical Safety Index: _____				

PART IV - CONSEQUENCES

30. Result of Incident (check all that apply): ☐ Spillage ☐ Fire ☐ Explosion ☐ Material Entered Waterway/Storm Sewer

☐ Vapor (Gas) Dispersion ☐ Environmental Damage ☐ No Release

31. Emergency Response : The following entities responded to the incident: (Check all that apply)

☐ Fire/EMS Report # _____ ☐ Police Report # _____ ☐ In-house cleanup ☐ Other Cleanup

32. Damages: Was the total damage cost more than \$500? ☐ Yes ☐ No

If yes, enter the following information: If no, go to question 33.

Material Loss: _____ Carrier Damage: _____ Property Damage: _____ Response Cost: _____ Remediation/Cleanup Cost: _____
\$ _____ \$ _____ \$ _____ \$ _____ \$ _____

(See damage definitions in the instructions)

33a. Did the hazardous material cause or contribute to a human fatality? ☐ Yes ☐ No

If yes, enter the number of fatalities resulting from the hazardous material:

Fatalities: _____ Employees _____ Responders _____ General Public _____

33b. Were there human fatalities that did not result from the hazardous material? ☐ Yes ☐ No If yes, how many? _____

34. Did the hazardous material cause or contribute to personal injury? ☐ Yes ☐ No

If yes, enter the number of injuries resulting from the hazardous material:

Hospitalized (Admitted Only): _____ Employees _____ Responders _____ General Public _____

Non-Hospitalized: _____ Employees _____ Responders _____ General Public _____

(e.g.: On site first aid or Emergency Room observation and release)

35. Did the hazardous material cause or contribute to an evacuation? ☐ Yes ☐ No

If yes, provide the following information:

Total number of general public evacuated _____ Total number of employees evacuated _____ Total Evacuated _____

Duration of the evacuation _____ (hours)

36. Was a major transportation artery or facility closed? ☐ Yes ☐ No If yes, how many? _____ (hours)

37. Was the material involved in a crash or derailment? ☐ Yes ☐ No

If yes, provide the following information: Estimated speed (mph): _____ Weather conditions: _____

Vehicle overturn? ☐ Yes ☐ No

Vehicle left roadway/track? ☐ Yes ☐ No

PART V - AIR INCIDENT INFORMATION (please refer to § 175.31 to report a discrepancy for air shipments)

38. Was the shipment on a passenger aircraft? ☐ Yes ☐ No

If yes, was it tendered as cargo, or as passenger baggage?

☐ Cargo ☐ Passenger baggage

39. Where did the incident occur (if unknown, check the appropriate box for the location where the incident was discovered)?

☐ Air carrier cargo facility ☐ Sort center ☐ Baggage area

☐ By surface to/from airport ☐ During flight ☐ During loading/unloading of aircraft

40. What phase(s) had the shipment already undergone prior to the incident? (Check all that apply)

☐ Shipment had not been transported ☐ Transported by air (first flight) ☐ Transport by air (subsequent flights)

☐ Initial transport by highway to cargo facility ☐ Transfer at sort center/cargo facility

PART VI - DESCRIPTION OF EVENTS & PACKAGE FAILURE

Describe the sequence of events that led to the incident and the actions taken at the time it was discovered. Describe the package failure, including the size and location of holes, cracks, etc. Photographs and diagrams should be submitted if needed for clarification. Estimate the duration of the release, if possible. Describe what was done to mitigate the effects of the release. Continue on additional sheets if necessary.

PART VII - RECOMMENDATIONS/ACTIONS TAKEN TO PREVENT RECURRENCE

Where you are able to do so, suggest or describe changes (such as additional training, use of better packaging, or improved operating procedures) to help prevent recurrence. Provide recommendations for improvement to hazardous materials transportation beyond the control of your individual company. Continue on additional sheets if necessary.

PART VIII- CONTACT INFORMATION

Contact's Name (Type or Print): _____	Telephone Number: () _____
Contact's Title: _____	Fax Number: () _____
Business Name and Address: _____	Hazmat Registration Number (if not already provided): _____
E-mail Address: _____	Date: _____
Preparer is: ☐ Carrier ☐ Shipper ☐ Facility ☐ Other _____	

BILLING CODE 4910-60-C

General Overview for Completing the Hazardous Materials Incident Report—Department of Transportation Form F 5800.1*What Federal Regulation Requires Me To Submit the Report?*

The Hazardous Materials Regulations (HMR; 49 CFR Parts 171–180) require that certain types of incidents be reported to the Research and Special Programs Administration (RSPA). Section 171.15 of the HMR requires an immediate telephonic report (within 12 hours) of certain types of hazardous materials incidents and a follow-up written report. Section 171.16 requires a written report for certain types of hazardous materials incidents within 30 days. Each type of report is explained below.

What Is the Purpose of the Report?

The information you are providing in this report is fundamental to hazardous material transportation risk analysis and risk management by government and industry. It allows us to better understand the causes and consequences of hazardous material transportation incidents. The data is used to identify trends and provide basic program performance measures. It helps to demonstrate the effectiveness of existing regulations and to identify areas where changes should be considered. It also assists all parties, including industry segments and individual companies, in understanding the types and frequencies of incidents, what can go wrong, and possible measures that would prevent their recurrence. Your accurate and complete description of incidents can make a significant contribution to continual safety improvement through better regulations, cooperative partnerships, and individual efforts.

Who Must Complete the Report?

Any person in possession of a hazardous material during transportation, including loading, unloading and storage incidental to transportation, must report to the Department of Transportation (DOT) if certain conditions are met. This means that when the conditions apply for completing the report, the entity having physical control of the shipment is responsible for filling out and filing Form DOT F 5800.1.

For example, if a shipper is carrying hazardous material, the consignee is unloading the material and there is an incident involving this material, the consignee is responsible for filling out and filing the form. However, if the consignee is unloading the hazardous material and causes a hazardous materials incident involving a consignment intended for someone else, the shipper is responsible for filling out and filing the form.

What Definitions Should I Know in Order To Complete the Report?

In order to accurately complete the report, you should be familiar with the following terms. A complete list of definitions is contained in § 171.8.

Bulk packaging—a packaging, other than a vessel or a barge, including a transport vehicle or freight container, in which hazardous materials are loaded with no intermediate form of containment and which has:

- (1) A maximum capacity greater than 450 liters (119 gallons) as a receptacle for a liquid;
- (2) A maximum net mass greater than 400 kilograms (822 pounds) and a maximum capacity greater than 450 liters (119 gallons) as a receptacle for a solid; or
- (3) A water capacity greater than 454 kilograms (1000 pounds) as a receptacle for a gas as defined in § 173.115.

Cargo tank—a bulk packaging which is:

- (1) A tank intended primarily for the carriage of liquids or gases and includes appurtenances, reinforcements, fittings, and closures;
- (2) Is permanently attached to or forms a part of a motor vehicle, or is not permanently attached to a motor vehicle but which, by reason of its size, construction, or attachment to a motor vehicle, is loaded or unloaded without being removed from the motor vehicle; and
- (3) Is not fabricated under a specification for cylinders, portable tanks, tank cars, or multi-unit tank car tanks.

Hazardous material—a substance or material that has been determined to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and that has been so designated. The term includes hazardous substances, hazardous wastes, marine pollutants, elevated temperature materials, materials designated as hazardous under the provisions of § 172.101, the Hazardous Materials Table (HMT), and materials that meet the defining criteria for hazard classes and divisions in Part 173.

Hazardous substance—a material, including its mixtures and solutions, that—

- (1) Is listed in Appendix A to § 172.101;
- (2) Is in a quantity, in one package, which equals or exceeds the reportable quantity (RQ) listed in Appendix A to § 172.101; and
- (3) When in a mixture or solution—
 - (i) For radionuclides, conforms to paragraph 7 of Appendix A to § 172.101.
 - (ii) For other than radionuclides, is in a concentration by weight which equals or exceeds the concentration corresponding to the RQ of the material, as shown in the following table:

RQ pounds (kilograms)	Concentration by weight	
	Percent	PPM
5000 (2270)	10	100,000
1000 (454)	2	20,000
100 (45.4)	0.2	2,000
10 (4.54)	0.02	200
1 (0.454)	0.002	20

The term hazardous substance does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance in Appendix A to § 172.101, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas useable for fuel (or mixtures of natural gas and such synthetic gas).

Hazardous waste—any material that is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR Part 262.

Marine pollutant—a material that is listed in Appendix B to § 172.101 (also see § 171.4) and, when in a solution or mixture of one or

more marine pollutants, is packaged in a concentration that equals or exceeds:

- (1) Ten percent by weight of the solution or mixture for materials listed in Appendix B; or
 - (2) One percent by weight of the solution or mixture for materials that are identified as severe marine pollutants in Appendix B.
- Undeclared hazardous material**—a hazardous material that is:

- (1) Subject to any of the hazard communication requirements in subparts C (Shipping Papers), D (Marking), E (Labeling), and F (Placarding) of Part 172 of this subchapter, or an alternative marking requirement in Part 173 of this subchapter (such as §§ 173.4(a)(10) and 173.6(c)); and
- (2) Offered for transportation in commerce without any clear indication of the presence

of the hazardous material in or on at least one of the following: an accompanying shipping paper, the outer package, the transport vehicle or freight container, or another written statement by the person offering the hazardous material for transportation.

Unintentional release—the escape of a hazardous material from a package on an occasion not anticipated or planned. This includes releases resulting from collision, package failures, human error, criminal activity, negligence, improper packing, or unusual conditions such as the operation of pressure relief devices as a result of over-pressurization, overfill, or fire exposure. It does not include releases, such as venting of packages, where allowed, and the operational discharge of contents from packages.

Additionally, for purposes of reporting on this form, the following definitions should be used:

Lading retention system—a lading retention system consists of those items or equipment that provide containment of hazardous materials at some point during transportation, including loading and unloading. The cargo tank shell, associated piping, and valves are an example of a lading retention system. Dents or damage to a tank requiring repair to an accident protection system guarding the tank are examples of incidents that must be reported. Paint chips and scratches to either the tank or the

accident protection system are examples of incidents that do not require reporting.

Major Transportation Artery—a highway, main road or secondary road but not a side street or dirt road. In the case of rail, any rail line except a rail spur.

When Must I Submit a Written Report (DOT Form F 5800.1)?

Under § 171.16, you must submit a written report within 30 days after any of the following:

- An incident that was reported by telephonic notice under § 171.15;
- An unintentional release (see definitions) of a hazardous material during transportation including loading, unloading

and temporary storage related to transportation;

- A hazardous waste is released;
- An undeclared shipment with no release is discovered; or
- A specification cargo tank 1,000 gallons or greater containing any hazardous materials that (1) received structural damage to the lading retention system or damage that requires repair to a system intended to protect the lading retention system, and (2) did not have a release.

To clarify the requirement for a report based on structural damage to a specification cargo tank, the table below illustrates some examples:

EXAMPLES TO CLARIFY WHEN TO REPORT STRUCTURAL DAMAGE TO A SPECIFICATION CARGO TANK

Incident report required	No incident report required
Damage to an outlet valve that affects seating and requires replacement. Serious damage that, if worse, could have resulted in the loss of the contents of the cargo tank. Damage to outlet lines that contain hazardous materials during transportation is in this category. Cargo tank damage that requires professional inspection or recertification to ensure it is capable of meeting requirements. Cargo tank damage that requires immediate or subsequent repair because of questions about cargo tank integrity.	Handle broken or knocked off valve—but otherwise undamaged. Serious damage that, even if worse, would not have resulted in the loss of the contents of the cargo tank. Damage to outlet lines that are normally not charged during transportation is in this category. Minor damage that obviously will not affect continuation of the cargo tank in service. Cargo tank damage that requires repair for cosmetic reasons only.

When Is a Report Not Required?

You are not required to report a release of a hazardous material if ALL of the following apply:

- The shipment is not being offered for transportation or being transported by air;
- None of the criteria in § 171.15(a) applies;
- The material is not a hazardous waste;
- The material is properly classed as an ORM-D, or a Packing Group III material in Class or Division 3, 4, 5, 6.1, 8, or 9;
- Each package has a capacity of less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids;
- The total aggregate release is less than 20 liters (5.2 gallons) for liquids or less than 30 kg (66 pounds) for solids;
- The material does not meet the definition of an undeclared hazardous material in § 171.8; AND
- The shipment is an undeclared material discovered in an air passenger's checked or carry-on baggage during the airport screening process.

Also, you are not required to report releases of minimal amounts of material (*i.e.*, a pint or less) released from the manual operation of seals of pumps, compressors, or valves, during the connecting or disconnecting of loading and unloading lines, or, for materials for which venting is authorized, from vents, provided these releases do not result in property damage or trigger any of the telephonic notifications requirements found in § 171.15.

When Must I Make a Telephonic Report?

Under § 171.15, you must provide telephone notice within 12 hours after the incident occurs when one of the following conditions occurs during the course of

transportation and is a direct result of the hazardous material:

- A person is killed;
- A person receives an injury requiring admittance to a hospital;
- The general public is evacuated for one hour or more;
- One or more major transportation arteries or facilities are closed for one hour or more;
- The operational flight plan or routine of an aircraft is altered;
- Fire, breakage, spillage or suspected radioactive contamination occurs involving a radioactive material;
- Fire, breakage, spillage or suspected contamination occurs involving an infectious substance other than a diagnostic specimen or regulated medical waste;
- There is a release of a marine pollutant in a quantity exceeding 450 liters (119 gallons) for liquids or 400 kilograms (882 pounds) for solids; or
- A situation exists of such a nature that in the judgment of the person in possession of the hazardous material, it should be reported to DOT's National Response Center even though it does not meet the above criteria.

You may decide that the situation should be reported even though it does not meet any of the above criteria.

Make sure that you request the NRC report number when you make your telephonic report.

What Telephone Number Do I Call To Make an Immediate Notification of a Hazardous Materials Incident?

You must call 800-424-8802 (toll-free) or 202-267-2675 (toll-call) to make a telephonic incident report. This is the number to the National Response Center. This call must be made within 12 hours of the events that

trigger this requirement. If the incident involves an infectious substance, you may notify the Director, Center for Disease Control and Prevention (CDC), U.S. Public Health Service, Atlanta, Georgia, toll-free at 800-232-0124. If a discrepancy of a shipment intended for air is discovered following its acceptance aboard aircraft, notify the nearest Federal Aviation Administration Civil Aviation Security Office as soon as practical.

How Long Do I Have To Submit the Written Report?

You must submit your written report within 30 days of discovery of the incident, § 171.16(a).

Am I Required To Update the Information in the Report?

Yes. You must use DOT Form F 5800.1 and check the "A supplemental (follow-up) report" box on question #2 to provide additional information after the initial report. You are required to provide updates for up to one year after the initial filing if more information is gained or new developments arise concerning the following, for example:

- A death results from injuries caused by a hazardous material;
- The person responsible for preparing the original report learns that there is a misidentification of hazardous material or package information;
- Damage or loss or related costs that were not known at the time the report was filed become known; or
- Revised estimates of damages, losses, and related costs result in a change of \$25,000 or more, or 10% of the original cost estimates, whichever is greater, even if the original estimate was under \$500.

How and Where Do I Submit My Completed Report?

- You can mail paper copies of the report to the Information Systems Manager, U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, DHM-63, Washington, DC 20590-0001; or
- You can submit the report on-line at <http://hazmat.dot.gov>.

How Long Must I Keep a Copy of the Report?

You must keep a copy of each report or an electronic image of the report for two years after the date you submit it to RSPA (§ 171.16(b)(3)).

Where Must I Keep a Copy of the Report?

The report must be accessible through your company's principal place(s) of business. You must be able to make the report available upon request to authorized representatives or a special agent of the Department within 24 hours of such a request (§ 171.16(b)(3)).

How Can I Get a Blank Copy of the Form F 5800.1?

There are a variety of sources for obtaining the Form F 5800.1. Please note that you are allowed to make unlimited photocopies of the form and distribute them.

- You may obtain limited copies of the form from the Information Systems Manager at the above address.
- You may download a copy of the form from our website at <http://hazmat.dot.gov/spills.htm>
- Our Fax on Demand service has copies of the instructions and the form. Call 1-800-467-4922 and choose the Fax on Demand option #2.

How Long Does It Take To Complete the Report?

RSPA anticipates that it will take you approximately 1.6 hours to complete this report. This estimate includes the time it will take you to review the instructions, search your existing data sources for information, gather the required data, and complete and review the report.

How Can I Comment on the Length of Time Needed To Complete the Report or on the Amount of Information Required in the Report?

You can send your comments on the report, and any suggestions you have for reducing the amount of time needed to complete the report, to the following address:

(2) Information Systems Manager, U.S. Department of Transportation, Research and Special Programs Administration, Office of Hazardous Materials Safety, DHM-63, Washington, DC 20590-0001.

Please verify that your information is accurate. Although the required information is generally available at the time of the incident, you may need to do some additional investigation in order to obtain all of the facts pertaining to deaths, injuries or damage amounts. If you submit complete and accurate information at the time you file the report, it will decrease the chance of your having to supply missing information to DOT at a later date. RSPA may follow up on incomplete forms.

Instructions for Form DOT F 5800.1:

Please print. Fill in all applicable blanks accurately to the best of your ability.

Part I: Report Type

(3) *This is to report:* Check the box that describes why you are filling out this form. This will normally be "A) A hazardous material incident." If you are reporting an undeclared shipment with no release, check the corresponding box, "B)." If you are reporting an incident involving a cargo tank motor vehicle containing a hazardous material that received structural damage to the lading retention system that may affect its ability to retain lading but does not release a hazardous material, check that appropriate box, "C)."

(2) *Indicate what type of report this is:* If this is an initial report, check the "initial report" box. If this is a follow-up to a previous report, check the "A supplemental (follow-up) report" box. If you are using additional pages, check the "Additional Pages" box.

Part II: General Incident Information

(3), (4) *Date & Time of Incident:* Enter the date and time the incident occurred. If you do not know the actual date and time, give the date and time you discovered the incident. Use 24-hour time for the incident time (e.g. "2400" for midnight, "1200" for noon, "0747" for 7:47 a.m., "2115" for 9:15 p.m.).

(5) *Enter National Response Center Report Number:* If this incident was reported to the National Response Center (NRC), fill in the report number NRC assigned to the incident.

(6) *If you submitted a report to another Federal DOT agency, enter the agency and report number:* If you were required to fill out a report for another Federal DOT agency such as the Federal Railroad Administration or the Federal Motor Carrier Safety Administration for this incident, please include the agency and report number. This will facilitate our combination of information.

(7) *Location of Incident:* Enter the geographic location of the incident (city, county, State, and zip code). If you do not know the actual location where the incident occurred, give the location where it was discovered. If the incident occurred at an airport or rail yard, include the name of the facility. If the incident occurred on a body of water, include the name and/or river mile. If you do not know the street address, or if the incident occurred on a highway, include a description such as "On I-70, mile marker 240."

(8) *Mode of Transportation:* Enter the code that corresponds to the mode of transportation in which the incident occurred or was discovered. If the incident occurred or was discovered in an in-transit storage area (e.g., a terminal or warehouse), check the box that corresponds to the mode by which the package was last transported.

(9) *Transportation Phase:* Enter the code that describes where the incident occurred in the transportation system. In transit means the incident occurred or was first discovered while the package was in the process of being transported. In-transit storage is storage

incidental to transportation, such as at a terminal waiting for the next leg of transportation.

(10) *Carrier/Reporter:* Provide the name, street address, Federal DOT number (if applicable), and hazmat registration number of the carrier or the entity who is reporting the incident (if other than a carrier). The entity in physical possession of the material when the incident occurred or was discovered must report the incident.

(11) *Shipper/Officer:* Enter the information about the person or entity that originally offered for transportation the material or package involved in the incident.

(12) *Origin:* Enter the origin of the shipment if the address is different than the shipper/officer information entered in item #11.

(13) *Destination:* Enter the final destination of the shipment involved in the incident.

(14) through (19):

Hazardous Material Description: Enter the proper shipping name, technical or trade name, hazard class or division, ID number, packing group, and amount of material released. All of this information, except the amount of material released, can be found on the shipping papers that accompany the shipment, § 172.202. When indicating the amount of material released, include units of measurements (examples: 115 gallons, 69 tons).

(20) Was the material shipped as a hazardous waste? Check the "Yes" box if the material meets the definition of a hazardous waste in § 171.8 (requires an EPA Uniform Hazardous Waste Manifest). Include the EPA Manifest number.

(21) Is this a Toxic by Inhalation (TIH) material? If the material involved in the incident meets the definition of a Toxic by Inhalation material in § 173.132, check the "Yes" box and enter the Hazard Zone in the space provided.

(22) Was the material shipped under an Exemption, Approval, or Competent Authority Certificate? If the shipment was shipped under an exemption, an approval, or a Competent Authority Certificate, check the "Yes" box and provide the appropriate assigned number.

(23) Was this an undeclared hazardous materials shipment? If this material was not indicated in any way to be a hazardous material even though it was required to be described as such on a shipping paper, or if the material would normally be excepted from the shipping paper requirements (such as a small quantity material) and does not have the required markings, it is considered an undeclared hazardous material shipment. Check the appropriate box.

Part III: Packaging Information

(24) *Packaging Type:* Check the box that corresponds to the type of packaging involved in the incident. If more than one packaging type was involved in an incident, reproduce Part III of the form and fill out this section for each of the packaging types. For example, if three different packaging types were involved in an incident, fill out a separate Part III for each packaging type. If the type of packaging is not represented, check the "Other" box and enter a brief

description such as “non-specification bulk bin.”

(25) Enter the appropriate failure codes (found at the end of the instructions): Enter the codes that describe what failed on the packaging, how the packaging failed, and the cause(s) of the failure. Be sure to enter the codes from the list that corresponds to the particular packaging types checked above (#24). Enter the most important failure point in line 1. If there is a second failure point, enter in line 2. If there are more than two failure points, provide additional information in this format in Part VI. The following explains the content of each line: What Failed: You can enter up to 2 “What Failed” codes to describe the part of the packaging that fails and was the immediate cause of the release. Often, on a simple packaging, only one code will be required. On more complex packaging, additional entries will help identify where that failure occurred. The first

entry should designate the specific point of failure, followed by entries that help identify where that failure occurred. For instance, a deteriorated gasket on a pipe flange on the liquid line would have failure code 121 for gasket entered first and failure code 118 for flange entered second.

How Failed: Enter the “Failure” code that describes how the corresponding part of the packaging failed. The primary way the packaging failed should be entered first. Cause(s) of Failure: Enter the “Cause of Failure” code that describes what caused the corresponding part of the packaging to fail in the way it did. The most probable or fundamental cause of failure should be entered first.

If none of the codes on the list fit exactly, use the closest matches and provide additional detail in Part VI. Also, if you believe a better set of codes would be more

descriptive of what failed, how it failed, and the causes of failure, suggest them in Part VII.

(26a) *Provide the complete packaging identification markings, if available:* Every specification packaging, UN or DOT, has a packaging identification printed or stamped on it or on a plate attached to the packaging. Examples are provided on the form.

(26b) *For Non-bulk, IBC, or non-specification packaging:* Only fill out 26b if the marking is incomplete, destroyed, or unknown. Fill in the Outer and Inner packaging type and material of construction information, as appropriate. If the packaging is Non-bulk or Intermediate Bulk Container (IBC), use the codes below to enter the number or letter that applies for either Non-bulk or IBC packaging. For non-bulk, IBC or non-specification packaging provide a description of the packaging in the space(s) provided.

NON-BULK PACKAGING IDENTIFICATION CODES

Outer Packaging		
Type	Material	Head type
1 = Drum 2 = Wooden Barrel 3 = Jerrican 4 = Box 5 = Bag 6 = Composite Packaging 7 = Pressure receptacle	A = Steel B = Aluminum C = Natural Wood D = Plywood F = Reconstituted Wood G = Fiberboard H = Plastic L = Textile M = Paper, multi-wall N = Metal other than steel or aluminum P = Glass, porcelain, or stoneware	1 = Non-removable 2 = Removable

Inner Packaging	
Type	Material
1 = Bottle 2 = Can 3 = Box 4 = Bag 5 = Cylinder	A = Metal (any type) B = Glass, porcelain, or stoneware C = Plastic D = Fiberboard or cardboard E = Wood (any type)

IBC Packaging Identification Codes

Material of Construction

- 1—Metal
- 2—Plastic
- 3—Composite
- 4—Fiberboard
- 5—Wooden
- 6—Flexible

(27) *Describe the package capacity and the quantity:* Enter the total capacity of the inner and outer package. Also enter the actual amount of hazardous material that was shipped in the package, the number of packages in the shipment, and the number of packages that failed. Please include the units of measurement (liter, gallons, pounds, cubic feet, etc.)

(28) Provide package construction and test information, as appropriate: In the case of Non-bulk packagings or IBCs enter the name of the packaging manufacturer or the symbol of the manufacturer only if complete

identification markings were not provided in #26b. Enter the date of manufacture and the serial number, if applicable. Enter the last test date if the packaging requires periodic testing. Also include the design pressure, shell thickness, head thickness, and service pressure if the failed packagings are of the type indicated in parenthesis after each question. If the packaging contained a valve, or other device that failed and resulted in a hazardous material release, enter the valve or device type, manufacturer, and model number.

(29) If the package is for Radioactive Materials, complete the following: Complete this question only if a radioactive material was involved. Indicate the packaging category, the packaging certification, certification number, and which nuclides were present, the transportation index (TI), activity of the nuclides, and the criticality safety index.

Part IV: Consequences

(30) *Result of Incident:* Check all boxes that describe what occurred during the incident or as a result of the incident. For example, in a situation where a truckload of 55 gallon drums of corrosive liquids overturns resulting in a release that contaminates a nearby wetlands and stream the boxes “Spillage,” “Material Entered Waterway/Storm Sewer,” and “Environmental Damage” may apply.

(31) *Emergency Response:* Check all boxes that correspond with any emergency response and cleanup crews that participated in resolving the incident. If a fire crew, EMS, or police unit responded to the incident, include the report number.

(32) *Damages:* You are required to provide information on estimated damages if your damages exceed \$500.00. This figure includes the cost of the material lost, property damage, vehicle damage, response costs, and clean-up costs. If you do not know

these amounts at the time you complete the report, or the actual costs are revised by more than \$25,000, you must submit a follow-up report after you determine the amounts. The following definitions explain each of the costs:

Material Loss: Enter the value of material released and unrecoverable. Base this entry on the amount of material released multiplied by the unit value (e.g., price per gallon or price per pound) as listed on the shipper's invoice. If the invoice is not available, estimate the cost per unit using the shipper's basis.

Carrier Damage: Enter the total value of damage incurred by the carrier. Major components include costs to repair the damaged vehicle and costs resulting from damage to cargo. If the vehicle is declared "totaled," enter the insured value of the vehicle. This entry should not include damage to other property or to vehicles owned by other persons.

Property Damage: Enter the total value of costs resulting from damage to the property of others involved in the incident. These include: repair and replacement costs of other vehicles; repair and replacement costs to buildings and other fixed facilities; and restoration of open land beyond decontamination and cleanup.

Response Cost: Enter the total value of response costs. Response costs are those costs incurred immediately after the incident, and include local emergency response from police and fire departments and emergency response teams, as well as costs incurred by the responsible party. Response costs also include costs to contain the hazardous material released. **Remediation/Cleanup Cost:** Enter the total value of the cost to cleanup and remediate the site. Cleanup costs are those costs incurred to collect, transport, and ultimately dispose of all material collected during the response phase. Remediation costs are those costs incurred to restore the incident scene to its pre-incident state, and could include excavation, disposal and replacement of contaminated soil, pumping, treatment and re-injection of contaminated groundwater, or absorption and disposal of hazardous material released into surface water.

(33a) Did the hazardous material cause or contribute to a human fatality? If a person was fatally injured by contact with the hazardous material or its vapors or by a fire or explosion that resulted from the hazardous material, check the "Yes" box and enter the number of fatalities that resulted directly from the hazardous material.

(33b) Were there human fatalities that did not result from the hazardous material? If the fatalities were not caused directly by the

hazardous material, check the "Yes" box and enter the number of fatalities. An example: if a passenger car collided with a cargo tank carrying gasoline and the automobile driver was killed due to the collision, then the fatality was not caused by the hazardous material released. If, however, the accident resulted in the release of gasoline from the cargo tank and a resulting fire killed the automobile driver, then the fatality was caused by the hazardous material.

(34) Did the hazardous material cause or contribute to a personal injury? If a person was injured by contact with the hazardous material or its vapors or by a fire or explosion that resulted from the hazardous material, check the "Yes" box and enter the number of persons injured by the hazardous material.

Hospitalized means admitted to a medical facility, not treated and released from a facility, such as a hospital emergency room, where the person was never admitted to the hospital proper. Non-hospitalized individuals are those who may have received attention from medical personnel on-site or at a facility (including hospital emergency room), but were not admitted to a medical facility. Indicate the number of injured employees, emergency responders (firefighters, police, medics, etc.) and members of the general public.

(35) Did the hazardous material cause or contribute to an evacuation? If the incident required the evacuation or removal of persons from a specific area because of possible or actual contact with the hazardous materials involved in the incident, check the "Yes" box. Separately specify the numbers of individuals from the general public evacuated and number of employees of the facility or workers in the area that were evacuated. Also provide the total number of individuals evacuated. Indicate the duration of the evacuation (in hours).

(36) Was a transportation artery or facility closed? If a road or transportation facility was closed due to the incident, check the "Yes" box and indicate the duration (in hours) here.

(37) Was the material involved in a crash or derailment? Check the "Yes" box if a hazardous material was involved in a crash or derailment. Provide the estimated speed and weather conditions at the time of the crash, such as rain, blowing snow, sleet, iced roadway, sun glare, fog, dry pavement, high winds, etc. Indicate if the vehicle overturned or left the roadway or track.

Part V: Air Incident Information

This section is for incidents with packagings transported or intended for transportation by aircraft. If your packaging was not transported or intended to be transported by air, skip this section.

(38) Was the shipment on a passenger aircraft? Indicate whether the shipment in question was on a commercial passenger aircraft. If so, indicate if the material was tendered (accepted for shipment) as cargo, or was located in a passenger's baggage, either in the cabin or baggage compartment.

(39) Where did the incident occur or where was the incident discovered? Indicate where in the course of transportation the incident occurred or was discovered.

(40) What phase(s) had the shipment already undergone prior to the incident? Check all boxes that describe the transportation phases the shipment went through before the incident occurred or was discovered.

Part VI: Description of Events and Packaging Failure

Please describe the events involved in the incident to provide us with a better understanding of the incident. Include information that has not been collected elsewhere on this form, and include special scenarios, outstanding circumstances, or other information that provides a complete picture of the incident. Describe the sequence of events that led to the incident, the package failure (if any) and actions taken at the time of discovery. Submit photographs and diagrams when necessary for clarification. You may continue on additional sheets if necessary.

Part VII: Recommendations/Actions Taken To Prevent Future Incidents

Recommendations may be preliminary in nature, may suggest actions by other parties, and may be subject to further investigation, refinement, acceptance, or rejection. Often, it may be beyond the ability of the preparer to offer recommendations, but where such recommendations can be made they have the potential of resulting in important improvements with safety benefits. For instance, such information can help companies identify common problems and alert the DOT to the need for additional measures such as outreach or broad training needs. This information can also help support regulatory changes.

Part VIII: Contact Information

Provide the name, title, telephone number, fax number, business name and address, hazmat registration number and email address of the contact person at your company who can answer questions about the information provided on this form. Make sure to check the box that describes the function of your firm: carrier, shipper, facility owner/operator, or other. If "Other" is checked, describe the function.

COMPLETE LISTING—ALL PACKAGING TYPES

Code	What failed	Code	How failed	Code	Cause(s) of failure
101	Air Inlet	301	Abraded	501	Abrasion
102	Auxiliary Valve	302	Bent	502	Broken Component or Device
103	Basic Material	303	Burst or Ruptured	503	Commodity Self-ignition
104	Body	304	Cracked	504	Commodity Polymerization
105	Bolts or Nuts	305	Crushed	505	Conveyer or Material Handling Equipment Mishap
106	Bottom Outlet Valve	306	Failed to Operate	506	Corrosion—Exterior

COMPLETE LISTING—ALL PACKAGING TYPES—Continued

Code	What failed	Code	How failed	Code	Cause(s) of failure
107	Check Valve	307	Gouged or Cut	507	Corrosion—Interior
108	Chime	308	Leaked	508	Defective Component or Device
109	Closure (e.g., Cap, Top, or Plug)	309	Punctured	509	Derailment
110	Cover	310	Ripped or Torn	510	Deterioration or Aging
111	Cylinder Neck or Shoulder	311	Structural	511	Dropped
112	Cylinder Sidewall—Near Base	312	Torn Off or Damaged	512	Fire, Temperature, or Heat
113	Cylinder Sidewall—Other	313	Vented	513	Forklift Accident
114	Cylinder Valve			514	Freezing
115	Discharge Valve or Coupling			515	Human Error
116	Excess Flow Valve			516	Impact with Sharp or Protruding Object (e.g., nails)
117	Fill Hole			517	Improper Preparation for Transportation
118	Flange			518	Inadequate Accident Damage Protection
119	Frangible Disc			519	Inadequate Blocking and Bracing
120	Fusible Pressure Relief Device or Element.			520	Inadequate Maintenance
121	Gasket			521	Inadequate Preparation for Transportation
122	Gauging Device			522	Inadequate Procedures
123	Heater Coil			523	Inadequate Training
124	High Level Sensor			524	Incompatible Product
125	Hose			525	Incorrectly Sized Component or Device
126	Hose Adaptor or Coupling			526	Loose Closure, Component, or Device
127	Inlet (Loading) Valve			527	Misaligned Material, Component, or Device
128	Inner Packaging			528	Missing Component or Device
129	Inner Receptacle			529	Overfilled
130	Lifting Feature			530	Over-pressurized
131	Lifting Lug			531	Rollover Accident
132	Liner			532	Stub Sill Separation from Tank (Tank Cars)
133	Liquid Line			533	Threads Worn or Cross Threaded
134	Liquid Valve			534	Too Much Weight on Package
135	Loading or Unloading Lines			535	Valve Open
136	Locking Bar			536	Vandalism
137	Manway or Dome Cover			537	Vehicular Crash or Accident Damage
138	Mounting Studs			538	Water Damage
139	O-Ring or Seals.				
140	Outer Frame.				
141	Piping or Fittings.				
142	Piping Shear Section.				
143	Pressure Relief Valve or Device—Non-Reclosing.				
144	Pressure Relief Valve or Device—Reclosing.				
145	Remote Control Device.				
146	Sample Line.				
147	Stub Sill (Tank Car).				
148	Sump.				
149	Tank Head.				
150	Tank Shell.				
151	Thermometer Well.				
152	Threaded Connection.				
153	Vacuum Relief Valve.				
154	Valve Body.				
155	Valve Seat.				
156	Valve Spring.				
157	Valve Stem.				
158	Vapor Valve.				
159	Vent.				
160	Washout.				
161	Weld or Seam.				

General non-bulk and IBCs		Cylinders	
Code	What failed	Code	What failed
103	Basic Material	111	Cylinder Neck or Shoulder
104	Body	112	Cylinder Sidewall—Near Base

General non-bulk and IBCs		Cylinders	
Code	What failed	Code	What failed
105	Bolts or Nuts	113	Cylinder Sidewall—Other
108	Chime	114	Cylinder Valve
109	Closure (e.g., Cap, Top, or Plug)	119	Frangible Disc
110	Cover	120	Fusible Pressure Relief Device or Element
119	Frangible Disc	122	Gauging Device
120	Fusible Pressure Relief Device or Element	132	Liner
121	Gasket	143	Pressure Relief Valve or Device—Non-Reclosing
125	Hose	144	Pressure Relief Valve or Device—Reclosing
128	Inner Packaging	161	Weld or Seam
129	Inner Receptacle		
130	Lifting Feature	Code	How Failed
132	Liner	301	Abraded
140	Outer Frame	303	Burst or Ruptured
143	Pressure Relief Valve or Device—Non-Reclosing	304	Cracked
144	Pressure Relief Valve or Device—Reclosing	306	Failed to Operate
161	Weld or Seam	307	Gouged or Cut
		308	Leaked
		309	Punctured
		313	Vented
Code	How Failed		
301	Abraded	Code	Causes of Failure
302	Bent	501	Abrasion
303	Burst or Ruptured	502	Broken Component or Device
304	Cracked	503	Commodity Self-ignition
305	Crushed	504	Commodity Polymerization
306	Failed to Operate	505	Conveyer or Material Handling Equipment Mishap
307	Gouged or Cut	506	Corrosion—Exterior
308	Leaked	507	Corrosion—Interior
309	Punctured	508	Defective Component or Device
310	Ripped or Torn	510	Deterioration or Aging
311	Structural	512	Fire, Temperature, or Heat
312	Torn Off or Damaged	513	Forklift Accident
313	Vented	514	Freezing
		515	Human Error
		516	Impact with Sharp or Protruding Object (e.g., nails)
Code	Cause(s) of Failure	517	Improper Preparation for Transportation
501	Abrasion	519	Inadequate Blocking and Bracing
503	Commodity Self-ignition	520	Inadequate Maintenance
504	Commodity Polymerization	521	Inadequate Preparation for Transportation
505	Conveyer or Material Handling Equipment Mishap	522	Inadequate Procedures
506	Corrosion—Exterior	523	Inadequate Training
507	Corrosion—Interior	524	Incompatible Product
508	Defective Component or Device	525	Incorrectly Sized Component or Device
510	Deterioration or Aging	526	Loose Closure, Component, or Device
511	Dropped	527	Misaligned Material, Component, or Device
513	Forklift Accident	528	Missing Component or Device
514	Freezing	529	Overfilled
515	Human Error	530	Over-pressurized
516	Impact with Sharp or Protruding Object (e.g., nails)	535	Valve Open
517	Improper Preparation for Transportation	536	Vandalism
521	Inadequate Preparation for Transportation	537	Vehicular Crash or Accident Damage
522	Inadequate Procedures	538	Water Damage
523	Inadequate Training		
529	Overfilled		
530	Overpressurized		
534	Too Much Weight on Package		
535	Valve Open		
536	Vandalism		
537	Vehicular Crash or Accident Damage		
538	Water Damage		
Portable tanks		Bulk tank vehicles—cargo tank motor vehicles (CTMV) and tank cars	
Code	What failed	Code	What failed
105	Bolts or Nuts	101	Air Inlet
106	Bottom Outlet Valve	105	Bolts or Nuts
107	Check Valve	106	Bottom Outlet Valve
108	Chime	107	Check Valve
109	Closure (e.g., Cap, Top, or Plug)	110	Cover

Portable tanks		Bulk tank vehicles—cargo tank motor vehicles (CTMV) and tank cars	
Code	What failed	Code	What failed
110	Cover	115	Discharge Valve or Coupling
119	Frangible Disc	116	Excess Flow Valve
120	Fusible Pressure Relief Device or Element	117	Fill Hole
121	Gasket	118	Flange
122	Gauging Device	119	Frangible Disc
125	Hose	120	Fusible Pressure Relief Device or Element
127	Inlet (Loading) Valve	121	Gasket
131	Lifting Lug	122	Gauging Device
132	Liner	123	Heater Coil
135	Loading or Unloading Lines	124	High Level Sensor
137	Manway or Dome Cover	125	Hose
140	Outer Frame	126	Hose Adaptor or Coupling
141	Piping or Fittings	127	Inlet (Loading) Valve
143	Pressure Relief Valve or Device—Non-Reclosing	131	Lifting Lug
144	Pressure Relief Valve or Device—Reclosing	132	Liner
152	Threaded Connection	133	Liquid Line
153	Vacuum Relief Valve	134	Liquid Valve
161	Weld or Seam	135	Loading or Unloading Lines
		136	Locking Bar
Code	How Failed	137	Manway or Dome Cover
301	Abraded	138	Mounting Studs
302	Bent	139	O-Ring or Seals
303	Burst or Ruptured	141	Piping or Fittings
304	Cracked	142	Piping Shear Section
305	Crushed	143	Pressure Relief Valve or Device—Non-Reclosing
306	Failed to Operate	144	Pressure Relief Valve or Device—Reclosing
307	Gouged or Cut	145	Remote Control Device
308	Leaked	146	Sample Line
309	Punctured	147	Stub Sill (Tank Car)
310	Ripped or Torn	148	Sump
312	Torn Off or Damaged	149	Tank Head
313	Vented	150	Tank Shell
		151	Thermometer Well
Code	Cause(s) of Failure	152	Threaded Connection
501	Abrasion	153	Vacuum Relief Valve
502	Broken Component or Device	154	Valve Body
503	Commodity Self-ignition	155	Valve Seat
504	Commodity Polymerization	156	Valve Spring
505	Conveyer or Material Handling Equipment Mishap	157	Valve Stem
506	Corrosion—Exterior	158	Vapor Valve
507	Corrosion—Interior	159	Vent
508	Defective Component or Device	160	Washout
509	Derailment	161	Weld or Seam
510	Deterioration or Aging		
511	Dropped	Code	How Failed
512	Fire, Temperature, or Heat	301	Abraded
514	Freezing	302	Bent
515	Human Error	303	Burst or Ruptured
517	Improper Preparation for Transportation	304	Cracked
520	Inadequate Maintenance	305	Crushed
521	Inadequate Preparation for Transportation	306	Failed to Operate
522	Inadequate Procedures	307	Gouged or Cut
523	Inadequate Training	308	Leaked
524	Incompatible Product	309	Punctured
525	Incorrectly Sized Component or Device	310	Ripped or Torn
526	Loose Closure, Component, or Device	311	Structural
527	Misaligned Material, Component, or Device	312	Torn Off or Damaged
528	Missing Component or Device	313	Vented
529	Overfilled		
530	Overpressurized	Code	Cause(s) of Failure
531	Rollover Accident	501	Abrasion
536	Vandalism	502	Broken Component or Device
537	Vehicular Crash or Accident Damage	503	Commodity Self-ignition
		504	Commodity Polymerization
		505	Conveyer or Material Handling Equipment Mishap
		506	Corrosion—Exterior
		507	Corrosion—Interior
		508	Defective Component or Device
		509	Derailment
		510	Deterioration or Aging
		511	Dropped
		512	Fire, Temperature, or Heat

Portable tanks		Bulk tank vehicles—cargo tank motor vehicles (CTMV) and tank cars	
Code	What failed	Code	What failed
		515	Human Error
		517	Improper Preparation for Transportation
		518	Inadequate Accident Damage Protection
		519	Inadequate Blocking and Bracing
		520	Inadequate Maintenance
		521	Inadequate Preparation for Transportation
		522	Inadequate Procedures
		523	Inadequate Training
		524	Incompatible Product
		525	Incorrectly Sized Component or Device
		526	Loose Closure, Component, or Device
		527	Misaligned Material, Component, or Device
		528	Missing Component or Device
		529	Overfilled
		530	Overpressurized
		531	Rollover Accident
		532	Stub Sill Separation from Tank (Tank Cars)
		533	Threads Worn or Cross Threaded
		536	Vandalism
		537	Vehicular Crash or Accident Damage

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