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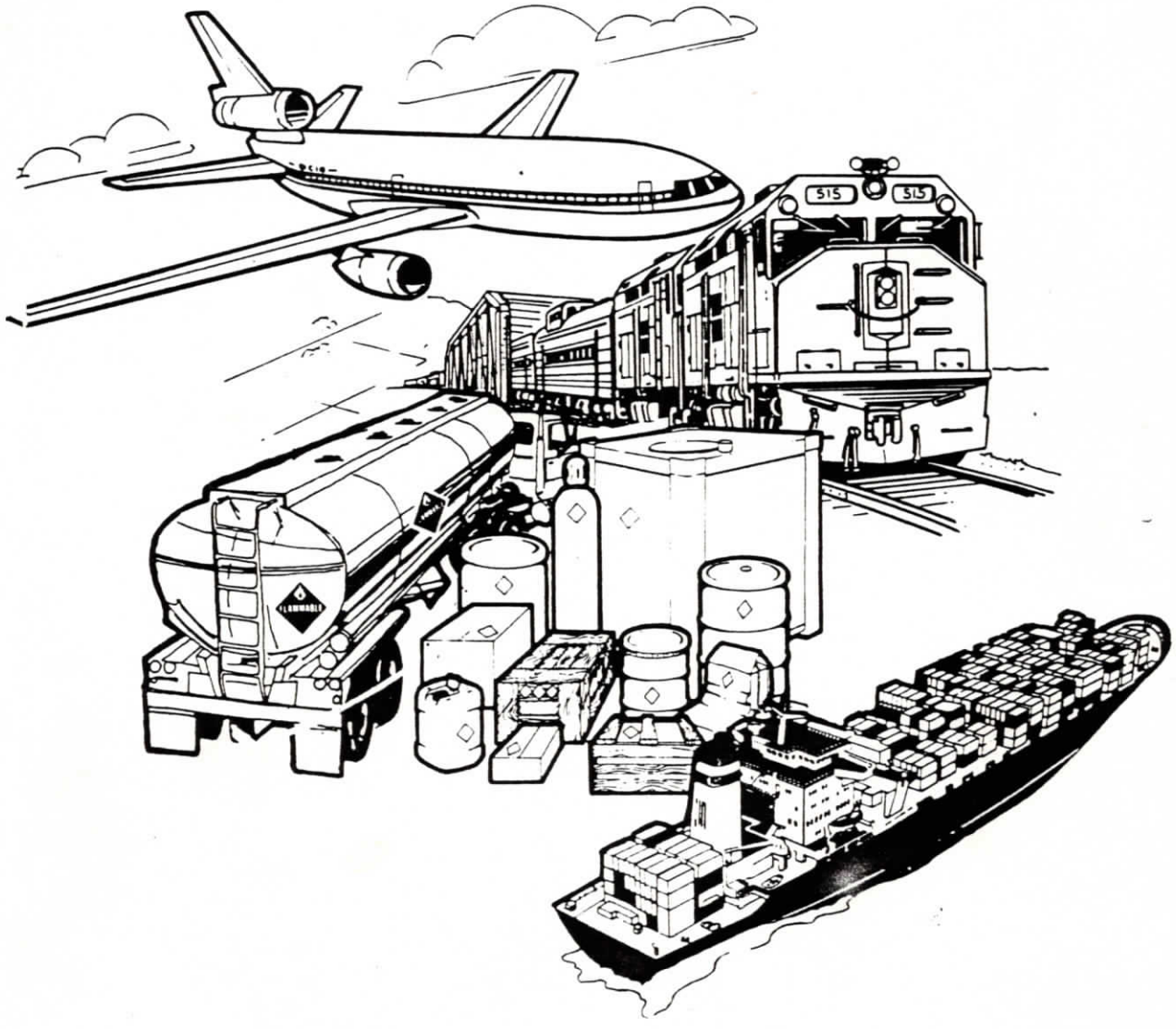
U.S. Department
of Transportation

**Research and
Special Programs
Administration**

Annual Report on Hazardous Materials Transportation

Calendar Year 1987



ANNUAL REPORT

ON

HAZARDOUS MATERIALS TRANSPORTATION

HAZARDOUS MATERIALS TRANSPORTATION ACT

(TITLE 1, PUBLIC LAW 93-633)

CALENDAR YEAR 1987

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OVERVIEW

Legislative Mandate

This report is required under Section 109 (e) of the Hazardous Materials Transportation Act (HMTA), 49 U.S.C. Appendix § 1808. It describes the Department's ongoing programs and policies for promoting hazardous materials transportation safety, contains safety statistics and enforcement data, and lists the regulations, as well as exemptions to the regulations, issued during the reporting year.

While the HMTA provides the primary legislative authority for the Department's hazardous materials programs, a number of other related statutes also guide the program. Among these are the Dangerous Cargo Act of 1940, Sections 601.(c) and 902(h)(1) of the Federal Aviation Act of 1958, the Tank Vessel Act of 1936, the Ports and Tanker Safety Act of 1978, the Federal Railroad Safety Act of 1970, Section 311 of the Federal Water Pollution Control Act Amendments of 1972, and the Resource Conservation and Recovery Act of 1976. These statutes are, for the most part, mode specific and the Department's modal administrations--United States Coast Guard (USCG), Federal Aviation Administration (FAA), Federal Highway Administration (FHWA), and Federal Railroad Administration (FRA)--retain jurisdictional responsibility for enforcement actions relating to transportation by water, air, highway, and rail, respectively.

The HMTA empowers the Secretary of Transportation to issue and enforce regulations deemed necessary to ensure the safe domestic and international movement of hazardous materials. This authority has been delegated to the Administrator, Research and Special Programs Administration (RSPA), who is responsible for departmental coordinated action to promote hazardous materials transportation safety.

RSPA develops and issues regulations of single and multimodal applicability governing hazardous materials definition and classification, shipper and carrier operations, and packaging and container specifications. This is accomplished in coordination with the modal administrations. RSPA's regulatory responsibilities also extend to enforcement of those regulations governing the manufacture, reconditioning, and retesting of DOT specification containers, and the multimodal shipment of hazardous materials.

The United States Coast Guard issues and enforces regulations applicable to the transportation of bulk hazardous materials by vessel as required by 46 CFR, subchapters D (Tank Vessels), I (Cargoes and Miscellaneous Vessels), N (Dangerous Cargoes), and O (Certain Bulk Dangerous Cargoes). In keeping with the requirement in the HMTA for a "...comprehensive report on the transportation of hazardous materials..." data presented in this report pertains to the transportation by vessel of both bulk and break-bulk (packaged) hazardous materials. A description of the Coast Guard's bulk hazardous materials program appears as Appendix A.

Program Highlights

Responsibility for issuing and enforcing regulations deemed necessary for the safe domestic and international movement of hazardous materials and for a coordinated departmental approach to promoting hazardous materials transportation safety rests with RSPA. This responsibility is met with the full coordination and cooperation of the modal administrations.

Highlights of important initiatives and accomplishments are summarized below:

- On July 30, 1987, the Department transmitted to Congress a major legislative proposal which would represent the first substantive amendment of the HMTA since its passage in 1974. The key issues of this proposal include permitting, uniformity, and routing.

- Several rulemaking actions were taken in 1987 including proposals designed to:

  o Replace specification packaging requirements for non-bulk packagings with performance-oriented packaging standards.

  o Extend the application of the Hazardous Materials Regulations to all intrastate transportation of hazardous materials.

  o Improve the packaging requirements for uranium hexafluoride.

  o Improve emergency response communication by requiring the placement of emergency response information on shipping papers and response action information in all places including vehicles.

  o Require states to give written notice to RSPA of designated alternative routes for highway route-controlled quantity of radioactive materials and require carriers rather than shippers to file route plans on similar shipments to RSPA.

  o Improve the incident data collection system by revising the reporting form to provide more meaningful information.

- RSPA issued five inconsistency rulings and three decisions on appeal under Section 112 "Relationship to Other Laws" of the HMTA. Significant decisions included:

  o The IR-17 appeal, which affirmed the decision that a State law imposing a fee of $1,000 per cask of spent nuclear fuel transported through the State, which is used to fund consistent inspection and emergency response programs, was consistent,

  o IR-19, in which it was determined that State Regulations containing burdensome and discretionary permitting system for railroad-related loading, unloading, transfer, and storage of hazardous materials were inconsistent, and; 1

- o IR-22, in which it was determined that City regulations on cargo containment systems, equipment, and related areas were inconsistent because they involved exclusively Federal areas and caused delays.

- RSPA undertook or continued work on the following projects in support of its continuing focus on interaction with other Federal and state agencies and constituency groups concerned with hazardous materials transportation safety:

  - o Implemented recommendations that evolved from the Cooperative Hazardous Materials Enforcement Development (COHMED) workshops conducted during the year including the development of a menu-driven program to enable States to tap into the Department's exemptions and interpretations data bases; development of a Hazardous Materials Modular Inspection/Enforcement Training Package; and expanding the scope of COHMED activities to include emergency response planning and training.

  - o In cooperation with the Department of Energy, the Nuclear Regulatory Commission, and the Federal Emergency Management Agency, conducted a series of regional workshops focusing on radioactive materials transportation issues.

  - o Completed a Memorandum of Understanding with FEMA that delineated areas of responsibility for emergency response planning and training and identified areas of cooperation in developing emergency management programs and emergency response initiatives.

  - o Instituted, jointly with FEMA, an electronic Hazardous Materials Information Exchange (HMIX) that provides state and local emergency response officials with timely information on hazardous materials emergency management. By year's end the system was expanded to include information on most facets of hazardous materials transportation.

- FRA and RSPA continued to monitor spent nuclear fuel shipments from point of origin to final destination.

- Under the aegis of the Motor Carrier Safety Assistance Program (MCSAP) participating states inspected 96,730 hazardous materials - carrying vehicles.

- The Emergency Response Guidebook was completely revised in 1987 and a total of approximately one million copies printed and distributed.

- RSPA has begun a comprehensive review and assessment of our data collection program which will be completed in 1988. The review and assessment, performed by the Transportation Systems Center (TSC), is evaluating the current use of the data, reviewing our current program, and contacting a variety of our constituents such as states. TSC will be making recommendations as to further information we should be collecting and how we can make better use of existing data.

- RSPA increased its inspection staff to 10, an addition of 3 over the previous year. This action resulted in increases over 1986 of 8 percent in inspections conducted, over 100 percent in penalty actions initiated and 33 percent each in warning letters issued and penalties collected.

Note: This Report covers Calendar Year 1987. Studies scheduled to be conducted in 1988 will be reported on in the Calendar Year 1988 Report.

SAFETY PERFORMANCE DATA

A truly effective hazardous materials transportation management program depends on its information base. Priorities for safety regulation development, enforcement, research and training are set in part by information on the safety performance of the hazardous materials transportation industry.

The Department's principal instrument for compiling, analyzing and disseminating hazardous materials transportation safety data is the Hazardous Materials Information System (HMIS) which contains comprehensive system performance data in incidents, enforcement actions, exemptions and approvals and other elements of the regulatory program. In combination with other factors, data from the HMIS are used to identify emerging safety problems, justify proposed regulatory solutions, monitor compliance efforts, and support and illustrate training programs. The HMIS is used extensively within the Department and other Federal agencies, and by State and local governments, the press and public. In 1987, RSPA responded to 285 data requests.

The HMIS is an evolving system. Recently, additional emphasis has been placed by the Department in enhancing the system to encompass additional functions and to support new users. In response to recommendations by the Secretary's Safety Review Task Force and from the Office of Technology Assessment, emphasis has been placed on upgrading system equipment and software. RSPA also undertook a number of significant actions to increase the utilization of the HMIS. New computer hardware for the exclusive support of the HMIS was placed into service in FY 87. In addition to enhancing system reliability and capability, it is expected to pay for itself with two years based on previous years operating costs.

In cooperation with the Environmental Protection Agency, the United States Coast Guard and others, RSPA designed and tested a unified data system for telephonic reports of spills. Maintained as part of the HMIS, the system records spills required to be reported under RSPA, USCG and EPA regulations. The system went operational on January 1, 1987, and has been expanded to include EPA and USCG regional data. .

With the continued expansion of the HMIS user community to include infrequent users, efforts have been accelerated to simplify and enhance user accessibility. User-friendly, menu-driven software was developed to access the Exemption subsystem of the HMIS, with testing and deployment completed in FY 87. Using only a series of simple multiple choice type questions, the user is able to quickly obtain comprehensive data base information.

Finally, a major independent review of the HMIS was begun by the RSPA's Transportation Systems Center, encompassing both the hazardous materials and pipeline subsystems. This multiyear review will evaluate the feasibility, benefits, costs and priority of suggested system improvements and is scheduled to be completed in FY 88.

Safety Statistics

Exhibit 1 and the companion Figures I - VI summarize system performance over the past eight years. The data reveal that the general decline in the number of reported incidents involving hazardous materials, begun in 1979, continued into 1987. Highway incidents account for approximately 76 percent of the incidents resulting in injuries and for all of the fatalities. These injuries and fatalities were attributable to 153 incidents.

Exhibit 2 shows the state-by-state breakdown of hazardous materials incidents for 1987, including deaths, injuries and property damage. As expected, in general, larger and more industrialized states have a greater incidence of hazardous materials spills, injuries and damages. A similar pattern is not expected or observed for deaths due to the small number of occurrences.

Exhibit 3 displays by hazard class the total number of incidents and the amount of associated damages reported in 1987. The left side of the table presents in rank order incidents by hazard class. The top portion of the table consists of the top four hazard classes that accounted for almost 87 percent of the reported incidents in 1987, while the number of incidents occurring in the other hazard classes appears directly below. The right side of the table lists, by hazard class, the amount of damages; the rank of damages; the percentage of total damages; and the number of incidents involving damages.

Exhibit 4 displays the injuries which occurred in 1987 by hazard class in actual numbers and percentages. Also shown is the breakdown of major and minor injuries, along with the number of incidents involving injuries in each hazard class.

Exhibit 5 lists the commodities and corresponding hazard class involved in fatalities during 1987. Gasoline, with its large and daily volume of transport throughout the U.S., accounted for the greatest number of fatalities (6) during the past year.

Exhibit 6 shows the general cause of incidents involving hazardous materials transportation grouped into four categories, by mode, that occurred in 1987. The actual number of incidents in each mode by attributable cause is shown, along with corresponding percentages.

Exhibit 7 displays the release cause of hazardous materials among the modes, broken down by bulk/nonbulk shipments. The percentage of total failures attributable to each release cause is shown under a modal and bulk and nonbulk grouping. The causes listed are those contained in the HMIS, and the number of total releases include both the primary and secondary failure causes of containers. [Exhibits 1 - 7 follow]

Exhibit 1
Incident Statistics by Mode and Reporting Year

Mode	1980	1981*	1982	1983	1984	1985	1986	1987	Total
Air	226	160	96	67	107	114	122	177	1063
Highway	14,181	8,669	5,671	4,879	4,509	4,749	4,612	4984	52,252
Railway	1,272	1,145	838	868	996	842	855	919	7,735
Water	34	8	9	12	9	7	7	12	98
Freight Forwarder	2	3	6	1	145	298	150	120	725
Other	29	63	1	1	6	6	12	3	121
TOTALS	15,744	10,048	6,621	5,828	5,772	6,016	5,758	6,215	61,994

Deaths by Mode and Incident Year

Air	0	0	0	0	0	0	0	0	0
Highway	17	25	13	8	6	8	16	11	104
Railway	2	0	0	0	0	0	0	0	2
Water	0	0	0	0	1	0	0	0	1
Freight Forwarder	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0
TOTALS	19	25	13	8	7	8	16	11	107

Injuries by Mode and Incident Year

Air	8	7	0	3	15	4	12	29	78
Highway	494	394	88	118	145	195	229	250	1,913
Railway	121	222	36	68	76	53	59	23	658
Water	1	1	1	0	18	0	2	8	31
Freight Forwarder	1	0	0	0	3	1	12	28	45
Other	2	18	0	0	0	0	2	0	22
TOTALS	627	642	125	189	257	253	316	338	2,747

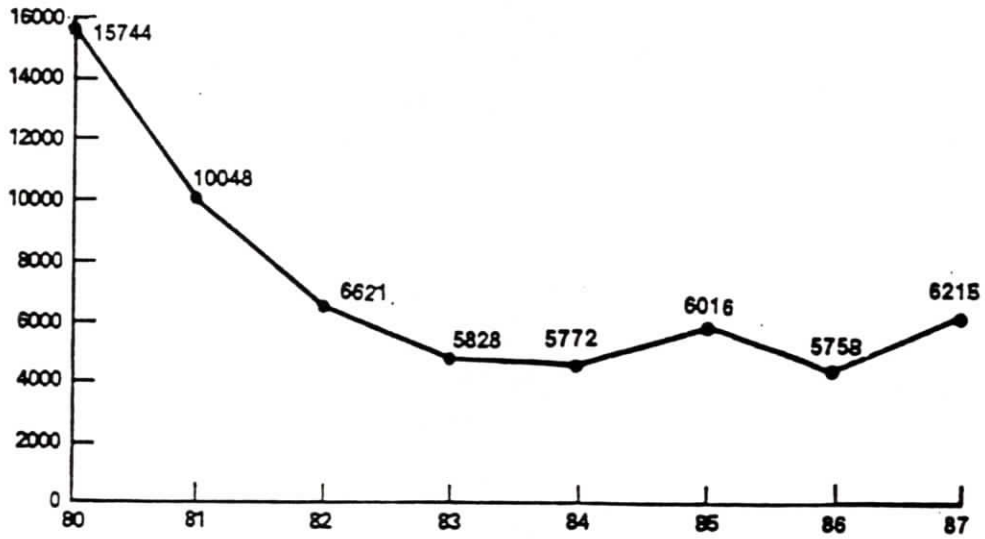
Damages by Mode and Incident Year

Air	12,286	6,860	26,851	52,575	771,226	12,524	57,017	14,983	954,122
Highway	7,367,972	14,200,784	11,382,169	9,254,885	11,120,358	12,619,212	13,103,623	15,749,873	94,795,876
Railway	2,952,508	3,652,682	4,138,265	2,559,130	3,353,339	10,273,671	3,077,925	7,439,468	37,446,988
Water	505,408	53,045	30,000	76,088	509,849	6,484	53,500	85,230	1,319,604
Freight Forwarder	100	6,500	35	300	14,011	13,918	102,117	51,126	188,107
Other	34,560	70,010	200	16,500	975	515	3,385	200	126,345
TOTALS	10,872,834	17,989,881	15,577,520	11,959,478	15,769,758	22,926,324	16,397,567	23,340,880	134,831,042

* Effective January 1, 1981, the reporting requirements were changed to exclude incidents involving consumer commodities, wet electric storage batteries, or paint, enamel, lacquer, stain, shellac, etc., in packaging of 5 gallons or smaller unless the incident results in death, injury or property damage over $50,000; the material is being transported by air; or the material is classified as a hazardous waste.

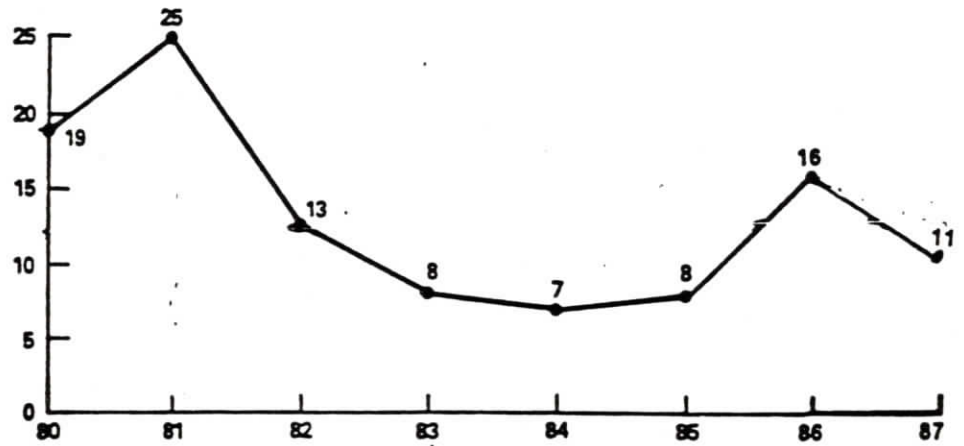
Preliminary data as of April 27, 1988

Figure I
Hazardous Materials Incidents, 1980—1987



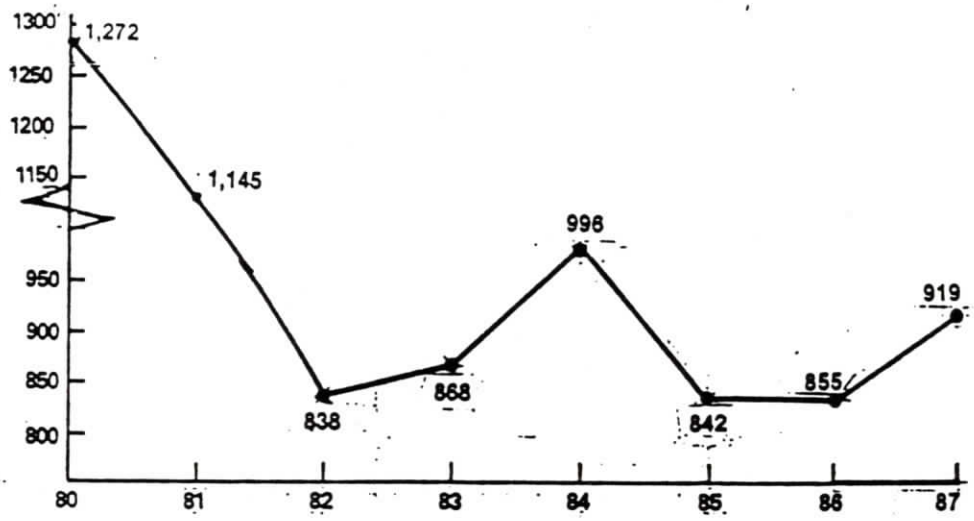
Preliminary data as of April 27, 1988

Figure II
Hazardous Materials Fatalities, 1980—1987



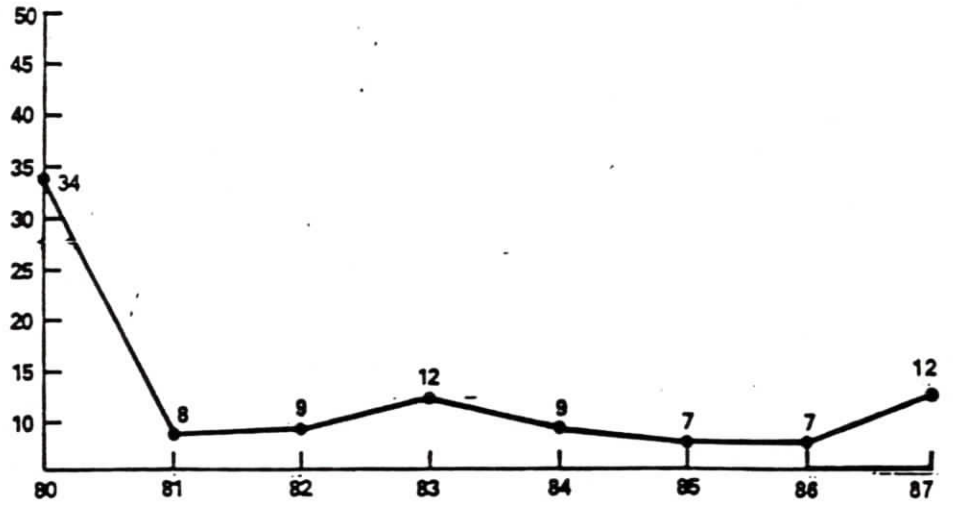
Preliminary data as of April 27, 1988

Figure III
Reported Incidents by Rail



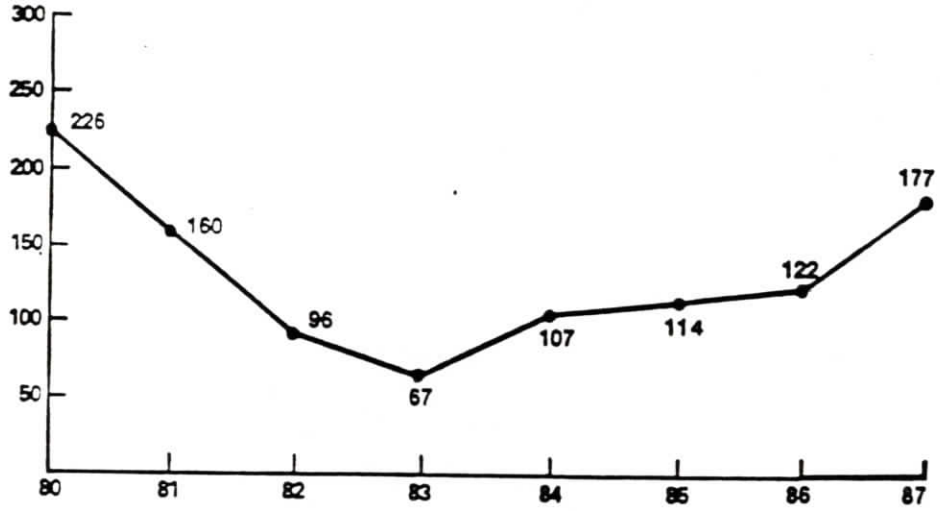
Preliminary data as of April 27, 1988

Figure IV
Reported Incidents by Water



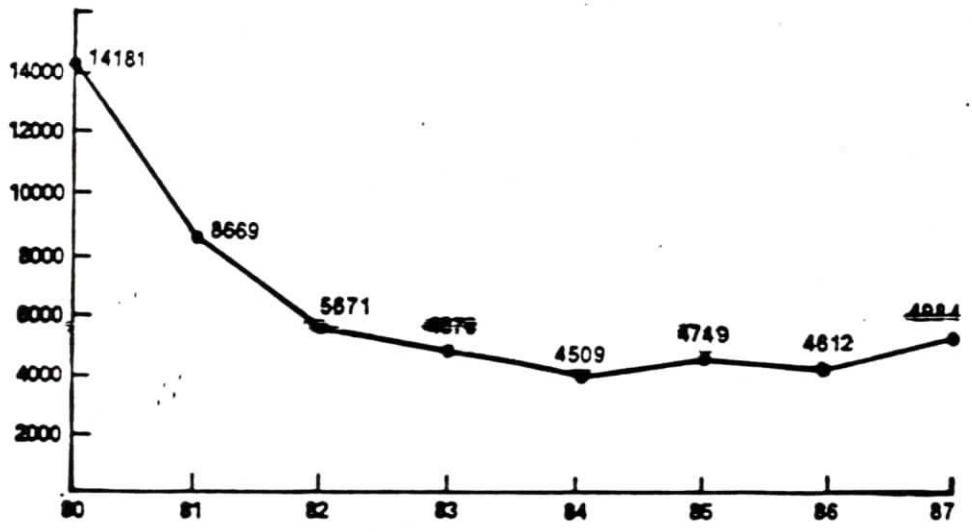
Preliminary data as of April 27, 1988

Figure V
Reported Incidents by Air



Preliminary data as of April 27, 1988

Figure VI
Reported Incidents by Highway



Preliminary data as of April 27, 1988

Exhibit 2

Hazardous Materials Incidents by State—1987
All Modes

State	Incidents	Dead	Injuries	Damages
Alabama	103	0	4	566,799
Alaska	9	0	0	27,577
Arizona	53	0	5	78,451
Arkansas	96	1	2	555,101
California	372	2	52	1,712,616
Colorado	80	0	1	159,220
Connecticut	44	0	3	99,539
Delaware	16	0	1	50,320
Dist. of Col.	7	0	0	3,500
Florida	155	1	3	529,479
Georgia	203	0	3	348,668
Hawaii	5	0	1	49,320
Idaho	22	0	0	117,829
Illinois	461	0	38	879,365
Indiana	201	0	14	244,965
Iowa	179	0	4	82,935
Kansas	131	3	1	102,951
Kentucky	97	0	0	41,364
Louisiana	140	0	54	1,004,455
Maine	16	0	0	177,886
Maryland	141	0	1	249,349
Massachusetts	87	0	2	289,972
Michigan	192	0	5	287,694
Minnesota	82	0	0	122,864
Mississippi	67	0	9	116,084
Missouri	184	0	2	194,774
Montana	15	0	0	155,487
Nebraska	31	0	0	19,005
Nevada	29	0	0	57,440
New Hampshire	8	0	1	93,220
New Jersey	173	0	16	311,794
New Mexico	59	1	4	89,801
New York	240	0	11	689,612
North Carolina	191	2	8	4,104,435
North Dakota	7	0	0	7,785
Ohio	441	0	11	770,122
Oklahoma	46	0	1	47,779
Oregon	70	0	0	60,443
Pennsylvania	540	0	13	512,476
Rhode Island	8	0	0	2,905
South Carolina	65	0	0	298,534
South Dakota	5	0	0	131
Tennessee	229	0	7	222,786
Texas	423	1	30	6,981,628
Utah	64	0	0	66,822
Vermont	7	0	0	49,798
Virginia	99	0	6	253,540
Washington	106	0	8	66,419
West Virginia	39	0	0	210,049
Wisconsin	135	0	12	30,032
Wyoming	25	0	0	91,418
Puerto Rico	9	0	5	13,885
* Other	8	0	0	40,457

* Shipments originating in the U.S. but incident occurring elsewhere.

Preliminary data as of April 27, 1988

EXHIBIT 3
INCIDENTS AND DAMAGES BY HAZARD CLASS–1987

HAZARD CLASS	REPORTED INCIDENTS	RANK	PERCENT OF REPORTED INCIDENTS	AMOUNT OF DAMAGES	RANK BY DAMAGES	PERCENT OF TOTAL DAMAGES	NO. OF INCIDENTS INVOLVING DAMAGES
TOP FOUR							
Corrosive Material	2,469	1	39.7	$ 2,114,398	3	9.1	1,766
Flammable Liquid	2,358	2	37.9	12,156,535	1	52.1	1,770
Combustible Liquid	356	3	5.7	3,831,380	2	16.4	269
Poison Liquid or Solid Cl B	225	4	3.6	1,662,068	4	7.1	173
TOTAL	**5,408**		**86.9**	**$19,764,381**		**84.7**	**3,978**
OTHER							
Oxidizer	214	5	3.4	$ 919,689	6	3.9	164
Non Flammable Compressed Gas	163	6	2.6	126,547	10	.5	49
Other Regulated Material Cl A	114	7	1.8	1,512.940	5	6.5	74
Flammable Compressed Gas	101	8	1.6	196,231	8	.8	42
Other Regulated Material Cl E	86	9	1.4	422,506	7	1.8	54
Flammable Solid	46	10	.7	10,449	15	.1	31
Organic Peroxide	39	11	.6	119,820	9	.5	35
Radioactive Material	15	12	.2	790	17	.1	5
Other Regulated Material Cl B	14	13	.2	83,162	11	.4	10
Other Regulated Material Cl D	4	14	.1	0	20	0	0
Irritating Material	3	15	.1	15	19	.1	2
Poison Gas or Liquid Cl A	2	16	.1	54,500	14	.2	2
Explosives Cl A	2	16	.1	60,050	13	.3	2
Other Regulated Material Cl C	2	16	.1	67,250	12	.3	1
Explosives Cl B	1	17	.1	2,500	16	.1	1
Explosives Cl C	1	17	.1	50	18	.1	1
TOTAL	**807**		**13.2**	**$ 3,576,499**		**15.7**	**473**
GRAND TOTAL	**6,215**			**$23,340,880**			**4,451**

Legend: All % figures rounded to nearest .1%
Preliminary data as of April 27, 1988

Exhibit 4

Injuries by Hazard Class*-1987

Hazard Class	Total Number of Injuries	Percent of Total Injuries	Number of Major Injuries**	Number of Minor Injuries	Number of Incidents with Injuries
Corrosive Material	110	32.5	14	96	80
Flammable Liquid	78	23.1	8	70	36
Other Regulated Material, Class A	18	5.3	0	18	6
Combustible Liquid	34	10.1	0	34	5
Flammable Compressed Gas	13	3.8	1	12	4
Poison Liquid or Solid, Class B	8	2.4	0	8	4
Oxidizer	5	1.5	0	5	4
Non Flammable Compressed Gas	66	19.5	0	66	3
Other Regulated Material, Class E	6	1.8	6	0	1
TOTAL	338	100%	29	309	143

Legend: All % figures rounded to nearest .1%.

* No reports received for other hazard classes

** Major injuries are those requiring hospitalization, or involving 2nd or 3rd degree burns, or resulting in injury-related loss of time at work of one or more days, such as would be caused by inhalation of strong irritating vapors. All other injuries are considered minor.

Preliminary data as of April 27, 1988

EXHIBIT 5

FATALITIES BY COMMODITY - 1987

COMMODITY	HAZARD CLASS	FATALITIES
Gasoline	Flammable Liquid	6
Ammonia, Anhydrous	Nonflammable/Compressed Gas	1
Hydrochloric Acid	Corrosive Material	1
Petroleum Naphtha	Flammable Liquid	1
Propellant Explosive	Explosive, Class B	1
Sulphuric Acid	Corrosive Material	1
	TOTAL	11

Preliminary data as of April 27, 1988

Exhibit 6

Incident Cause by Mode—1987

	Air	Highway	Rail	Other Including Water	Total	Percent of all Incidents
Human Error	120	3,416	335	95	3,966	63.8
Package Failure	56	1,300	511	40	1907	30.7
Vehicle Accident/ Derailment	0	247	65	0	312	5.0
Other	1	21	8	0	30	.5
TOTAL	177	4,984	919	135	6,215	
Percent of Incidents By Mode	2.8	80.2	14.8	2.2		

Preliminary data as of April 27, 1988

Exhibit 7

Percentage of Incidents by Release Cause by Mode—1987

Release Cause	AIR		HIGHWAY		RAIL		OTHER *		TOTAL	
	Bulk	Non Bulk	Bulk	Non Bulk	Bulk	Non Bulk	Bulk	Non Bulk	Bulk	Non Bulk
Dropped	—	19.6	2.0	11.0	.6	2.3	—	5.8	1.3	10.9
External Puncture	—	13.0	6.4	25.7	2.2	33.6	12.5	26.5	4.4	25.4
Damage by Other Freight	—	8.8	.2	12.5	—	8.6	—	12.9	.1	12.3
Water Damage	—	—	—	.1	—	—	—	—	—	.1
Damage From Other Liquid	—	—	—	.1	.1	—	—	—	.1	.1
Freezing	—	—	.1	.1	—	—	—	—	.1	.1
External Heat	—	—	.2	.2	2.2	.8	—	.6	1.2	.2
Internal Pressure	—	5.1	1.8	1.1	6.4	—	—	.6	4.0	1.2
Corrosion On Rust	—	.5	1.0	.7	1.0	—	12.5	3.9	1.0	.7
Defective Fittings	—	7.9	8.8	4.7	27.0	2.3	25.0	4.5	17.7	4.7
Loose Fittings	—	26.5	13.1	16.0	36.0	7.0	12.5	14.2	24.2	16.2
Failure of Inner Receptacles	—	.5	.2	.2	.2	—	—	—	.2	.2
Bottom Failure	—	1.4	.7	4.2	.9	4.7	25.0	6.5	.9	4.2
Bodyside Failure	—	1.9	2.0	3.8	2.2	2.3	—	6.5	2.1	3.8
Weld Failure	—	.9	2.2	.8	.8	.8	—	.6	1.5	.8
Chime Failure	—	.9	—	.7	—	3.1	—	1.3	—	.8
Other Condition	—	4.2	4.8	1.3	2.3	3.9	—	1.3	3.6	1.5
Hose Burst	—	—	4.0	—	.2	—	—	—	2.1	—
Loading/Unloading Spill	—	—	4.9	.1	.3	—	12.5	1.3	2.8	.1
Improper Blocking/Bracing	—	2.8	.2	4.2	—	18.0	—	7.1	.1	4.5
Improper Loading	—	3.3	.7	9.8	.5	8.6	—	5.2	.6	9.4
Vehicular Accident/Derailment	—	—	18.8	1.0	7.3	1.6	—	—	13.2	1.0
Venting	—	—	.6	.1	2.1	—	—	—	1.3	.1
Release of Fumes	—	2.8	.5	.4	6.5	.8	—	.6	3.4	.5
Friction Between Containers	—	—	.1	.4	—	1.6	—	—	.1	.4
Static Electricity	—	—	.1	—	—	—	—	—	.1	—
Metal Fatigue	—	—	—	.8	—	—	—	.6	—	.8
Spill Human Error	—	—	21.0	.1	1.1	—	—	—	11.3	.1
Storage Tank Failure	—	—	5.5	—	—	—	—	—	2.8	—
** Total Releases	0	215	1,233	5,203	1,158	128	8	155	2,399	5,701

Legend: All figures rounded to nearest .1%
— denotes no reports received

* Includes water.

** Total Releases include both primary and secondary releases

Preliminary data as of April 27, 1988

SPECIAL EMPHASIS INITIATIVES

Reauthorization of the Hazardous Materials Transportation Act

On July 30, 1987, the Department transmitted to Congress a major legislative proposal which would represent the first substantive amendment of the HMTA since its passage in 1974. The proposal would:

- eliminate confusion by clearly delineating Federal, state and local roles;

- recognize concurrent jurisdiction in state and political subdivisions to do highway routing;

- establish a limited safety permitting program for motor carriers of hazardous materials toxic by inhalation, class A and B explosives, and highway route controlled quantities of radioactive materials (e.g. spent nuclear fuel)

- establish a dispute resolution mechanism to resolve conflicts between and among States arising from highway routing decisions;

- provide a statutory basis for the Department to determine the validity of State or political subdivision requirements which may conflict with the Act or the Hazardous Materials Regulations (HMR), to replace the current advisory process provided by regulation.

- clearly extend the Act and the HMR to intrastate operations.

Cooperative Hazardous Materials Enforcement Development

The Cooperative Hazardous Materials Enforcement Development (COHMED) Program, in existence since 1985, underwent an extensive restructuring in 1987. This cooperative program which focuses exclusively on hazardous materials transportation was developed to enhance and complement the hazardous materials initiatives of the Motor Carrier Safety Assistance Program (MCSAP), a grant-in-aid program for motor carrier assistance. COHMED does not fund states directly (MCSAP does). It provides technical assistance, training, and information to states for development of their enforcement programs, fosters state adoption and enforcement of the Federal Hazardous Materials Regulations and thus promotes uniformity and consistency in regulation and enforcement.

The Department's hazardous material transportation enforcement program was enhanced by a steadily improving coordination and involvement with the MCSAP program for state highway enforcement of the motor carrier and hazardous materials transportation regulations. RSPA actively participated in MCSAP Tri-Regional meetings in three locations in 1987. These meetings provided an opportunity for closer cooperation and improved understanding of common goals among RSPA, FHWA's Office of Motor Carriers (OMC) and the

states. Such meetings have proved invaluable for effectively allocating staff and funding resources to enhance state enforcement of the hazardous materials regulations.

RSPA also participated in the Office of Motor Carriers' technical review of State Enforcement Plans (SEP's) for FY 88 to ensure that states maintained adequate emphasis on hazardous materials transportation in their enforcement planning. States requesting funds under MCSAP are required to submit an annual State Enforcement Plan to the Office of Motor Carriers describing their proposed use of any funds allocated under the program. OMC and RSPA review these plans at the developmental and final stages for conformity with the criteria set forth for qualification for a grant. From the involvement of RSPA in the SEP process at both stages, it has become evident that review and coordination at the planning stage is the most effective way of assuring effective hazardous materials enforcement under MCSAP.

During FY 87, RSPA provided a forum for states to meet and discuss common interests concerning hazardous materials transportation safety through a national COHMED workshop in San Diego, California. In response to state concerns expressed in this workshop, RSPA intensively reorganized the COHMED program and placed a greater emphasis on state agency direction toward common solutions to variances in state enforcement authorities and practices. RSPA also plans to sponsor a series of Federal/state regional workshops to be held in 1988 in Florida, Arizona, Massachusetts and Missouri. Strong attendance from surrounding states is anticipated.

Transportation of Radioactive Materials

The radioactive materials transportation safety record has been excellent. In over four decades of transporting radioactive materials in the United States, there has never been a death or serious injury due to a release of radioactive materials.

RSPA engaged in several rulemaking projects in 1987 which were directly related to the transportation of radioactive materials. The Hazardous Materials Regulations were amended to reference the American National Standards Institute (ANSI) standard addressing the construction, cleaning, repair, periodic inspection and testing of packagings used for transporting Uranium hexafluoride. Additional rulemaking was initiated proposing that: (1) states which designate alternative routes for highway route-controlled quantities of radioactive materials give written notice of such designations to RSPA, and (2) carriers, rather than shippers, file route plans and other information on highway route-controlled shipments of radioactive materials.

RSPA conducts surveillance inspections at radioactive materials shipper facilities and carrier terminals, including those carriers transporting large amounts of radioactive materials under DOT exemptions; monitors radioactive materials moving through ports and air freight terminals; assists the modal administrations in conducting pre- and post-trip inspections of certain spent nuclear fuel shipments, as well as in other areas of radioactive materials transportation where assistance is requested; and monitors the route plans for highway route-controlled quantities of radioactive materials required by

regulation to be filed with RSPA. Sixteen percent of all RSPA inspections carried out in 1987 were of radioactive materials shippers and shipments.

Five regional TRANSRAM workshops focusing on states' problems and concerns regarding radioactive materials transportation were held during the year. The meetings were sponsored by RSPA with the participation of DOE, NRC, and FEMA and were intended to promote coordination and cooperation among states, Indian Nations, and Federal agencies having regulatory and enforcement responsibilities for the transportation of radioactive materials. These workshops will be continued on a regional basis through 1988.

Emergency Response

Recent legislative initiatives at all levels of government have emphasized the need for emergency planning and preparedness for response to hazardous materials transportation accidents. The three principal Federal agencies involved in hazardous materials emergency response activities are FEMA, EPA and DOT. RSPA has endeavored to increase coordination and communication among these agencies toward achieving a uniform, consistent policy for hazardous materials emergency management.

In recognition of a need for clarification of overlapping responsibilities for emergency response, the Department completed a Memorandum of Understanding with FEMA to more clearly define our respective roles and identify areas of possible collaboration in developing strong emergency management and training programs. (A copy of the MOU is attached as Appendix E)

RSPA's commitment to increasing coordination and communication among agencies with emergency management planning responsibilities extends to its membership on the National Response Team (NRT). The NRT is primarily a planning, policy and coordinating body chaired by the EPA, co-chaired by the Coast Guard and composed of 14 Federal Agencies with interests and expertise in various aspects of emergency response to pollution incidents. The NRT develops and executes the National Contingency Plan for emergency response to discharges of oil into the navigable waters of the United States and releases of chemicals into the environment. RSPA's participation on the NRT ensures that the unique issues concerning emergencies involving hazardous materials in transport are adequately addressed.

In 1988, RSPA plans a DOT/FEMA sponsored workshop on emergency response for senior policy makers of Federal agencies, state and local governments, and the private sector. The purpose of the workshop is to gain assistance from the participants in formulating policy recommendations and determining new program initiatives.

RSPA has provided substantial assistance to state and local governments' hazardous materials emergency response efforts through a variety of conferences, workshops, publications and training materials. One of RSPA's most significant contributions in this regard has been the development of the Emergency Response Guidebook which is a guide to first responders' actions at

the scene of a hazardous material incident. A second contribution is the RSPA/FEMA implementation of an electronic hazardous materials information exchange that offers users (states, individuals, industry) ready access by computer or toll free telephone to current hazardous materials transportation and emergency response planning and training information. A more detailed description of the system is contained in the section on training which follows.

REGULATORY PROGRAM

The Research and Special Programs Administration is the primary element within the Department of Transportation responsible for developing a national regulatory program to protect against the risks to life and property inherent in the transportation of hazardous materials. Embodied in this regulatory program is the responsibility for the promulgation of regulations governing the transportation of such materials and the issuance of amendments and exemptions thereto. Because of the multi-modal nature of hazardous materials transportation, RSPA relies extensively on the participation of the four modal administrations in the promulgation of regulations. Participation in international standards-setting organizations to ensure that the U.S. hazardous materials industry is not confronted with a multitude of conflicting or inconsistent requirements for shipping and handling hazardous materials, is also a key element in the regulatory program.

The Hazardous Materials Regulations cover classification, packaging, handling, incident reporting, and hazard communication requirements applicable to the transportation of hazardous materials. They are continually reviewed and amended to eliminate obsolete or unnecessary requirements, address safety concerns, or convert the provisions of exemptions into regulations of general applicability.

The rulemaking process evolves from one or more of four sources: petitions for rulemaking received from the general public or other government agencies; rulemaking proposals from the four modal administrations; RSPA initiatives to improve existing regulations, convert exemptions into regulations of general applicability, or address unusual situations not presently covered by the rules; or the need to change existing regulations as a result of RSPA's enforcement experiences. Whatever the impetus that drives the need for rulemaking, the process encourages the direct involvement of the public in formulating the regulation through the solicitation of comments at the time of issuance of Advance Notices of Proposed Rulemaking (ANPRM) and Notices of Proposed Rulemaking (NPRM). Publication of a final rule is the culmination of the rulemaking process and occurs only after analysis of all public comments, internal and external coordination, and examination of its potential impacts.

During 1987, RSPA issued nine amendments to the regulations and published 13 ANPRM's and NPRM's for comment. The amendments and proposed changes to the regulations are listed in Appendix B. Ongoing regulatory actions address a variety of issues including the following:

Performance-oriented Packaging Standards- In May and November of 1987, RSPA issued NPRMs proposing to replace specification packaging requirements for non-bulk packagings with performance-oriented packaging standards based on the United Nations Committee of Experts' Recommendations on the Transport of Dangerous Goods (UN Recommendations). Also proposed were the adoption of hazard classification procedures and communication requirements generally consistent with international regulations based on the UN Recommendations and certain safety initiatives related to bulk

packagings, materials which are toxic by inhalation and other subjects. The proposed changes are intended to simplify and reduce the volume of regulations, facilitate international commerce, and promote safety through improvements to packaging and hazard communication. A public hearing was held in Washington, D.C., in November 1987. The comment period will end in early 1988, at which time RSPA will begin a detailed review and evaluation of public comments to the docket.

Emergency Response Communication- New standards for emergency response communication were proposed in 1987. These included requiring that emergency response information be included on shipping papers, and also having this information available on transport vehicles and at transportation facilities where hazardous materials are handled. The proposal is intended to improve emergency response communications and the availability of information for handling hazardous materials during incidents. RSPA is currently evaluating comments.

Intrastate Transportation of Hazardous Materials- In June of 1987, RSPA issued an ANPRM proposing to extend application of the hazardous Materials Regulations to all intrastate transportation of hazardous materials in commerce as a means of promoting national uniformity and transportation safety. RSPA is currently evaluating comments.

Uranium Hexafluoride- In 1987, RSPA published a revision to a final rule issued in 1986 concerning design criteria for certain types of packages used for the transport of uranium hexafluoride. Also an NPRM was published to address maintenance and continued use of older types of uranium hexafluoride packaging. RSPA is currently evaluating comments

Route Designation Communication- Two rulemaking actions were begun in 1987 relating to the transportation of route controlled quantities of radioactive materials. The first was a proposal to require that state agencies designating alternative routes for the transportation of radioactive materials give written notice of such designations to RSPA. The second proposed that carriers, rather than shippers, be required to give RSPA written notice of route plans.

Marine Portable Tanks- The Coast Guard began work on a rulemaking which would discontinue the design specification in 46 CFR Part 64 for marine portable tanks (MPTs) and authorize DOT Specification IM 101 and IM 102 portable tanks to be loaded and discharged while on board vessels. Design approval and inspection by the Coast Guard would be replaced by third-party inspection and approval. A Notice of Proposed Rulemaking is expected to be published in March 1988.

There were also a number of joint rulemaking actions underway in 1987.

Cargo Tank Requirements- FHWA and RSPA continued to evaluate the comments received under Docket No. HM-183, 183-A pertaining to requirements for cargo tanks. A series of working meetings were held in Washington, D.C., in 1987 with certain trade associations to discuss

comments on the proposed revisions to requirements for cargo tanks. The discussions addressed the manufacture, repair, requalification and operation of DOT specification cargo tanks and enabled both FHWA and RSPA to receive additional supportive information, and clarification on data which had been submitted by commenters. A final rule should be forthcoming towards the end of 1988.

Transport of Explosives by Vessels- The Coast Guard and RSPA moved forward with the consolidation of the regulations on military explosives contained in 46 CFR Part 146 with those in Title 49 applying to all types of explosives. The rules governing the transport of explosives by vessel would be extensively revised to align them with recently proposed amendments to the International Maritime Dangerous Goods (IMDG) Code. A Notice of Proposed Rulemaking is expected to be published in the summer of 1988.

Portable Tanks for Combustible Liquids- The Coast Guard and RSPA continued a joint project to establish regulations which would permit the carriage by vessel of combustible liquids in portable tanks designed in accordance with the requirements for DOT Specification 57 portable tanks, but which have a greater capacity and would not be required to pass a vibration test due to their large size. This type of portable tank is currently being used in the offshore oil industry under a Coast Guard approval program. This project is expected to result in a substantial savings of time and money for both the regulated industry and the Coast Guard. This action will be included with the proposed miscellaneous amendments (HM-166W) to be published by RSPA in the spring of 1988.

EXEMPTIONS

RSPA is authorized to grant exemptions to the Hazardous Materials Regulations that permit practices and procedures not specifically authorized in the regulations. Codified regulations are static in nature but hazardous materials transportation exists in a changing environment. Literally hundreds of new chemical mixtures or variations of existing mixtures are introduced into commerce each year. New packaging techniques are continuously under development, and there are a host of peculiar shipping situations and needs for the one-time movement of materials that cannot possibly be addressed by a single set of codified regulations. The exemption program provides a mechanism whereby these new materials, packaging innovations, and peculiar shipping situations may be evaluated and authorized at an equivalent level of safety or at a level of safety consistent with the public interest and the policy of the Hazardous Materials Transportation Act. Many exemptions eventually result in new regulations thereby authorizing these innovative practices to the entire population of hazardous materials shippers, carriers, and container manufacturers.

Exemption applications consist of requests for new exemptions, requests for modification of existing exemptions, requests for renewal of exemptions, requests to be a party to existing exemptions and requests for emergency exemptions. RSPA evaluates, and grants or denies these exemption

applications for new exemptions, modifications to exemptions and emergency exemptions with the full coordination of the modal administration involved.

In 1987, RSPA received 1,448 applications for exemption actions including emergency exemptions; granting 1,266, including 117 new exemptions, 51 emergency exemptions and 1,098 renewals, modifications, or parties to existing exemptions. Of this number, FRA evaluated 106 applications for both small and bulk packages of hazardous materials in addition to preparing three requests for Emergency Exemptions for the transportation of hazardous materials by rail. FHWA evaluated 245 affecting transportation by highway, FAA evaluated 90 pertaining to transportation by air and the Coast Guard evaluated 95 affecting transportation by vessel. In addition, the Coast Guard approved 12 requests to authorize the shipment of military and Class A commercial explosives in intermodal freight containers by vessel, and three other requests relating to the handling or stowage of military or Class A commercial explosives on board vessels; and issued four Letters of Authorization allowing non-DOT specification portable tanks to be used to transport combustible liquids by vessel. The total number of exemptions in effect at the end of 1987 was 1,019.

Approvals

RSPA's responsibilities also extend to inspection and approval of non-domestic cylinder manufacturers; the classification of new explosives; coordinating the registration, testing, and approval functions formerly delegated to the Bureau of Explosives of the Association of American Railroads; conducting inspections and investigations in select areas; and developing and issuing regulatory changes governing these activities. Approval actions executed during 1987 follow:

Approval Activity in 1987

Category	Number of Applications Received	Granted
Explosives Classification	3,941	4,385
Cylinder Retester	566	347
Cigarette Lighters/Packagings	56	55
Domestic Independent Inspection Agency Approvals	4	1
Repair/Rebuilders	2	2
Foreign Approvals Manufactures	2	2
Foreign Approvals Inspections	63	50
Special Approvals	397	397

Summary of Registration Activity in 1987

Drum Reconditioners	22	22
Specification 35	4	4
Specification 39	6	7
Symobl Registration	36	36
*ANFO Registrations	3	3

* Blasting Agents

The foreign and domestic manufacture, repair, retest, and reuse of cylinders used in the transportation of hazardous materials is strictly regulated. Repair facilities must be approved by RSPA with the issuance of a registration number which serves to identify that facility as authorized to service cylinders to the extent of their authorization and in accordance with the hazardous materials regulations. Seventeen companies outside the United States reported producing DOT cylinders during 1987. With the total number of manufacturers at 29, the number of manufacturers of DOT specification cylinders outside the U.S. is almost three times the number of manufacturers of high pressure cylinders in the domestic industry. Inspections were conducted in Argentina, Brazil, Mexico and Venezuela in 1987. Inspections are scheduled for China, Mexico, Venezuela, Argentina, Brazil, England, Germany, Italy, France, Canada, Israel and Singapore in 1988.

As the United States Competent Authority for all modes of transport, RSPA is also assigned the responsibility for issuing competent authority approvals and certifications under the ICAO Technical Instructions and the International Maritime Organization's Dangerous Goods Code. These approvals and certificates, required in certain instances under international regulations to permit the shipment of hazardous materials, are of great importance to U.S. shippers and carriers of hazardous materials. A total of 397 competent authority approvals and certifications were issued during the year.

INSPECTION AND ENFORCEMENT

The Department of Transportation conducts an extensive inspection and enforcement program to ensure industry compliance with hazardous materials transportation regulations and to reduce the potential for catastrophic accidents that may result from violations of the safety regulations. Responsibility for the development of hazardous materials transportation safety regulations is vested in RSPA whose primary responsibility is hazardous materials transportation safety. Modal administrations, on the other hand, are primarily responsible for carrier safety. Enforcement of hazardous materials regulations is done in conjunction with those responsibilities.

RSPA serves as the coordinator for Departmental policy. To achieve the unified posture essential to an effective hazardous materials regulatory program, RSPA convenes a bi-monthly intermodal meeting that provides a forum for the exchange of information and the coordination of inspection and enforcement activity. This modal collaboration and cooperation ensures uniformity in the application of the hazardous materials regulations and enhances the credibility of the Department's enforcement program.

In Calendar Year 1987, the Department's combined inspection resources expended approximately 208.8 work years performing 125,820 inspections of facilities, vehicles and vessels; investigating 418 incidents; initiating 1,319 penalty actions and collecting $1,466,943 in civil penalties. See Tables I through III.

Table I
Hazardous Materials Inspectors—1987

Operating Administration	Full-Time Inspectors	Part-Time			Total Work-Years
		Inspectors	Percent of Time	Work-Years	
USCG	0	838	13.4	112.2	112.2
FAA	11	192	3.4	6.5	17.5
FHWA	0	257	8.6	22.1	22.1
FRA	34	62	15.0	9.0	48.0
		104	5.0	5.0	
RSPA	8	2	50.0	1.0	9.0
Totals	53	1,455		155.8	208.8

NOTE I: Information in this report pertains to transportation by vessel of both bulk and break bulk hazardous materials.

NOTE II: The zero FHWA full-time inspectors displayed above reflects a conversion of nine regional Hazardous Materials Specialists to State Program Specialists. FHWA is in the process of reestablishing the Regional Hazardous Materials Manager positions.

Table II

Hazardous Materials Enforcement Actions by Operating Administration 1986-1987

Enforcement Actions	FAA		FHWA		FRA		RSPA		USCG*	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
Criminal Cases Initiated	0	1								
Criminal Cases Completed	0	1								
Total Fines $	0	**								
Civil Penalty Actions Initiated	85	112	137	NA	101	43	38	81	1,048	1,083
Civil Penalty Actions Completed	55	45	72	65	53	43	22	36	153	272
Violations Noted and Corrected Letters of Warning Issued							124	170	337	64
Total Civil Penalties Collected $	350,050	357,600	300,350	290,300	636,775	565,800	106,663	142,125	118,120	111,118
Average Penalty $	6,364	7,964	4,172	4,466	12,015	13,158	4,848	3,948	772	848

* Starting in 1985 Coast Guard data presented above pertains to the transportation by vessel of both bulk and break bulk (packaged) hazardous materials.

** Five years confinment.

Table III

Hazardous Materials Inspections and Investigations by Mode 1986-1987

Category	FAA		FHWA		FRA		RSPA		USCG*	
	1986	1987	1986	1987	1986	1987	1986	1987	1986	1987
Operations/Facilities										
Carriers	3,441	5,001	1,205	4,118	5,975	5,473				
Shippers			897	389	3,080	2,529	138	166		
Waterfront									3,976	4,547*
Container Manufacturers					63	93	52	38		
Drum Reconditioners							13	5		
Cylinder Retesters							31	34		
Shipment Observations							246	233		
Freight Forwarders	207	377			280	422				
Packages/Shipping Documents	11,048	14,644								
Other				10			130	185		
Vehicles/Vessels										
Railroad Tank and Freight Cars					76,763	72,367				
Vessels									22,840	29,028*
Motor Vehicles			1,080	**						
Accidents/Incidents	40	75	91	30	246	313			718	755

* Data pertains to inspections and investigations of waterfront facilities handling both bulk and break bulk (packaged) hazardous materials. Increase in number of vessels inspected is due to improved data collection methods.

** Inspections of motor vehicles are carried out by state inspectors under MCSAP. 96,730 hazardous materials-carrying vehicles were inspected.

The Department has promoted and, in fact, heavily relies on our state partners for highway enforcement of the hazardous materials transportation rules. Fifty states and territories participated in the Motor Carrier Safety Assistance Program (MCSAP) in 1987-- 47 in the implementation phase and 3 in development. Authorized under the Surface Transportation Assistance Act of 1982, MCSAP is a cooperative endeavor between the Federal Government and the states to uniformly enforce Federal and state safety hazardous materials regulations and rules applicable to commercial motor vehicles and their drivers. Of the 1,000,044 vehicle inspections carried out by states under MCSAP in 1987, 9.7 percent involved vehicles transporting hazardous materials.

The primary focus of RSPA's inspection and enforcement program is packaging in all its forms, e.g., plastic and steel drums, cylinders, fiberboard boxes, etc., and related businesses such as independent inspection, retesting, and reconditioning. In addition, RSPA expends much time and effort inspecting shipments of hazardous materials at the shipper's plant or the consolidator's dock, or somewhere in the transportation system. Shipments are examined in detail for compliance not only with regard to classification, marking, labeling, and documentation, but also for compliance with packaging specifications and requirements. RSPA also purchases containers on the open market and arranges testing to determine compliance.

In 1987, RSPA observed the 10th anniversary of its hazardous materials inspection and enforcement program. Its staff of ten inspectors, an increase of 3 over 1986, performed 661 inspections, initiated 81 civil penalty cases and one compliance order case, issued 170 letters of warning, and collected $142,125 in penalties. This represents an increase over 1986 of 8 percent in inspections conducted over 100 percent in penalty actions initiated, 33 percent in warning letters issued and 33 percent in penalties collected.

The varied coverage of the program is exemplified in the types of cases initiated: 16 cases against container manufacturers of all types; 20 cases involving shippers of general hazardous materials, including two foreign companies; 12 cases against cylinder retesters; 12 cases involving carriers and shippers of radioactive materials; three cases against independent inspection agencies; two cases involving importers of hazardous materials and one involving a freight forwarder.

In addition, RSPA initiated two enforcement programs in 1987 focusing on incident reporting and validity of exemptions. Nine enforcement cases were initiated against carriers who failed to file written incident reports following unintentional releases of hazardous materials and seven cases were initiated against companies continuing to operate under expired DOT exemptions.

In 1987, the Office of Motor Carriers' field staff expended a total of 22 work-years investigating 30 incidents, conducting 4,507 audits of shippers and motor carriers engaged in hazardous materials movements, including radioactive materials movements. This activity resulted in the initiation of enforcement cases and the imposition of civil penalties of approximately $290,300.

The OMC field staff continued its emphasis on auditing manufacturers of DOT specification cargo tanks. Ten such audits were done in 1987. This activity involved on-site inspection of production facilities, detailed audits of the manufacturers' records, and technical examination of drawings, calculations, and test reports to evaluate the manufacturers's degree of compliance with the HMR. Recommendations for correcting violations detected were offered to the manufacturer.

Within the FAA, hazardous materials inspections/surveillance activities are conducted by civil aviation security inspectors in conjunction with regularly scheduled security inspections of air carriers and airports. At a minimum, inspections are conducted of all air carriers, both U.S. and foreign, where it is determined that the air carrier (passenger or cargo) regularly accepts and transports or handles hazardous materials. These inspections are conducted frequently based on a review and analysis of prior hazardous materials shipments, incident experience and violation history.

In order to determine compliance effectiveness and ensure that freight forwarders and shippers meet their basic responsibilities in the shipment of hazardous materials by air, the FAA is continuing inspections efforts at the major air carrier facilities at major airports. These locations are considered collection points for shipments originating from many freight forwarders and shippers and are where these shipments first come under the FAA jurisdiction. Here the FAA participates in jointly coordinated inspection programs with local Bureau of Motor Carrier Safety inspectors to ensure that those commodities being transported to air carrier facilities are done so under the provisions of the pertinent regulations.

The hazardous materials enforcement program is carried out by the Office of Civil Aviation Security and includes participation in the Flight Standards National Aviation Safety Inspection Program (NASIP), which calls for special in-depth inspections of Federal Aviation Regulations (FAR) Parts 121 and 135 air carriers and other aviation-related organizations. In the past year, 17 civil aviation security inspectors have been provided as hazardous materials representatives on 16 NASIP inspections. A total of 19 hazardous materials enforcement cases were initiated as a result of these inspections.

Two FAA Washington headquarters and nine regional positions are assigned full-time hazardous materials program management and compliance and enforcement duties. In addition, there are approximately 192 inspectors who conduct hazardous materials inspections along with other civil aviation security duties. A total of 17.5 work years were expended by FAA in the hazardous materials compliance and enforcement program during 1987. The 5,378 inspections conducted during the year represents an increase of approximately 47 percent over the number of inspections conducted during 1986. In the course of these 5,378 inspections, a total of 14,644 individual hazardous materials shipments and associated shipping papers were inspected resulting in 411 hazardous materials violations being detected. The investigation of 75 hazardous materials incidents resulted in the detection of an additional 73 violations. The one criminal case concluded in 1987 resulted in a sentence of confinement for five years for the defendant.

Based on a 1986 survey of import and export shipments in intermodal freight containers passing through U.S. marine terminals, the Coast Guard in 1987, began development of a comprehensive enforcement program for packaged hazardous materials. Field research has demonstrated the need for close coordination of this program with the U.S. Customs Service at the headquarters and field level, as well as communication with cognizant state police and fire departments. The Coast Guard and Customs both examine cargo at marine terminals, and care must be taken in developing this program to encourage sharing of information obtained during such examination as well as to avoid practices which might cause conflicts in the exercise of each agency's responsibilities. In the course of field inspections, trends of non-compliance became evident in certain industries and as a result, the Coast Guard was involved in various enforcement programs targeting specific commodities, including intermodal shipments of lead-acid batteries and fireworks imports.

Inspection of containerized shipments of lead-acid batteries resulted in the detention of freight containers which contained improperly prepared shipments of used automobile and motorcycle batteries. None were placarded or properly dunnaged or manifested, and many of the batteries were cracked and leaking. All were consigned to destinations in the Far East. In addition to imposing civil penalties for such violations, the Coast Guard continued to work with the shippers and the metals recycling industry in an effort to improve future regulatory compliance and preclude recurrence of these unsafe practices. This situation presents several dangers in the transportation system. Operators of vessels and waterfront facilities are not afforded the opportunity to properly segregate these corrosives from incompatible cargoes, and response personnel may take action during an emergency they might not otherwise have taken had they been aware of the presence of corrosive liquids. During the highway segment of the container's transit it may go through tunnels where hazardous materials are otherwise prohibited. Additionally, U.S. battery manufacturers who go to significant expense to comply with environmental and safety regulations are placed at a financial disadvantage by having to compete with firms who realize substantial savings in transportation costs by circumventing those same requirements.

The Coast Guard, RSPA and the Maryland Port Administration participated in a U.S. Customs Service organized enforcement operation in Baltimore, MD, in 1987, targeting containerized import shipments of fireworks and other explosives. Customs became aware that several foreign manufacturers were misrepresenting their shipments in an apparent effort to reduce their U.S. import duty. Early in the operation it became evident that non-compliance was widespread. Forty-six containers were inspected; 31 of these were unloaded, comprising over 180 tons of fireworks, and 17 were either seized by Customs or detained by the Coast Guard until they were brought into compliance. Ten civil penalty cases have been initiated by the Coast Guard in addition to those by Customs and RSPA. Not only were Customs-required import declarations being improperly prepared and shipments falsely represented, but DOT-required shipping papers, labels and placards were improper and several explosives were not RSPA approved, as required by regulation. Some shipments have simply not been tested and approved; in

other cases, manufacturers were having one commodity approved, then using that approval number on a variety of products, a practice strictly contrary to the intent and letter of the regulations. During the second half of 1987, over 15,000 tons of fireworks were imported into the United States, the vast majority from the Far East. If improper and potentially unsafe shipments are not interdicted at the port of entry, they enter the transportation system and are carried by truck or rail to destinations all over the United States. The Coast Guard will continue to work with Customs and RSPA in attempting to improve the compliance record of the fireworks industry and reduce this significant threat by inspecting and detaining improper shipments as necessary.

Thousands of tons of packaged hazardous materials pass through U.S. ports every day on U.S. and foreign flag freight vessels. Each of these vessels is examined thoroughly by the Coast Guard at least once each year, and cargo transfer operations are monitored at least twice a year.

The Coast Guard continued to provide assistance to the Marine Corps in the loading and unloading of hazardous materials of different hazard classes, including approximately 1 million net pounds of military explosives per ship, on Military Prepositioning Ships (MPS) during 1987. These operations are pursuant to the vessels' biennial maintenance periods. These commercial vessels, under charter to the U.S. Navy's Military Sealift Command, are floating warehouses intended to provide all provisions necessary to supply Marine Corps landing forces for 30 days. Complex loading, stowage and segregation plans are required by regulation to be approved by the Coast Guard Captain of the Port for each ship. Coast Guard Headquarters representatives visited the Port of Jacksonville, Florida to provide assistance monitoring loading and reloading operations on each ship in 1987.

The Federal Railroad Administration (FRA) currently has on board 34 full-time hazardous materials inspectors. Their ranks are increased by inspectors from other safety disciplines -- 62 operating practices inspectors and 104 motive power and equipment inspectors -- who devote 15 percent and 5 percent of their time to hazardous material movements, respectively. To monitor industry compliance with the Hazardous Materials Regulations, FRA conducts hazardous materials inspections at rail facilities, shipper/consignee plants, freight forwarder facilities, and package manufacturing facilities.

At rail facilities, FRA inspectors evaluate carrier compliance with requirements governing train placement, placarding, equipment standards and proper documentation (shipping papers, notices, and train consists). They also determine if carriers have given proper notice to individual train and engine crews who are responsible for transporting these regulated commodities. Shipper/consignee inspections are conducted to monitor compliance with regulations concerning shipping papers, labeling, packaging, marking, and loading and unloading of tank cars. At freight forwarder facilities, FRA inspectors evaluate compliance with the regulations concerning documentation required for hazardous materials movements in Trailer-on-Flatcar (TOFC) and Container-on-Flatcar (COFC) service. FRA increased its freight forwarder inspections 51 percent from 1986 to 1987, as a response to increased TOFC and COFC shipments of hazardous materials. The

facilities where hazardous materials packages are manufactured are inspected to evaluate if DOT specification packages have been manufactured, fabricated, marked, maintained, reconditioned, repaired, or retested in accordance with the HMR.

Other duties of FRA inspectors include investigations of rail accidents and incidents affecting the public, as in hazardous materials spills, leakages, and emergency evacuation situations. In addition, because of a growing number of injuries to railroad operating employees resulting from improperly maintained and secured appurtenances (tank car closures - manways, valve plugs, gaskets, etc.), FRA inspects shippers facilities on a continuing basis to ensure that proper maintenance and car preparation practices are followed before any hazardous materials are shipped.

In general, the violations most frequently noted by FRA inspectors and the violations for which civil penalties were most frequently sought were improperly secured hazardous materials tank cars and improper placement of placarded cars in a train consist.

In 1987, FRA with the cooperation of the Coast Guard, FHWA, United States Customs, New Jersey Department of Transportation and New Jersey State Police conducted a mini-assessment of freight forwarders and bulk chemical shippers in the Newark, New Jersey and New York area. A total of 29 freight forwarder operations (10 marine terminals and 19 import/export agents and freight forwarders), 26 bulk chemical manufacturers and two rail carriers that service the area were inspected during a two-week period. Seventy-eight percent of the import/export agents and freight forwarders were found not to be in full compliance with existing regulations. Sixty-one percent of the bulk chemical shippers were found to be below an acceptable level of compliance and both rail carriers were also found to be below an acceptable level of compliance.

The deficiencies most frequently encountered included:

- Improper DOT shipping name and classification of commodities.
- Omission of the DOT hazard classification and placard notation for transport vehicles going in either TOFC or COFC service, by rail.
- Illegible placards.
- Failure to properly secure appurtenances (dome covers, valve plugs, etc.).
- Accepting improperly prepared documentation.
- Failure to inspect tank cars.

FRA intends to conduct more mini-assessments in geographical areas that have a high concentration of hazardous materials movements. An assessment of the Portland, Oregon area is planned for 1988 to include intermodal movements of hazardous materials in containers and intermodal (IM) portable tanks traveling in either TOFC or COFC service.

FRA continues to monitor spent nuclear fuel shipments from point of origin to final destination. Each spent nuclear fuel shipment is inspected prior to being offered for rail transportation by FRA personnel. In

addition, FRA biannually inspects the route to assure that the track, signal systems and railroad operating practices comply with Federal safety standards.

INTERNATIONAL ACTIVITIES

The United States participates in the work of international standard-setting organizations in order to promote a worldwide system of consistent modal and regional transportation safety requirements. The primary U.S. objective is to ensure, as far as practicable, that shipments of hazardous materials may move freely and safely among the various modes of transport and regions of the world. An active U.S. role in the development of international standards is essential to the economic interests of the domestic hazardous materials industry. Adoption of transportation safety standards by other nations and regional bodies throughout the world has a direct impact on U.S. shippers and carriers of exports, and inequitable or incompatible international requirements can have a profoundly negative impact on an industry which has consistently earned a balance of trade surplus. Such impacts could, therefore, affect the overall economy of the United States.

In 1987, as in the past, the Department continued to support a uniform, global approach to the safe transportation of hazardous materials through participation in the work of several international organizations:

1. The Committee of Experts on the Transport of Dangerous Goods of the United Nations Economic and Social Council (ECOSOC), including the Committee's two subsidiary bodies:

   (a) The Group of Experts on Explosives, and
   (b) The Group of Rapporteurs;

2. The Subcommittee on the Carriage of Dangerous Goods of the International Maritime Organization (IMO);

3. The Dangerous Goods Panel of the International Civil Aviation Organization (ICAO);

4. The Group of Experts on the Transport of Dangerous Goods of the United Nations Economic Commission for Europe (ECE);

5. The International Atomic Energy Agency (IAEA); and,

6. The Highway Operations Committee of the Pan American Highway Congress.

A summary of the Department's participation in the activities of each organization during 1987 is provided below:

The ECOSOC Committee of Experts on the Transport of Dangerous Goods

This Committee is the focal point of international activity regarding all transportation of packaged hazardous materials (except radioactive materials). It meets biennially to consider the work of its two subsidiary bodies, the Group of Experts on Explosives and the Group of Rapporteurs. RSPA is the agency charged by the Department of State to represent the United States on each of these committees. During 1987, the Group of Experts on

Explosives and the Group of Rapporteurs each met once. The results of their work for the 1987-88 biennium will be considered by the Committee of Experts at its Fifteenth Session in December of 1988. Those items adopted by the Committee will then be reported to ECOSOC, which is responsible for taking final action to include these decisions in the United Nations Recommendations on the Transport of Dangerous Goods, the primary body of international standards on the transport of hazardous materials.

The Committee's 1987-88 work program for its two subsidiary groups covered a wide variety of topics, including several of great interest to the United States. Among these were the following:

(a) Adoption of tests and criteria for classification of highly insensitive explosives articles. At its Fourteenth Session, the Committee of Experts adopted the U.S. proposal to amend the definition of Division 1.5 to include highly insensitive explosives articles as well as substances. The Committee then invited the United States to propose detailed tests and criteria for classification of such articles. The U.S. proposal was considered by the Group of Experts on Explosives in August and the United States was invited to submit a revised proposal for consideration at the next session. This issue is of great importance to the Department of Defense (DOD), which has invested considerable resources in developing a new generation of highly insensitive explosives in order to improve the safety of munitions transport and storage. Lacking international recognition of the unique nature of these explosives articles, the DOD has had to ship these articles under much more stringent packing and stowage requirements than is warranted by their relatively low risk. This, in turn, has increased shipping costs while reducing the availability of ports for off-loading. While the immediate benefit of the new classification will accrue to the military, many experts believe that the availability of this new classification would encourage the commercial development of such highly insensitive explosives articles and would, therefore, lead to an overall enhancement in the safe transport of explosives.

(b) Classification of Gases. The U.N. Recommendations lack a single set of classification criteria for materials of Class 2, i.e. gases. These materials present different types of risks in transport which should be addressed in the body of the Recommendations. In 1987 the United States presented a proposal, based on its ongoing rulemaking proposal (Docket No. HM-181), to establish three divisions in Class 2. This would categorize Class 2 materials as flammable, compressed or poisonous gases. While opinions differed on the preferred number of divisions, there was general agreement among the Rapporteurs on the need to adopt defining criteria. Accordingly, the United States was invited to submit a more detailed proposal for consideration at the next session.

(c) Classification of liquid oxidizers. The Fourteenth Session of the Committee of Experts adopted tests and criteria for classification of solid oxidizers, but was unable to reach agreement on provisions for liquids. In 1987, the United States presented a proposal based on the test protocol which has been in domestic use for many years. Technical opinions differed on the relative merits of including such a test in the Recommendations, but the United States was invited to submit a revised proposal reflecting the results of the discussion at the next session of the Rapporteurs.

International Maritime Organization (IMO)

The International Maritime Organization (IMO) is a specialized agency of the United Nations concerned primarily with the promotion of safety in shipping and the prevention of marine pollution from ships. IMO facilitates cooperation among governments on technical matters affecting marine safety and pollution prevention through the exchange of information under the auspices of its committees and the adoption of international agreements. The Department participates in the work of IMO through the State Department's Shipping Coordinating Committee. The Coast Guard co-chairs that committee, which coordinates all U.S. input to IMO, provides technical expertise for U.S. delegation to IMO, and with RSPA represents the Department on the IMO's sub Committee on Dangerous Goods (CDG). Technical matters concerning safety and prevention of pollution from hazardous materials are handled within four subcommittees: Subcommittee on Bulk Chemicals (BCH), Subcommittee on Carriage of Dangerous Goods (CDG), Subcommittee on Containers and Cargoes (BC), and Subcommittee on Fire Protection (FP). International requirements developed by the technical subcommittees are then approved by the parent committees: the Maritime Safety Committee (MSC) and the Marine Environment Protection Committee (MEPC). With respect to pollution prevention measures relating to bulk oil transportation, requirements are developed in the MEPC without being considered by a subcommittee.

The CDG Subcommittee publishes and maintains the International Maritime Dangerous Goods (IMDG) Code. This code is recognized as the worldwide standard for the transportation of packaged hazardous materials by vessel. U.S. regulations governing the transportation of hazardous materials incorporate substantial portions of the IMDG code by reference. At its April 1987 meeting the U.S. delegation presented 13 position papers on diverse subjects including (a) a "Grandfather" provision covering all military dangerous goods; (b) development of provisions for the implementation of MARPOL Annex III regulations for the prevention of marine pollution by packaged harmful substances; and (c) establishment of a marine pollution marking for packagings.

The CDG Subcommittee also continued work on the complete revision of Class 7 (Radioactive Materials) to align the IMDG Code requirements with those contained in the 1985 International Atomic Energy Agency Recommendation

and Class 1 (Explosives). It is anticipated that revision of these two major sections of the IMDG Code will be completed in 1988. Other actions by the subcommittee included:

- Adoption of selection criteria for mixtures and solutions of Annex III marine pollutants.

- Amendments to the publication "Emergency Procedures for Ships Carrying Dangerous Goods" and the Medical First Aid Guide (MFAG) concerning goods in "not otherwise specified" (n.o.s.) entries, and emergency twenty-four hour medical advice telephone numbers.

- Adoption of the UN standards for Flexible Intermediate Bulk Containers (FIBCs), and development of a list for substances specifically permitted for transport in FIBCs.

The United States has taken the initiative on development of provisions for the implementation of MARPOL Annex III. The purpose of Annex III is to protect the marine environment from accidental release of marine pollutants in packaged form. The Annex establishes detailed requirements concerning packaging, marking/labeling, documentation, stowage and if necessary quantity limitation for preventing or minimizing pollution of the marine environment. Any loss of marine pollutants overboard must be reported under the Annex.

The IMDG code schedules were revised in order to reflect the provisions dealing with those packaged marine pollutants thus far identified which are also dangerous goods, as well as for the new Class 9 entries listed under the new United Nations serials for Environmentally Hazardous Substances, n.o.s. The reporting requirements contained in Protocol I to MARPOL Annex III became effective in April 1987. The working group will continue its protocols to solicit information on the capabilities of packages containing marine pollutants to endure submersion.

MARPOL Annex III has not entered into force internationally, but will enter into force 12 months after the date on which not less than 15 countries, representing 50 percent of the gross tonnage of the world's merchant shipping, have become party to it. If the United States which represents 5 percent of that tonnage ratifies, the required 50 percent would be met, thereby bringing the Annex into force worldwide.

With strong U.S. leadership, the MEPC and the CDG Subcommittee have resolved most of the key implementing issues. The Coast Guard is now prepared to move toward domestic ratification of Annex III. At an interagency meeting chaired by the Coast Guard in December 1987, representatives from RSPA, the State Department, the Environmental Protection Agency and others discussed the mechanics of ratification and effects on various statutes and regulations. RSPA and the Coast Guard will be coordinating their efforts on ratification and implementation of Annex III. It is expected that this may take two years.

International Civil Aviation Organization (ICAO)

The Dangerous Goods Panel (DGP) of the International Civil Aviation Organization is responsible for periodic updating of Annex 18 to the Convention on International Civil Aviation (which prescribes basic requirements for the safe transportation of dangerous goods by air) and its supporting Technical Instructions (which provide the detailed requirements necessary to implement Annex 18). RSPA provided the panel member for the United States. In 1987, the DGP updated the Technical Instructions to provide appropriate measures for the safe transport of new chemicals entering into the marketplace; to address potential safety hazards; to incorporate advancements in packaging and air transport technology; and to address issues that result in the imposition of unwarranted economic hardships on shippers and carriers. At the same time, the DGP continued work on development of revisions to the Technical Instructions to conform to the latest revised standards of the International Atomic Energy Agency for the safe transportation of radioactive materials.

The ECE Group of Experts on the Transport of Dangerous Goods

The Group of Experts on the Transport of Dangerous Goods of the U.N. Economic Commission for Europe (ECE) is responsible for updating and revising the European Agreement Concerning the Carriage of Dangerous Goods by Road (ADR). Although the ADR is a European Convention, it is administered through a duly constituted committee of the United Nations and, for this reason, the United States (represented by RSPA) has full voting rights with respect to the ADR. At least twice each year, the ADR meets jointly with the organization responsible for updating the International Regulations Concerning the Carriage of Dangerous Goods by Rail (RID) to ensure consistency between the two sets of regulations. Although these are European conventions, they are of interest to the United States because of the direct impact of their requirements on shipments of hazardous materials from the United States. Furthermore, many members of ADR and RID, who are also members of the ECOSOC Committee of Experts on the Transport of Dangerous Goods, have demonstrated a tendency to favor close alignment of the international standards with those previously adopted by RID/ADR. The following matters of particular interest to the United States were discussed at the two joint RID/ADR meetings held in 1987:

(a) Harmonization of the RID/ADR provisions for the transport of explosives with those of the U.N. Committee of Experts on the Transport of Dangerous Goods. This issue is of particular interest to the Department of Defense because it will have a direct impact on the movement of military explosives within Europe. In 1987, the joint meeting agreed to adopt a grandfather clause which would allow goods packaged prior to the effective date of the U.N. packaging rules to continue to be transported in international commerce.

(b) Harmonization of the RID/ADR provisions for the transport of radioactive materials with those of the International Atomic Energy Agency and the U.N. Committee of Experts on the Transport of

Dangerous Goods. This effort parallels the work of other modal organizations to implement the latest revised IAEA standards by January 1, 1990. Minor amendments, however, could have significant impacts on non-European transporters and the United States has followed these efforts closely to ensure that such differences do not develop.

International Atomic Energy Agency (IAEA)

The International Atomic Energy Agency (IAEA) is an intergovernmental body chartered to foster the peaceful contribution of nuclear energy to mankind. A very necessary element in the application of nuclear technology is the transportation of nuclear materials and, consequently, the IAEA developed a regulatory system to help ensure the safe international transportation of such materials. RSPA represents the United States with respect to transportation and serves as the Competent Authority of the United States to both governmental and private parties involved in nuclear transportation, issues Certificates of Competent Authority relating to package and shipment approvals required by the IAEA transportation regulations, and provides technical expertise to the IAEA.

In 1987, RSPA continued to participate as a member of the Standing Advisory Group for the Safe Transport of Radioactive Materials (SAGSTRAM), the primary group advising the IAEA Director-General on transportation activities and initiatives involving radioactive materials. Knowledge of the status of IAEA activities is crucial to ensuring appropriate and timely U.S. input to maintain compatibility of domestic and international regulations. RSPA participation in SAGSTRAM ensures that the United States is able to promote its goal of harmonization of international regulations affecting the transport of radioactive materials.

Among the topics considered at the 1987 SAGSTRAM meeting were: (1) the implementation of the IAEA Transport Regulations (Safety Series No. 6), and (2) the evaluation of the packaging standards for air transport of plutonium. As a result of the meeting, the IAEA will continue its process of updating and revising Safety Series No. 6 for uniform application of radioactive materials transportation regulations worldwide. The evaluation of packaging standards for air transport of plutonium is expected to involve consideration of the standards adopted by the U.S. Nuclear Regulatory Commission.

Pan American Highway Congress

The Pan American Highway Congress has been in existence for 60 years. Its original purpose was to propose the integration of the Americas by the development of a highway system which connected all major cities. The current work of the Congress has been to promote regional highway transportation improvements and the sharing of technology. In this latter capacity, the Congress has initiated consideration of the safety implications of hazardous materials transportation.

At the 15th Congress, held in October of 1986, the Highway Operations

Committee established a working group to study regulations for transporting dangerous commodities and specifically invited the United States to present a paper on the transportation of hazardous wastes. The Department's Federal Highway Administration represents the United States at these meetings and, upon receiving this request, invited RSPA to participate in the working group on the transportation of dangerous commodities. This interest in hazardous materials transportation is encouraging both from the standpoint of overall safety and as an indication of potential for expanding the membership of the ECOSOC Committee of Experts on the Transport of Dangerous Goods to achieve greater geographic representation than is currently the case.

The discussions of the working group on hazardous materials transportation were quite productive and the Congress adopted a resolution calling for the establishment of a working group to produce a "Pan American Manual of Standards for Automotive Transportation of Dangerous Goods". An informal session of the working group met in Caracas in late November to consider the form of a recommendation to the Highway Operations Committee. It is expected that this issue will be included in future Committee work programs.

RSPA Actions to Recognize International Standards

The Department's active involvement in developing international standards for the transportation of dangerous goods would be of limited value if steps were not taken to recognize these standards within the framework of the domestic regulatory program. As more and more industrialized nations move toward the implementation of these international standards, U.S. industries engaged in the international sale and transportation of hazardous materials may find themselves having to comply with differing domestic and international requirements. It becomes incumbent on the Department, therefore, to recognize these standards through the hazardous materials regulations so as to minimize the economic burden that compliance with such dual standards would impose on these industries. Furthermore, the General Agreement on Trade and Tariffs (GATT) imposes treaty obligations on the U.S. to take steps to eliminate regulations which constitute non-tariff trade barriers. Similarly, under Title IV of the Trade Agreements Act of 1979 (19 U.S.C. 2532) the Department has a statutory mandate to incorporate international standards, particularly those which are performance-oriented, to the maximum extent consistent with safety. For these reasons, RSPA has long been concerned with implementing these international standards through the rulemaking process.

In May RSPA published a notice of proposed rulemaking (NPRM) that proposes to align the hazardous materials regulations with the United Nations Recommendations on the Transport of Dangerous Goods and the ICAO Technical Instructions in the areas of hazard classification, packaging and hazard communication. This rulemaking generated an extremely high level of public interest and the period for receipt of public comments had not closed by the end of 1987.

Conclusion

Considerable industry interest in the Department's involvement in these international organizations is stimulated, in large part, by the impact that the standards issued by these organizations have on U.S. industries involved in the international sale and distribution of hazardous materials. The RSPA hosts periodic public meetings to inform industry of work underway within these organizations and a number of U.S. businesses have approached RSPA with requests to initiate particular actions with various international organizations, or for assistance in obtaining approvals or information from foreign governments.

Continued participation by the Department in these standards-setting bodies is absolutely essential. Only by maintaining its active involvement can the Department ensure that the requirements developed by these international bodies promote safety in the international transportation of hazardous materials, without impeding their free movement by creating artificial trade barriers.

TRAINING AND INFORMATION DISSEMINATION

Training and education are an integral part of the Department's regulatory program and of its responsibilities for emergency response to hazardous materials spills in transportation. To promote compliance with the hazardous materials regulations, the Department sponsors a number of training and information dissemination activities designed to familiarize industry personnel with the requirements of the regulations and to educate government inspectors in enforcement procedures. The sources for this training are: (1) the Department's Transportation Safety Institute (TSI) located in Oklahoma City, OK which receives financial and technical support from RSPA and the operating administrations to provide instruction on individual modal, as well as cross-modal, regulatory responsibilities; and (2) RSPA in Washington, D.C., which offers a wide array of training materials packages and job aids to all segments of the hazardous materials enforcement and emergency response communities.

During 1987, TSI conducted a total of 24 classes in various facets of hazardous materials regulation enforcement including four on Cargo Tank Roadside Inspection, one Train-the-Trainer, 17 on basic Hazardous Materials Compliance and Enforcement and two on the Safe and Legal Transport of Radiopharmaceuticals and Labeled Compounds. Other than the last course which was developed solely for private industry, the primary beneficiary of the training conducted by TSI has been the states. Of the 768 persons receiving training during the year, 483, or 63 percent, were state and local government personnel.

One basic and four advanced classes in air transportation of Hazardous Materials were conducted at the Mike Monroney Aeronautical Center, Oklahoma City, Oklahoma. Twenty-one new inspectors received basic training, and 68 inspectors received recurrent training, Regional personnel conducted 5 training sessions for 41 FAA inspectors and participated in 11 seminar/training sessions attended by 444 persons, including operators, freight forwarders, shippers, and other aviation industries affected by the Hazardous Materials Regulations.

The FHWA's Office of Motor Carriers conducted or participated in more than 566 seminars or meetings (including hazardous materials refresher courses) covering portions of the Motor Carrier Safety Regulations and the Hazardous Materials Regulations. These seminars and training activities, attended by personnel from the motor carrier industry, shippers of hazardous materials, labor unions, and state/local governments, covered instructions in methods and procedures necessary to achieve compliance with applicable Federal regulations.

The FRA field staff conducted: 88 seminars, attended by 2,487 fire and emergency response personnel; 89 rail carrier seminars, attended by 1,528 carrier employees and officials; and two courses on rail transportation of hazardous materials, attended by 50 FRA and state enforcement inspectors.

Information Dissemination

The Department is firmly committed to the concept of safeguarding the public from the dangers incidental to the transportation of hazardous materials. This commitment is reflected in the continuing revision, update, and issuance of publications that keep the regulated community, as well as the regulators, informed concerning hazardous materials regulations and issues. In addition to sponsoring classroom training, the Department provides training and information materials for use by the regulated public (shippers, carriers, freight forwarders), emergency responders, and enforcement personnel. These aids are in the form of a variety of pamphlets, charts, posters, fact sheets, newsletters, and other handout materials offered in response to an increasing number of public inquiries for information, clarification, or interpretation of various aspects of the hazardous materials regulations.

RSPA supplies over one million pieces annually of 50 different items of hazardous materials training/information publications in response to approximately 13,000 requests from a diverse population. These requests come from fire departments, police departments, sheriffs, civil defense/emergency management agencies, corporations and individual businesses, universities and colleges, and other Federal, state, and local government agencies. To ensure that we provide the hazardous materials transportation community with the most accurate and timely information, RSPA undertook an intense update and revision of its library of guidance and educational materials in 1987. This project will continue through 1988.

Over the years, RSPA has developed and published a number of emergency response guidance documents that receive wide distribution in the emergency response community. By far, the most widely distributed of these is the Emergency Response Guidebook. Since its initial publication in 1980, approximately 2 1/2 million copies have been printed and distributed at an approximate cost of $1.8 million. It lists all hazardous materials regulated by the Department of Transportation along with suggested initial response actions in the event of an incident (spill, explosion, fire) involving these products and is made available free to first responders--police, fire and their emergency response personnel. Updated every three years to reflect the introduction of new hazardous products into the market and/or new and improved methods of handling these products in an emergency, it was completely revised in 1987. A newly introduced distribution system utilizing designated state coordinators as distribution points has proven to be faster and more effective in getting the Guidebook to the target audience. The Guidebook has been translated, reproduced and distributed by Mexico, Sweden, and Japan. Saudi Arabia is now in the process of translating it into Arabic.

RSPA and the Federal Emergency Management Agency established a computerized Hazardous Materials Information Exchange (HMIX) to improve the dissemination of timely information on hazardous materials and emergency response training. The HMIX allows users to receive and exchange information regarding the preparation for, and prevention and mitigation of hazardous materials incidents in two ways -- personal computer or by calling a toll-free number, 1-800-752-6367.

With a personal computer, users can reach an electronic "bulletin board" containing information on Federal and state hazardous materials and emergency response training courses, instructional materials and literature listings, private sector activities, hazardous materials regulations updates, official interpretations, and other relevant information. The bulletin board is designed for two-way communication as well. The toll-free number provides on-line telephone assistance and information to those individuals without computer capabilities. Between its inception in January 1987 and December 1987, the user level increased to almost 1,400. By far, the most active users are at the local level which indicates that we are meeting one of our major goals, and that is to get valuable hazardous material and emergency response information to local planners and responders.

The Coast Guard pursued numerous public education efforts in the area of hazardous materials transportation. The following articles on hazardous materials were published in the Coast Guard's Proceedings of the Marine Safety Council, a magazine which receives wide distribution in the Coast Guard and the maritime industry:

- "Barge Transportation of Radioactive Materials"
- "The International Maritime Organization (and What the Coast Guard Does There)"
- "SOLAS Working Group on the Carriage of Dangerous Goods and the IMDG Code"
- "Fire and Explosion on the Letetia Lykes"
- "CHRIS? Who's CHRIS?"

In addition, each issue of Proceedings featured a "Chemical of the Month" giving the properties and hazards associated with various hazardous materials. The Coast Guard was also featured in several articles in the international publication, Hazardous Cargo Bulletin.

Technology Research

The Department's hazardous materials research and technology program provides technical support for development, modification, and interpretation of the hazardous materials regulations and enforcement activities. Research is conducted to find answers to special problems or to address unique safety concerns where current regulations may not fully provide for technological advances and to evaluate the feasibility of enforcement action. Transportation of hazardous materials is a multimodal activity, therefore, the Department's research and technology initiatives span all modes, address a multiplicity of issues that reflect individual modal commitments to improving safety and efficiency, and run the gamut from routine performance testing to the more complex applied research programs. Highlights of the Department's research activities carried out through its operating administrations during 1987 follow.

(1) Evaluation of Toxicity Hazards in Transportation-Phase II. This phase involved an investigation and evaluation of criteria for the packaging of bulk quantities of liquid and gaseous materials which are toxic by inhalation and considered three major areas: (1) development of design criteria for bulk packagings based on performance criteria for accidents; (2) development of a basic design methodology for typical rail tank cars, cargo tanks and portable tanks that will analytically pass the performance criteria; and (3) evaluation of the effect of the quantity spilled and method of spill for various representative groups of liquids and gases toxic by inhalation. Results evolving from this phase include:

(a) Of five abnormal environments identified for both highway and rail transportation -- impact, puncture, fire, immersion and crush -- the first three were judged to be significant contributors to the likelihood of packaging failure. The study recommended that packagings for materials toxic by inhalation be subjected to a sequential test program of a drop, puncture and thermal test.

(b) A design methodology was developed for bulk packagings that will analytically pass the established performance criteria.

(c) Establishment of the concept of "Quantity of Concern" for the transportation of materials toxic by inhalation. The quantity of concern is the amount of material that, if spilled or released, has the potential to produce a downwind vapor concentration that may be dangerous to individuals. Formulas were developed to help estimate the quantity of concern based on a material's physical properties, its toxicity and vapor pressure. The results of this work shows that the quantity of concern is much smaller than bulk quantities now transported. It is concluded that packaging integrity and accident survivability characteristics are central to the safe transportation of highly toxic materials.

(2) Evaluation of Cracking in Aluminum Cylinders. Examination of a group of cylinders to determine the extent of cracking and to assess the significance of such cracking resulted in the recommendation that: additional inspections be made of cylinders that have been in service to determine if service pressure, time of use and commodity carried have an effect on the cracking; and a careful visual inspection be performed during the required periodic retest. RSPA published a safety advisory and Advance Notice of Proposed Rulemaking in July 1987 that addressed this problem.

(3) Improved Design, Production, and Requalification Tests for Gas Cylinders Fabricated from High Strength Steels. With millions of high pressure gas cylinders in service in the nation's factories, hospitals, and homes, the use of high pressure cylinders represents one of the public's greatest exposures to hazardous materials. An industry trend towards the use of higher strength materials to reduce cylinder weight and thereby gain substantial productivity increases, has made necessary the development of design, production, and requalification tests to verify the safety of these cylinders. Preliminary work related to the development of such tests has brought into question the validity of production and requalification tests used for present DOT Specification cylinders-- thereby amplifying the critical need for the development of improved design, production and requalification tests.

(4) Development of Definition and Test Method for Flammable Gas-Phase I. This phase of the study involves a comprehensive literature survey on the definition and test methods for classification of flammable gas. Publications from various governmental, international, foreign and private sources were examined. This study will provide RSPA with specific recommendations with regard to the definition of flammable gas and proposals for further work, if necessary, to develop a suitable test method for classification of flammable gas. The results of this study will be used to support RSPA's rulemaking efforts on HM-181.

(5) Development of Test Criteria for Evaluating Detonation, Fragmentation and Radiant Heat Hazards of Explosives. One new task was added to this project to evaluate projection hazard criteria for certain Class C explosive devices. Results obtained so far indicate there are some deficiencies in the U.N. scheme regarding the classification of these Class C explosive devices. One objective of this project is to develop a modification to the U.N. classification scheme that the U.S. could propose to the U.N. Group of Experts on Explosives. Additionally, this project is to provide RSPA with an evaluation of those unique test methods and criteria for explosives contained in Title 49, CFR to see if they can be merged with the U.N. scheme or if some of the existing criteria should be retained in DOT's major revision of the explosive regulations which are scheduled for completion in 1990.

(6) Development of Test Criteria for Evaluating Detonation, Deflagration, Mechanical Sensitivity and Explosive Power of Organic Peroxides. Development of the test methods and criteria for assessing

the hazardous properties of organic peroxides and determining packaging, temperature controls and other requirements for safe transport of organic peroxides has been completed. Results obtained from the previous tasks under this study enabled the U.S. to play an active role in the development of the U.N. classification scheme for organic peroxides which was adopted by the U.N. Committee of Experts for Transport of Dangerous Goods in December 1986. Three new tasks were added to this project in 1987 to further refine the Gap Test method for assessing the detonability of organic peroxides in paste and gel forms. This project should provide RSPA with sufficient information for adopting the U.N. classification scheme for organic peroxides into RSPA's HM-181 rulemaking.

(7) Highway Transportation of Radioactive Material. Work continued throughout 1987 on projects already initiated. These projects include:

(a) Evaluation of the radiological consequences of release of low specific activity radioactive material (LSA) during an accident;
(b) Study of the consequences of severe accidents involving radioactive material in large numbers of Type A packages: and
(c) Tabulation of the relative detection sensitivity for 2 radiation detection instruments for the types of radioactive materials being transported.

The FHWA continued its research on "Evaluation of the Corrosion Integrity of Cargo Tanks." A Draft Final Report has been submitted and is under review. A Final Report is anticipated in early 1988.

The study evaluated the corrosion integrity of cargo tanks currently in operation for the purpose of developing and recommending cost effective procedures for monitoring and controlling cargo tank corrosion so as to minimize corrosion-induced cargo tank structural failures.

Preliminary conclusions are that:

- Pitting-type corrosion of stainless steel cargo tanks is the most frequent unanticipated cargo tank corrosion problem;

- Most preventive measures used are generally adequate, in themselves, however, specific improvements may be made. The most critical preventive measure--proper selection of tank type and material for a given load--sometimes is not properly applied because of the inadequate corrosion technology background of the individual making the selection and/or inadequate knowledge regarding corrosion characteristics of the load;

- Carriers often haul incompletely identified waste products and combinations of products whose corrosivity is not known and cannot be assessed by the corrosivity of the individual products. This can lead to the carriers' selection of the wrong cargo tank for the load and probably caused more cargo tank corrosion than any other

factor;

- There may be a need for more stringent quality control and inspection requirements for the welding of stainless steel tanks, both during tank construction and repair; and
- The observed practices of those ASME-certified repair facilities included in the study were satisfactory. Non-code repairs are being made in sections of the country in which there are no ASME-certified repair facilities. Most facilities use unsophisticated techniques for inspection for corrosion damage, particularly regarding stress corrosion cracking.

FRA's Office of Research and Development continued research on tank car improvements, tank car damage assessment and intermodal transportation of hazardous materials. The following research projects were completed in 1987:

- Puncture testing of one-fifth scale, and full scale tank cars designed for chlorine service;

- Simulated derailment tests of various configurations of MC 307/312 cargo tanks and IM 101/102 portable tanks in Trailer-on-Flatcar and Container-on-Flatcar service;

- Investigation of residual stress in tank cars with attachments and with reinforcement pads.

Research that continued in 1987 included investigation of cracks in stub sill tank cars. This program will continue into 1988 with testing of stub sill tank car fatigue life. Work continues on critical flaw size for tank cars in accidents; testing of a hazardous chemical monitor; a prototype transponder for hazardous material car identification; and on analysis of the rail fire environment and its effect on spent nuclear fuel rail casks.

APPENDIX A
1987 ANNUAL REPORT TO CONGRESS ON HAZARDOUS MATERIALS TRANSPORTATION
U.S. COAST GUARD BULK ACTIVITIES

PREFACE

In addition to enforcing the Hazardous Materials Regulations in 49 CFR 171-179 as they pertain to packaged hazardous materials in the water mode, the U.S. Coast Guard issues and enforces other regulations applicable to the transportation of packaged and bulk hazardous materials by vessel and at waterfront facilities. Bulk shipments, which include oil and a broad variety of other hazardous materials, are regulated under the authority of the HMTA and other laws, and by regulations in 46 CFR Subchapters D (Tank Vessels), I (Cargo and Miscellaneous Vessels), N (Dangerous Cargoes), and O (Certain Bulk Dangerous Cargoes). Packaged shipments are regulated under the authority of the HMTA and the Ports and Waterways Safety Act (33 USC 1221 et seq.), and by regulations in 49 CFR 171-179 and 33 CFR Subchapter L. Information presented by the Coast Guard in this Appendix pertains to bulk shipments of hazardous materials by vessel and at waterfront facilities.

Some of the information contained in this Appendix is also provided in various sections of the main body of this report. When information is repeated it is in order to present a comprehensive picture of the Coast Guard's efforts in that area.

REGULATORY PROGRAMS

In addition to the regulatory projects discussed earlier in this report, the Coast Guard had regulations under development during 1987 pertaining to bulk shipments of hazardous materials and prevention of pollution of the environment by hazardous materials in transportation. An estimated total of 1767 work-days were expended by the Coast Guard on hazardous materials regulatory projects, which included the following:

Implementation of MARPOL Annex II

These rules implemented MARPOL Annex II for ships. Annex II seeks to control operational pollution and minimize accidental pollution from a group of cargoes termed "noxious liquid substances (NLS)," which includes polluting chemicals shipped as liquids in bulk. Operational pollution is that resulting from normal ship operations related to carrying cargoes, such as in the discharge of tank washings to the sea. The vessel regulations amended 46 CFR Parts 98, 151, 153 and 172 and 33 CFR Part 151 by promulgating design and operating requirements for United States self-propelled ships, oceangoing non-self propelled ships and foreign ships operating in U.S. waters that carry NLS in bulk. The regulations became effective April 6, 1987.

MARPOL Annex II Reception Facilities.

These regulations require ports and terminals to make reception facilities available to receive residues and mixtures containing noxious liquid substances (NLS) from ships and implement the backpressure requirements of MARPOL 73/78. The regulations ensure that ships suffer no undue delay in discharging this material to a reception facility. The regulations became effective April 6, 1987.

Hazardous Substances Pollution Prevention

As part of a continuing effort to protect the safety of ports and the environment, the Coast Guard is revising the present Oil Pollution Prevention Regulations in 33 CFR 154-156 to broaden their applicability to include vessels and facilities which transfer hazardous materials other than oil. A Notice of Proposed Rulemaking will be published in March, 1988 and the final rule in the Fall of 1988.

Incinerator Vessels

A notice of proposed rulemaking on hazardous wastes incinerator ship design and construction was published on August 25, 1986. This rulemaking: (1) applies the requirements in 46 CFR Part 153 for chemical tankers carrying commercial cargoes, to incinerator ships; (2) applies requirements applicable to large fired units such as boilers and hot water heaters to the waste incinerators to ensure safe operation and; (3) applies additional equipment requirements to ensure the safe transfer of wastes from cargo tanks to the incinerators. Compliance with these requirements would be a prerequisite for an incinerator vessel to carry and burn bulk hazardous wastes at sea.

A large number of comments were received. The Coast Guard has prepared responses to each of them, and a final rule will be published in early 1988.

Safety Standards for Existing Self-Propelled Vessels Carrying Liquefied Gases.

This rule revises U.S. regulations for existing gas ships carrying bulk liquefied gases in U.S. waters by adopting certain standards of the IMO Existing Gas Ship Code that are not currently in U.S. regulations. The rule makes U.S. regulations for existing gas ships compatible with the internationally accepted standard. The rule improves the level of safety associated with the transport of liquefied gases, and streamlines Coast Guard certification procedures by reducing plan review. The NPRM was issued March 14, 1985, in the Federal Register (50 FR 10264). The final rule is expected to be published in 1988.

Ships' Stores.

The Coast Guard continued work on a project to completely revise the regulations contained in 46 CFR Part 147 for the shipboard use of hazardous materials on vessels during normal operations. This docket will incorporate

by reference the requirements of the Consumer Product Safety Commission thereby obviating the need for Coast Guard certification of consumer type products. The scope of the regulations was extended to address Mobile Offshore Drilling Units (MODUs) and outer continental shelf facilities. The regulations also address the use of hazardous materials in industrial systems. A NPRM was published July 23, 1987, and a final rule is expected to be published in mid-1988.

Liquefied Natural Gas Waterfront Facilities

The Coast Guard and RSPA have agreed to a revision of the February 7, 1978, Memorandum of Understanding (MOU) between the Coast Guard and the Materials Transportation Bureau concerning Liquefied Natural Gas Waterfront Facilities. Because of this revision, which increases RSPA's area of jurisdiction on these facilities, RSPA developed a Notice of Proposed Rulemaking (NPRM) to revise their regulations in 49 CFR 193. At the same time the Coast Guard developed an NPRM which, in addition to the changes to jurisdiction, adds safety regulations for LNG transfers at waterfront facilities. The NPRMs were published on May 16, 1986. RSPA's final rule was published on January 8, 1987, and the Coast Guard final rule will be published in February, 1988.

EXEMPTIONS AND APPROVALS

Bulk Chemical Classification

When new chemical and petroleum products are proposed for bulk shipment by tankship or barge, the Coast Guard reviews the chemical, physical, flammability and health characteristics of the commodity to develop appropriate shipping requirements. These requirements include such specifications as hull type, venting, gauging, fire protection and any special requirements necessary for safe shipment. Approximately 30 new products were evaluated in 1987. An increasing number of submissions are for waste solutions, often containing toxic chlorocarbons, heavy metals and insecticides/pesticides. Waste solutions require careful review since compositions tend to vary and specific health data are seldom available.

In addition to domestic classifications, the Coast Guard performs nearly all interim evaluations for international shipping by tanker. This involves development of tentative requirements and reference cargoes before official requirements are developed by the IMO Subcommittee on Bulk Chemicals and entered into the International Bulk Chemical Codes. A Coast Guard representative chairs the IMO Working Group that develops the international requirements for the Codes. The Coast Guard's work on interim evaluations is well recognized by classification societies and other national maritime administrations and is used with a minimum of technical review.

Bulk Solid Hazardous Materials.

The Coast Guard administers regulations for the carriage of solid hazardous materials in bulk on board vessels (46 CFR 148). These regulations are intended to ensure that bulk solid hazardous materials are shipped and handled in a manner which is safe and protects the environment. The most common hazardous materials carried in bulk solid form are listed in a table of permitted cargoes in 46 CFR 148 along with their carriage requirements.

However, unlisted hazardous cargoes may be carried after evaluation and issuance of a special permit by the Coast Guard. During 1987, a total of 4 new special permits were issued and 16 special permits renewed for the carriage of unlisted cargoes. An estimated 20 work-days were expended on the effort.

Letter of Compliance Program.

Under 46 CFR Parts 153 and 154, the Coast Guard issues Letters of Compliance (LOCs) with Subchapter O endorsements to foreign-flag vessels transporting hazardous liquid chemicals and liquefied gases in bulk. Issuance of these documents fulfills a requirement in law that foreign vessels operating in the U.S. possess a certificate endorsed to allow carriage of these hazardous liquids in bulk.

As in prior years, 1987 saw an increase in the number of foreign vessels transporting chemicals and liquefied gases in the U.S. Approximately 260 full LOC examinations and an equal number of annual examinations were conducted on foreign chemical and liquefied gas tankships by the Coast Guard. Nearly 1300 submittals were received from industry and from Coast Guard field offices on matters concerning vessel certification and deficiencies, regulatory interpretations, and general inquiries.

An estimated 3 work-years were expended on this activity in 1987.

Marine Safety Information System (MSIS)

The MSIS is used extensively to carry out the Letter of Compliance program. Subchapter O Endorsements are maintained in the system for all vessels so that they can be utilized by Marine Inspection and Marine Safety Offices in conjunction with LOC examinations of foreign-flag chemical and liquefied gas tankers.

A "universal" Certificate of Compliance is being developed It will replace both the LOC and the Tank Vessel Examination Letter, which is issued to foreign-flag crude and product oil tankers which operate in U.S. waters. The COC will be an MSIS product, able to be generated at field units throughout the Coast Guard. The Coast Guard expended an estimated 10 work-days on this project in 1987.

INTERNATIONAL ACTIVITIES

See the International Activities section of the main body of this Report for a description of the International Maritime Organization (IMO).

A major facet of the Marine Environment Protection Committee's (MEPC) efforts has been the development, improvement and implementation of the International Convention for the Prevention of Pollution from Ships, 1973, as modified by the Protocol of 1978 relating thereto, as ammended (MARPOL). Three of the five MARPOL Annexes pertain to the environmental aspects of the transportation of hazardous materials: Annex I - Regulations for the Prevention of Pollution by Oil; Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk; Annex III - Regulations for the Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Forms, or in Freight Containers, Portable Tanks or Road and Rail Tank Wagons.

The Coast Guard represented the United States at the 24th and 25th sessions of the MEPC in 1987, at which, in addition to those identified earlier in this Report, the following papers were presented:

Paper #	Topic
24/Inf. 9	A list of MARPOL Annex I reception facilities certified as adequate with the U.S.
24/18/9	Proposal providing comment and recommendation on periodic and intermediate surveys of crude oil washing systems under Annex I.
25/3/3	Major proposal regarding the discharge of clean ballast from oil tankers operating with a waiver under Regulation 15(5) of MARPOL Annex I.
25/Inf. 10	Updated list of MARPOL Annex I reception facilities certified as adequate within the U.S.
25/Inf. 13	List of MARPOL Annex II reception facilities certified as adequate within the U.S.
25/3/4	Proposal providing recommendations on implementing pollution category changes in carriage requirements, resulting from GESAMP hazard profile revisions for substances listed in MARPOL Annex II.
25/12/Add. 8	Notice on the availability of published materials in the U.S. used to implement the provisions of MARPOL Annex II.
n/a	Annual Enforcement Report for MARPOL.

In addition to the presentation of the above papers, the following was accomplished at MEPC 24:

- Committee reaffirmation that any ship not in full compliance with MARPOL Annex II by April 6, 1987 will be in violation of MARPOL 73/78, and Committee adoption of a resolution for ensuring uniform port state enforcement actions for those ships not in full compliance.

- Committee agreement to not allow carriage of MARPOL Annex II category A, B, and C noxious liquid substances in deep tanks of dry cargo ships.

- Committee agreement on the U.S. recommendations concerning periodic and intermediate surveys of crude oil washing systems under MARPOL Annex I.

At MEPC 25:

- Unanimous adoption of amendments to MARPOL Annex I to provide for the designation of the Gulf of Aden as a Special Area.

- Committee agreement to the U.S. proposal on the discharge of clean ballast from oil tankers operating with an equipment waiver under Regulation 15(5) of MARPOL Annex I.

- Committee agreement for the IMO Secretariat to solicit views of member states on the need for possible development of and Annex VI to Marpol to provide for the control of pollution by noxious solid substances in bulk.

The Subcommittee on Bulk Chemicals (BCH) has responsibility for international safety and pollution prevention requirements dealing with the bulk transport of hazardous liquids and liquefied gases. As such, the Subcommittee has responsibility for: (1) the Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk (Bulk Chemical Code or BCH Code), and a revised version called the International Bulk Chemical Code (IBC Code); (2) the Code for the Construction and Equipment of Ships Carrying Liquefied Gases in Bulk (GC Code), and a revised version the International Gas Carrier Code (IGC Code) and; (3) Annex II of the International Convention for the Prevention of Pollution from Ships, 1973 (MARPOL). Once developed at IMO, the Codes, Annex II, and related documents are implemented by incorporating them into U.S. regulations. The various IMO documents are all in some stage of being placed into regulations.

The most significant accomplishment of BCH in 1987 was to resolve numerous issues relative to implementation of MARPOL Annex II. Amending Annex II was a major U.S. initiative at IMO and fulfilled a DOT Environmental Initiative. Coast Guard recommended amendments were proposed at IMO and within a year won IMO support. The Annex II amendments became effective April 7, 1987. The amendments are recognized by IMO member countries, environmental groups and the marine chemical transportation industry as a significant improvement over the original Annex II requirements and as an effective and practical means of

controlling marine pollution by chemical tankers. The combination of ship and facility capacity for waste reception will eliminate the annual discharge of approximately 820,000 gallons of NLS per year from U.S. vessels alone in U.S. waters.

In support of Annex II, the Subcommittee developed interpretations on the application of Annex II to vessels engaged in ocean dumping in accordance with the London Dumping Convention and prepared draft guidelines on the carriage of dangerous and noxious liquids on offshore supply vessels. Carriage requirements for many chemicals proposed for bulk shipment were also approved. In addition, the Subcommittee developed interpretations of existing international Codes and Conventions and continued work on revising cargo tank venting requirements for chemical tankers carrying flammable hazardous liquid chemicals.

The IMO Subcommittee on Fire Protection (FP) has responsibility for international safety requirements dealing with fire protection on board vessels, including vessels carrying hazardous materials. The Coast Guard participated in the 32nd session of the FP Subcommittee, which met in January, 1987. During that session the Subcommittee continued to review the testing procedures for devices to prevent the passage of flame and permissible operational procedures for gas freeing and tank washing evolutions aboard vessels carrying hazardous materials. The subcommittee also agreed on fire protection requirements for ships dedicated to the carriage of irradiated nuclear fuel in casks, and reviewed and agreed upon revisions to the "Guidelines for the Transport and Handling of Limited Amounts of Hazardous Materials on Offshore Support Vessels."

INSPECTION AND ENFORCEMENT

Tank Vessel Examination Program

Millions of tons of oil and crude and refined oil pass through U.S. ports each year, on U.S. and foreign flag tank ships and barges. Each of these vessels is examined thoroughly by the Coast Guard at least once each year, and cargo transfer operations are monitored at least twice each year. In 1987, 200,367 transfers took place in U.S. ports, of which 6333 were monitored by Coast Guard personnel.

Responding to and investigating reports of oil and other hazardous materials discharges resulted in a considerable expenditure of Coast Guard resources in 1987. Many of these investigations resulted in civil penalty action being initiated for violations of the hazardous materials and/or pollution prevention regulations. In 1987 the Coast Guard received 9401 reports of discharges of oil and other hazardous materials. The Coast Guard subsequently conducted 8500 investigations. These investigations resulted in 2973 reports of violations being initiated, and expenditure of approximately 64 work-years.

TRAINING AND EDUCATION

The Coast Guard offers a two-year program of hazardous materials postgraduate training in major universities around the country leading to a Master of Science degree that supports the Coast Guard's various hazardous materials related missions. Programs are available in the disciplines of chemical engineering and industrial hygiene. Graduates of this postgraduate program are considered specialists in the marine transportation of hazardous materials. Their projects may include:

- review of the physical, reactivity, combustion and toxicological properties of chemicals proposed for shipment;
- development of specifications for containment systems for each chemical;
- preparation of research and other support work for several International Maritime Organization committees.
- review of chemical tanker and liquefied gas containment system design standards and regulations;
- study of occupational safety and health guidelines for the shipboard crew; and
- casualty analysis of shipboard chemical fires and explosions.

Normally, four quotas a year are required to fill expected billet vacancies with an average of six officers in school at any time. In 1987 two officers graduated, one officer commenced school and two officers continued with the second year of the program.

One highlight in the area of training deals with a course the Coast Guard is developing. Gas hazards in vessel tanks present some of the greatest threats to personnel and property in shipyards and on board underway vessels. Explosive, toxic, or reduced oxygen atmospheres present a constant threat in daily operations involving tank entry or hot work. Reduction of these hazards relies heavily upon competent persons to test atmospheres and maintain ventilation for vapor reduction. These persons must have available adequate procedures and knowledge of test equipment in order to be effective. There are presently no regulatory or voluntary standards for the training and competency of these persons. In partial answer to this need the Coast Guard has joined with OSHA, the National Fire Protection Association, and interested industry associations such as the American Institute of Merchant Shipping and the American Waterways Operators to support and develop a public training course for competent persons involved in testing confined spaces on vessels.

The course curriculum establishes appropriate procedures for confined space testing, use of appropriate testing equipment, and familiarization with principles of protective procedures such as tank ventilation. The course was successfully presented in New York City and Mobile, AL in 1987, and several more presentations are scheduled for 1988.

The Coast Guard offered a variety of hazardous materials training programs in 1987 in such courses as Hazardous Chemicals, Port Operations, Explosive Handling Supervision, and Port Safety and Security. These training programs, which cover other areas in addition to hazardous materials, were offered at the Coast Guard's Reserve Training Center in Yorktown, Virginia to 823 persons. 28 instructors spent a total of 24.1 work-years teaching hazardous materials in these seven courses; additionally, 3.8 work-years were expended in administrative support of the courses.

In addition to these programs, On-Scene Coordinator/Regional Response Team exercises provided simulation training to approximately 1500 people from the Coast Guard, other federal, state and local agencies, and the general public in Hazardous Materials Incident Response with approximately 5 work-years expended by the trainers. In 1987, field units also expended approximately 39 work-years on in-house training.

During 1987, the Coast Guard pursued numerous hazardous materials transportation related public education efforts. In addition to those identified earlier in this Report, the following articles on hazardous materials were published in the Coast Guard's Proceedings of the Marine Safety Council:

Beware of Gassy Coal
The Coast Guard Incinerator Ship Program

The Coast Guard also provided a speaker for two seminars sponsored by the International Maritime Organization on the requirements of MARPOL. One seminar was conducted in Argentina and the second in China. Two Coast Guard representatives presented papers on hazardous materials issues at the Marine Section of the 1986 National Safety Congress. Presentations on marine mode hazardous materials transportation issues were made at two meetings of the American Institute of Chemical Engineers (AICHE) and at two conferences sponsored by the Hazardous Materials Advisory Council (HMAC).

RESEARCH AND TECHNOLOGY

The Coast Guard continued a research project ("Study to Improve the Health and Safety of the Marine Hazardous Chemical Worker") to characterize merchant seamen's exposures to hazardous vapors and liquids aboard tank vessels. The final product of the study will be a comprehensive occupational health and safety program for these personnel. The program will include effective training, environmental sampling to check vapor concentration levels and a medical monitoring program. A trial implementation of this model health and safety program was begun at a barge company in late 1986 and the research study will be completed in 1988.

In 1987, the National Academy of Sciences completed a study for the Coast Guard on the safety, operational, engineering, and cost concerns associated with vapor recovery systems used in conjunction with the loading of

hydrocarbon liquids into marine vessels. The study recommended that the Coast Guard develope and implement a nationally coordinated program to ensure safety and standardization of maritime hydrocarbon emission controls. It also recommended that elements of this program include vessel safety, waterfront facility safety, control of emissions, and industry education. The Coast Guard is now pursuing this recommendation.

Appendix B

The Hazardous Materials Regulations are codified in 49 CFR Parts 106-177 as follows.

Subchapter B	-	Hazardous Materials Transportation and Pipeline Safety
Part 106	-	Rulemaking Procedures
Part 107	-	Hazardous Materials program procedures
Subchapter C	-	Hazardous Materials Regulations
Part 171	-	General information, regulations and definitions
Part 172	-	Hazardous materials tables and hazardous materials communications regulations
Part 173	-	Shippers- general requirements for shipments and packagings
Part 174	-	Carriage by rail
Part 175	-	Carriage by aircraft
Part 176	-	Carriage by vessel
Part 177	-	Carriage by public highway

APPENDIX B

RULEMAKING ACTIONS TAKEN IN 1987

DOCKET NUMBER AND SUBJECT	DATE PUBLISHED	ACTION	SYNOPSIS
HM-36B Detailed Hazardous Materials Incident Reports	3/27/87	NPRM	Proposes several changes to the incident reporting form (DOT 5800.1) to provide more meaningful, comprehensive data.
HM-126C Emergency Response Communication Standards	8/20/87	NPRM	Proposes requirements for additional emergency response information on shipping papers and the placement of response action information in all places, including vehicles, where hazardous materials are transported in commerce.
	9/4/87	Extension of Comment Period	Extended comment period from September 21, 1987 to December 22, 1987.
HM-126D Bulk packagings and Miscellaneous Amendments	8/10/87	Final Rule	Incorporates into the HMR definitions for bulk packagings and non-bulk packagings and makes other miscellaneous changes to the HMR.
HM-145E Reportable Quantity of Hazardous Substances	3/19/87	Final Rule	Removed an obsolete hazardous substance discharge reporting requirement from the HMR.
HM-145F Hazardous Substances; Corrections	2/17/87	Final Rule; Corrections	Corrects errors in regulatory text of final rule under Docket HM-145F published on November 21, 1986.
	7/1/87	Final Rule	Revised the definition of "hazardous substance", to clarify that the definition does not apply to petroleum products that are lubricants or fuels.

	10/27/87	Suspension of Effective Date	Suspended RQ value of certain substances pending EPA's final rule. Incorporated the proper shipping name ORM-E, n.o.s. into the Hazardous Materials Table.
HM-149E Exceptions for Specified Quantities of Radioactive Materials	3/2/87	NPRM	Proposes renewal for two years (statutory exemptions) for specified quantities of radioactive materials.
HM-149E Exceptions for Specified Quantities of Radioactive Materials	5/1/87	Final Rule	Renews the exceptions for specified quantities of radioactive materials in 49 CFR 173.4, 173.421-1 and 173.421-2.
HM-164A State Designations of Alternative Routes for Radioactive Materials Transportation	7/16/87	NPRM	Proposes to amend 49 CFR 177.825 to require that, when a state routing agency designates an alternative route for the transportation of highway route controlled quantities of radioactive materials, the state must give written notice of such designation to the Research and Special Programs Administration.
HM-164B Notification to RSPA of Route Plans for Radioactive Materials Transportation	7/16/87	NPRM	Proposes to amend the HMR to require carriers, rather than shippers, give written notice to RSPA of route plans and other information relating to the transportation of highway route controlled quantities of radioactive materials.
HM-166U Transportation of Hazardous Materials; Miscellaneous Amendments	4/20/87	Final Rule	Incorporates into the HMR miscellaneous amendments to update the regulations, reduce RSPA's backlog, and eliminate the need for DOT approvals.

HM-166V Uranium Hexafluoride	7/6/87	NPRM	Proposes to amend the HMR, to permit the transport of uranium hexafluoride in packages that do not meet the requirements of American National Standards N14.1-1982 or DOT Class 106A specifications for multi-unit tank car tanks.
HM-166V Uranium Hexafluoride	3/12/87	Emergency Final Rule	Removed the requirement that all uranium hexafluoride (UF_6) cylinders be cleaned in accordance with specific procedures contained in Appendix A of the American National Standards Institute (ANSI) Standard N14.1-1982.
	7/6/87	Revision to Final Rule	Revises previous amendments on the transport of uranium hexafluoride.
HM-176A DOT 3AL Aluminum Cylinders; Safety Problems	7/10/87	Safety Advisory and ANPRM	Purpose of Notice is to inform all persons that possess DOT 3AL cylinders of problems associated with those cylinders and to request comments concerning the extent of the problem and how to resolve it.
HM-181 Performance-oriented Packaging Standards; Miscellaneous Proposals	5/5/87	NPRM	Proposes to amend the HMR to incorporate features found in the United Nations Committee of Experts Recommendations on the Transport of Dangerous Goods and the Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO).

	11/6/87	Corrections and Supplemental Proposals	Provides supplements and corrections to the proposals in the May 5, 1987 publication of the NPRM on Performance-oriented Packaging Standards.
HM-189E Editorial Corrections & Clarifications	9/30/87	Final Rule	Corrects editorial errors and makes minor regulatory changes which do not impose any new requirements on persons subject to the HMR.
HM-199 Enforcement of Motor Carrier Financial Responsibility Requirements	5/20/87	NPRM	Proposes to require carriers furnish documentary proof, to the person offering the hazardous material for transportation, that the carrier possesses the minimum level of financial responsibility prescribed by 49 CFR Part 397.
HM-200 Hazardous Materials in Intrastate Commerce	6/29/87	ANPRM	Requests comments on the need for, and possible consequences of extending the application of the HMR to all intrastate transportation of hazardous materials in commerce.
	9/21/87	Extension of Comment Period	Extended comment period from September 28, 1987 to November 28, 1987.
HM-201 Detection and Repair of Cracks, Pits, Corrosion, Lining Flaws, Thermal Protection Flaws, and Other Defects of Tank Car Tanks.	12/8/87	ANPRM	Proposes new safety standards which would require railroad tank car owners and repair facilities to inspect for cracks after certain tank repairs to assure that no cracks exist.
HM-201B Thin Wall Tank Cars	12/8/87	NPRM	Proposes the development of safety standards for use of Tank Car Tanks with localized thin spots.

U.S Department
of Transportation

**Research and
Special Programs
Administration**

APPENDIX C

400 Seventh Street, S.W.
Washington, D.C. 20590

HAZARDOUS MATERIALS TRANSPORTATION

DOT PENALTY ACTIONS RESULTING FROM VIOLATIONS OF HAZARDOUS MATERIALS REGULATIONS

The information contained in this publication summarizes penalty actions taken by agencies of the Department of Transportation in exercising their authority and responsibility for the enforcement of hazardous materials regulations. The penalty actions are grouped by the administration conducting the enforcement action. Each case contains the name of the shipper, carrier or person(s) involved; a description of the violations; reference to the regulations violated; and the penalty collected. **The penalties cited do not explain the mitigating or aggravating factors that, in accordance with the statutory assessment criteria, were considered in arriving at the final penalty and account for penalty variations in cases that are somewhat factually similar.**

Total penalties collected by mode by Fiscal Year:

		FY 85	FY 86	FY 87
(FAA)	Air	$ 291,100	$ 383,250	$ 305,900
(FHWA)	Highway	437,225	366,500	292,300
(FRA)	Rail	655,050	621,575	646,750
(RSPA)	Intermodal	127,925	79,163	126,625
(USCG)	Water	104,100	23,645	83,150
		$1,615,400	1,474,133	$1,454,725

The regulations referenced in each case summary are codified in the appropriate Code of Federal Regulations (CFR) identified below:

- CFR, Title 33, Navigation and Navigable Waters, Parts 1-199
- CFR, Title 46, Shipping, Parts 1-199
- CFR, Title 49, Transportation, Parts 100-199 and 300-399
- International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air

For questions concerning these actions, contact the following persons in the appropriate agency:

RSPA Edward Bonekemper (202) 366-4400
FHWA Paul Brennan (202) 366-0834
FAA Allan Horowitz (202) 267-3137
FRA Thomas Phemister (202) 366-0635
USCG LCDR. S. V. Hughes (202) 267-0497

FEDERAL AVIATION ADMINISTRATION

BURLINGTON NORTHERN AIR FREIGHT (Shipper)	Offered for transportation on an improperly classed marked described labeled an packaged shipment of hazardous materials. Failed to instruct employees having responsibility for the shipment as to the applicable hazardous materials regulations. [171.2(a), 202(a)(1), 172.300, 301(a); 173.1(b)]. Case No. 81WE750211.	$ 600.00
COMBUSTION ENGINEERING (Shipper)	Offered for transportation a shipment of paint, the contents of which were not disclosed. Failed to mark or label shipment to indicate the contained hazardous materials; failed to properly identify contents on shipping papers and failed to instruct employees as to the applicable hazardous materials regulations. [171.2(a); 172.200(a), 172.202(a)(1-4), 172.203(c)(1)(f), 172.204(a)(c)(1)(2)(3), 172.300(a), 301(a), 312(a)(1)(2), 172.400(a); 173.3(a), 173.128(a), 173.6(b)(1)(4), 173.26(a)(1), 173.24(a)(2), (c)(1)(i); 173.1(b)]. Case No. 86EA720110.	$ 20,000.00
COMBUSTION ENGINEERING (Shipper)	Offered for transportation aboard aircraft a container that included leaking cans of paint which was not marked or labeled to indicate its hazardous contents. Shipping papers lacked appropriate certifications, proper shipping name and description of commodity. Commodity was not packaged in accordance with the hazardous materials regulations. [171.2(a); 172.200(a)(1-4), 172.204(a)(c)(1)(3), 172.300, 172.301(a)(2), 172.400(a); 173.1(b); 173.3(a); 173.24(a)(1)]. Case No. 83SW710499.	$ 2,500.00
COPENE-PETROQUIMICA DO NORDESTE S.A (Shipper)	Offered for transportation aboard passenger-carrying aircraft a shipment described on the shipping papers as flammable liquid, poisonous, N.O.S, Solvent (C-9), but which did not bear the prope- shipping name, UN identification number or label indicating class or division of the contents. [ICAO Part 1, Ch. 1, Para. 1.2; Part 4, Ch. 2. Par 2.4.1,3; Part 4, Ch. 3, Para. 3.1.2, 3.4.1; Part 7, Ch. 2]. Case No. 85SO740099.	$ 3,000.00
DAMES & MOORE (Shipper)	Failed to properly mark label and package in DOT specification packaging, a shipment containing sulfuric acid which was later found to be leaking. Shipment was not properly described on shipping papers which also lacked the required certification. [172.2(a), 172.101, 172.200(a), 172.202(a)(1-4), 172.204(a)(c)(3), 172.300, 172.301(a), 172.312(a)(2), 172.400(a); 173.24(a), 173.25(a), 173.1(b), 173.3(a)]. Case No. 83EA710100.	$ 1,500.00
DUNKIN DONUTS (Shipper)	Offered for transportation, a shipment containing dry ice without the proper shipping name or UN identification number marked on the boxes or shipping papers. Shipping papers did not include the hazard class or total quantity of contents. Shipper failed to make advance arrangements with carrier inasmuch as shipment exceeded 5 lbs. per package. [171.2(a), 172.200(a), 172.202(a)(2-4), 172.204(a),(c)(1)(3), 172.300, 172.301(a), 172.316(a)(c); 173.1(b), 173.615(a)]. Case No. 85NE700051.	$ 1,500.00
FOX PHOTO (Shipper)	Offered for transportation as "tools", a shipment of propane gas cylinders and cans of plastic pipe cement. Shipment was not marked to indicate its hazardous materials content nor was it packaged in accordance with DOT specifications. Shipping papers did not include proper shipping names or required certifications. [171.2(a); 172.200(a), 172.202, 172.202(a)(1)(3)(4), 172.203(f); 174.204(a)(c)(3); 172.300, 172.301(a), 172.400(a), 172.402(b); 173.3(a), 173.132(a)(2), 173.24(a)(1), 173.25(a)(3)]. Case No. 85CE730107.	$ 25,000.00
GLIDDEN COMPANY (Shipper)	Failed to properly marked and label as to its hazardous contents, the over-pack of ~~a shipment of phosphoric~~ acid that subsequently leaked causing damage to the aircraft. Shipping papers lacked the required proper shipping name, UN identification number, hazard class and certification "Cargo Aircraft Only." Shipper failed to instruct employees handling shipment in the requirements of the HMR. [172.202(a)(1)(2)(3), 172.203(f), 172.204(a)(c)(1)(3), 172.300, 172.301(a), 172.400(a)(b); 173.1(b), 173.6(b)(1), 173.24(a)(1)(2), 173.25(a)]. Case No. 83GL740106.	$ 44,000.00
GLOBAL INTERNATIONAL AIRWAYS (Carrier)	Transported a shipment of Diethyl ether classified as a dangerous good under ICAO Technical Instructions that was improperly marked and labeled and lacked the required certifications "Cargo Aircraft Only." [171.11(a); 175.30(a)(3)(4)]. Case No. 84SO740034.	$ 10,000.00

GUYANA AIRWAYS (Carrier)	Knowingly transported a container of ammunition and explosives, removed from the baggage of a passenger, aboard passenger-carrying aircraft without fulfilling any of the requirements for the shipment of hazardous materials and in violation of the regulations concerning carriage aboard aircraft. [171.2(a)(b); 175.3, 175.20, 175.30(a)(1-3), 175.33, 175.35(a), 175.75(a)(1)]. Case No. 84SO740115.	$ 35,000.00
MR. ALEX HAJDU (Shipper)	Offered for shipment aboard passenger-carrying aircraft, seven crates of assorted hazardous materials that were improperly packaged, identified labeled and marked, lacked shipping papers. Some items were expressly forbidden aboard aircraft. [171.2(a), 172.200(a), 172.202(a)(1-4), 172.203(f), 172.204(a)(c)(3), 172.300, 172.301(a), 172.400(a), 172.402(b); 173.1(b)]. Case No. 82NM720032.	$ 1,000.00
HALLIBURTON SERVICES (Shipper)	Offered for transportation a shipment of hydrochloric acid in plastic containers that were improperly described on shipping papers and lacked the certification that the shipment was within the limitations prescribed for passenger/cargo-only aircraft. Shipment was not legibly marked to indicate upward position of the inside packaging; was improperly packaged so that contents leaked. [171.(a); 172.200(a); 172.202(a)(1-4), 172.204(a)(c)(3),(-d), 172.300,172.312(a)(2),172.400(a); 173;6(b)(1); 173.263(a)(1), 173.6(b)(4), 173.24(a)(1)]. Case No. 82SW7102361.	$ 6,500.00
HYUNDAI CONSTRUCTION (Shipper)	Offered for shipment aboard passenger carrying aircraft a crate containing a radionuclide that was not intended for use in or incident to research or medical diagnosis and was not excepted under the regulations, outer container lacked the required radioactive label and "Cargo Aircraft only notations. [172.200(a), 172.202(a)(1-3), 172.203(d)(f), 172.204(a)(c)(3), 172.300, 172.400(a), 172.402(b), 172.403(b)(f), 172.393(p), 173.1(b)]. Case No. 82NE710012.	$ 1,000.00
JET EAST INC. (Shipper)	Offered an improperly packaged labeled and described shipment of resin solution and methyl ethyl ketone peroxide for transportation aboard passenger carrying aircraft which leaked causing illness to baggage handlers. Both substances were either forbidden or in excess of the amounts permitted aboard passenger carrying aircraft. [171.2(a), 172.200(a), 172.202(a)(1-4), 172.203(a), 172.204(a)(c)(1)(3), 172.300, 172.301(a), 172.312(a)(2), 172.400(a), 172.402(b); 173.1(b), 173.6(b)(1)(3)(4), 173.21(a), 173.24(a)(1)(2), 173.27(a); 172.101(d)(1)(h)(1); 173.27(a)]. Case No. 84S0730161.	$ 5,000.00
MARKAIR INC. (Carrier)	Failed to notify pilot of the presence and location of a cargo of cement mixers with internal combustion engines, classified as hazardous materials. [175.33; 172.203; 175.30(b)]. Case No. 84AL720042.	$ 2,000.00
MICHAELJOHN (Shipper)	Offered for transportation shipment of aerosol cans without the proper shipping papers, labels, and packaging identifying the product as compressed gas, a hazardous material. [171.2(a), 172.200(a), 172.202(a)(1)(4), 172.204, (a),(c)(1)(3); 172.300, 172.301(a), 172.400(a); 173.1(b); 173.3(a), 173.305(c)(1)]. Case No. 82WP710606.	$ 2,500.00
OXOID CANADA (Shipper)	Improperly described a shipment of sodium borohydride, a substance forbidden aboard passenger-carrying aircraft, as biological materials. Failed to mark and label the shipment to indicate its dangerous content or to package in accordance with the regulations. Shipment was transported aboard passenger-carrying aircraft and broke open during flight. [ICAO Part 1, Ch. 1, Para. 1.2; Part 4, Ch. 1, Para 1.1(f), Ch. 4, Para. 4.1.2, 4.1.3(a)(d)(e)(g), 4.1.7, Para. 4.3.1(a)(b), Ch. 2, Para. 2.4.1, 2.4.3, Ch. 3, Para. 3.1.1, 3.2.8(b); Part 3, Cha. 1, Para. 1.1.2]. Case No. 85SO 740013.	$ 9,000.00
PORTEC, PATHFINDER DIV (Shipper)	Offered for transportation a shipment of hazardous materials that were improperly described on airbills and bore no indication of the hazardous nature of the contents. Shipping papers lacked the proper shipping name and required certifications. Shipment was packaged in non-specification packaging, improperly labeled and marked. [171.2(a), 172.200, 172.202(a)(1-4), 172.203(f), 172.204(a)(c)(3), 172.300, 172.312(a)(2), 172.400, 172.402(b); 173.1(b), 173.3(a), 173.24(a)(1)]. Case No. 86WP710021.	$ 33,000.00
REPUBLIC AIRLINES (Shipper)	Transported shipments of various hazardous materials with incomplete or improper shipping papers. Failed to provide pilot with proper documentation and failed to establish training programs with ICAO Technical Instructions for its employees. (ICAO Part, Ch. 1, Para. 1.2; Part 5 Sec. 4, Para. 4.1.1(b)(f); Part 6, Section 1, Para. 1.1(d)]. Case No. 83CE730068.	$ 17,000.00

SIEMANS CORPORATE RESEARCH AND SUPPORT (Shipper)	Over packed three properly packaged and described cartons containing hazardous materials without affixing to the outer container, the appropriate labels, marking and certifications that would indicate the hazardous nature of the contents. Consequently, shipment was transported aboard passenger carrying aircraft when the commodity was either forbidden or exceeded the quantity permitted. [171.2(a); 172.200(a), 172.202(a)(1-4), 172.203(f), 172.204(c)(3), 172.300, 172.301(a), 172.400(a), 172.402(b); 173.6(b)(2), 173.24(a)(1), 173.25(a)(3)(b), 173.1(b)]. Case No. 85GL740050.	$ 35,000.00
SOFUKU TRADING CO. (Shipper)	Shipped a package containing 1 kilogram of Dioxane, classified as a flammable liquid to the U.S. without properly executed shipping papers describing the contents by its proper shipping name and without any markings on the container to indicate the hazardous nature of the contents. Failed to instruct its employees in the requirements of the Hazardous Materials Regulations. [171.2(a), 172.200(a), 172.202(a)(1-4), 172.204(a), 172.204(c)(3), 172.300, 172.301(a), 172.312(a)(2), 172.400(a); 173.1(b)]. Case No. 85GL740030.	$ 3,000.00
DAVID S. SULLIVAN (Shipper)	Misrepresented a package offered for transportation and later found to contain gasoline and strike/anywhere matches, but which as not containing hazardous materials. Presented no shipping papers describing the hazardous materials. Strike/anywhere matches are prohibited aboard passenger carrying and cargo only aircraft. [171.2(a); 172.200(a), 172.203(f), 172.204, 172.300, 172.312(a)(2), 172.402(b)]. Case No. 81AL720069.	$ 1,000.00
SUMITOMO CORP. OF AMERICA (Shipper)	Offered for transportation a shipment of Sumithion L-50 without the proper description, shipping name and identification number affixed to the packaging or the shipping papers and in non-specification packaging. Contents leaked causing illness to the crew unloading the shipment. [172.2(a), 172.200(a), 172.202(a)(1-4), 172.204(a)(c)(3), 172.300, 172.301; 173.3(a), 173.6(b)(1), 173.24(a)(1)(2)]. Case No. 86SO740096.	$ 30,000.00
SUN SUPPLY (Shipper)	Offered for transportation aboard aircraft a shipment of paint misrepresented as "cornstarch" and "medical supplies" on the waybill. Waybill bore no indication that shipment contained hazardous materials. No shipping papers accompanying the shipment and no "Cargo Aircraft Only" or "flammable" labels were affixed to the packages. Shipper failed to instruct employees in the requirements of the hazardous materials regulations. [171.2(a), 172.200(a), 172.202(a)(1-4), 172.203(f), 172,204(a)(c)(1)(3)(d), 172.300, 172.301(a), 172.400(a), 172.402(b); 173.1(b)]. Case No. 82NM710038.	$ 1,000.00
TEXAS AIRFREIGHT (Shipper)	Accepted and offered for transportation a shipment of dangerous goods without the proper documentation including the proper shipping name and assigned identification number. [ICAO Part 1, Ch. 1, Para. 1.2; Part 4, Ch. 4, Para. 4.1.2; Part 4, Ch. 2, Para. 2.4.1, Ch. 3, Para. 3.1.1; Part 5, Ch. 1, Para. 1.1.2]. Case No. 85SW700029.	$ 1,000.00
TEXAS INTERNATIONAL, INC.(Carrier)	Accepted, transported aboard passenger aircraft and offered for transportation a shipment containing explosives that was improperly classified, and identified and not packaged in accordance with DOT specifications. Shipping papers were incorrect and incomplete and carrier failed to instruct employees in the requirements of the hazardous materials regulations. [171.2(a)(b); 172.200(a)(1)(2)(4); 172.204(c)(3), 172.300; 172.301(a); 173.1(b), 3(a); 175.3; 175.20; 175.30(a)(1)(2)(3); 175.33; 175.35(a)]. Case No. 82NW720007.	$ 5,000.00
UNIVERSITY OF ALASKA (Shipper)	Shipped a package of marine specimens packed in formaldehyde solution without any markings or indication of the presence of hazardous materials. Package was found to be emitting a strong vapor. No shipping papers accompanied the shipment. Cartons lacked "This End Up" marking to indicate the proper orientation of inside packaging and were not marked with the proper shipping name and identification number of the commodity. [171.2(a); 172.200(a), 172.204(a)(c)(1-3), 172.300, 172.301(a), 172.316(a); 173.1(b), 173.3(a), 173.510(a)]. Case No. 85WP710151.	$ 3,000.00
UNIVERSITY OF GEORGIA (Shipper)	Shipped glacial acetic acid in a DOT exemption packaging not authorized for transportation of that commodity by air. Package was not accompanied by shipping papers and lacked required "Corrosive" and Cargo Aircraft Only" labels. Failed to instruct employees in the requirements of the applicable hazardous materials regulations. [171.2(a); 172.200(a); 172.202(a)(1-4); 172.203(f); 172.204(a)(c)(1)(3), 172.300, 172.301(a), 172.312(a)(2), 172.400(a), 172.402(b); 173.3(a), 173.1(b)]. Case No. 82SO730444.	$ 3,000.00

WHITAKER CABLE CORP. (Shipper)	Offered for transportation aboard aircraft, a shipment of ink, a flammable liquid. Packages were not marked with the proper shipping name, the required U.N. number, or "Cargo Only Aircraft label. [171.2(a), 172.202(a)(3), 172.300, 172.204(b); 173.1(b)]. Case No. 81CE710059.	$ 500.00
YAIR IMPORT AND EXPORT CORP. (Shipper)	Offered a shipment of cigarette lighters filled with butane and equipped with an ignition element as checked baggage aboard passenger carrying aircraft. No shipping papers accompanied the shipment which bore no markings or "flammable" labels, no proper shipping name, identification number or hazard class. The offering for transportation of these lighters is forbidden. [171.2(a), 172.200(a), 172.202(a)(1-3), 172.204, 172.204(a), 172.300, 172.400(a); 173.21(e), 173.1(b)]. Case No. 81WE710451.	$ 3,300.00
	TOTAL	**$305,900.00**

FEDERAL HIGHWAY ADMINISTRATION

ADAMS OIL CO., INC. (Carrier)	Failing to maintain a cargo tank certificate or manufacturer's data report at the carrier's place of business. 177.814(a) — 4 counts.	$ 4,000.00
AMERICAN FIREWORKS CO., INC. (Carrier)	Shipping paper did not indicate proper shipping name, hazard class and total quantity. Failure to maintain at principal place of business proof of required financial responsibility. 177.817(a)—1 count. 387.7—1 count.	$ 400.00
AQU AIR CORPORATION (Carrier)	Offering hazardous material for transportation not properly packaged for shipment. 171.2(a) & 173-268—2 counts.	$ 1,000.00
AROMATIC TRUCKING (CORPORATION) (Carrier)	Transporting a shipment of hazardous materials not accompanied by a properly prepared shipping paper. Requiring or permitting a driver to drive its commercial motor vehicle who had not been medically examined or certified. Using a driver not physically certified within the preceding 24 months. 177.817(a)—13 counts. 177.804 and 391.45(a)—5 counts. 177.804 and 391.45—1 count.	$ 14,000.00
ASHLAND OIL, CO. (Carrier)	Operating cargo tank without operable remote emergency discharge control. 173.33 and 178.342-5—1 count.	$ 1,000.00
ATLANTA FUEL CO. (Carrier)	Operating cargo tank not equipped with remote emergency shutoff control and metal specification plate, and emergency vents were not marked with venting capacity. Failure to require driver to prepare driver vehicle inspection report as required. Did not have cargo tank certificate or manufacturer's data receipt at carrier's principal office as required. Did not have cargo tank retest and inspection reports as required. Did not have proof of financial responsibility at carrier's principal place of business as required. 173.33 and 173.119—2 counts. 177.804 and 396.11(a)—1 count. 177.814(a) and 177.814(d)—1 count. 387.7(d)—1 count.	$ 5,000.00
BADDOUR, INC. (Carrier)	Transporting a shipment of hazardous materials not accompanied by a properly prepared shipping paper. 177.817(a)—7 counts.	$ 6,000.00
T. H. BAYLIS CO.,INC. (Carrier)	Offering or accepting for transportation a hazardous material that is not properly ~~packaged~~. ~~Failing to secure hazardous~~ material ~~on a transport~~ vehicle. 171.2(a)—3 counts.	$ 6,000.00
BLACK THUNDER MARKETING, INC. (Carrier)	Failure to keep systematic records of maintenance. Failure to maintain proof of required financial responsibility at principal place of business. 177.804 and 396.3(b)—1 count. 387.7(d)—1 count.	$ 1,500.00
CAMPBELL OIL CO. (Carrier)	Operating MC-306 cargo tank not in proper condition to transport hazardous materials. Failing to mark cargo tank with date of last test or visual inspection as required. Operating MC-306 cargo tank used to transport hazardous materials with inoperative remote emergency discharge control device. Operating MC-306 cargo tank used to transport hazardous materials with inoperative heat actuated discharge control device. 173.24 and 177.801 —1 count. 177.824—1 count. 177.802, 173.33 and 178.341-5—1 count. 177.802, 173.33 and 178.341-5—1 count.	$ 4,000.00

CECOS INTERNATIONAL, INC. (Carrier)	Using an unauthorized cargo tank to transport hazardous materials. 173.33(b) and 173.272(c)—1 count.	$ 3,000.00
CENEX (Carrier)	Exceeding permitted filling density of a compressed gas in a cargo container. 173.315(a)(1)—11 counts.	$ 10,000.00
CHEMICAL SALES AND SERVICE CO., INC. (Carrier)	Failing to make a written report of an incident involving hazardous material. Offering a hazardous material for transportation without properly prepared shipping paper. 171.16—3 counts. 172.200—7 counts.	$ 3,000.00
CONWAY EASTERN EXPRESS (Carrier)	Failing to give immediate notice to the Office of Motor Carrier Safety of the occurrence of an accident involving a fatality. Transporting a shipment of hazardous materials not accompanied by a properly prepared shipping paper. Moving a transport vehicle containing hazardous materials that is not properly placarded. 177.804 and 394.7(a)—1 count. 177.817(a)—1 count. 177-823.(a)—1 count.	$ 9,000.00
DANIS TRANSPORTATION CO., INC. (Carrier)	Transporting a package bearing a poison label in the same vehicle with materials marked or known to be intended for consumption by humans. 177.841(e)—1 count.	$ 6,000.00
DOWN EAST ENERGY CORP. (Carrier)	Using a driver who has not completed a written examination. Failing to investigate a driver's background. Using a driver who has not been medically examined and certified as physically qualified to drive a motor vehicle. Failing to maintain a cargo tank certificate or manufacturer's data report at a carrier's principal office. 177.804, 391.11(b)(11) and 391.35—2 counts. 177.804 and 391.23—3 counts. 177.804, 391.11(b)(6), 391.45(a)—1 count and 177.814—4 counts.	$ 5,000.00
DYTEX CHEMICAL CO., INC. (Carrier)	Failed to use authorized containers while transporting hazardous materials. 177.801 and 171.2(b)—1 count.	$ 800.00
EASTERN TITLE CO., INC. (Carrier)	Transporting a shipment of hazardous materials not in proper condition for transportation. Transporting a shipment of hazardous materials not accompanied by a properly prepared shipping paper. Requiring or permitting a driver who is has not been medically examined or certified to drive a commercial motor vehicle. Using a driver not physically certified within the preceeding 24 months. Failing to require driver to prepare driver vehicle inspection reports. 177.801(a)—2 counts. 177.817(a)—5 counts. 177.804 and 391.45(a)—1 count. 177.804 and 391.45(b)—3 counts. 177.804 and 396.11(a)—4 counts.	$ 6,000.00
EMPIRE, INC. (Carrier)	Failing to maintain proof of required financial responsibility at the motor carrier's principal place of business. Failing to maintain a driver qualification file for each driver employed. Transporting hazardous materials in an unauthorized cargo tank. 387.7(d)—3 counts. 177.804 and 391.51—5 counts. 177.802 and 173.33(b)—3 counts.	$ 8,000.00
ENVIRONMENTAL RESPONSE, INC. (Carrier)	Offering a hazardous material for transportation with a hazardous waste which has not been properly prepared. Failing to mark the proper shipping name and identification number on a package containing hazardous materials offered for transportation. Failing to label a container of hazardous material offered for transportation. Failing to provide to the motor carrier the required placards for the hazardous materials being offered for transportation. Loading a hazardous material into a transport vehicle not in compliance with the loading requirements of 49 CFR Part 177. 172.205(a)—1 count. 172.301(a)— 1 count. 172.400(a)—1 count. 172.506(a)—1 count. 173.30—1 count.	$ 3,000.00
EXPLOSIVES TRANSPORTS, INC. (Carrier)	Failing to maintain at principal place of business proof of required financial responsibility. Failing to maintain required records of inspection and maintenance for motor vehicle used to transport hazardous materials. Failing to require motor vehicle containing	$ 18,000.00

	class A or class B explosives to be attended. Transporting and storing a prohibited combination of hazardous materials together. 387.7(d)—5 counts. 177.804 and 396.3—10 counts. 177.894 and 397.5—3 counts. 177.848—1 count.	
PORTO CHEMICAL CORPORATION (Carrier)	Transporting a shipment of hazardous materials not accompanied by a properly prepared shipping paper. 177.817(a)—4 counts.	$ 2,000.00
FUEL TRANSPORT SERVICES, d/b/a CORY'S GASOLINE STATION'S, INC. (Carrier)	Failure to maintain cargo tank or manufacturer's data report at principal place of business. False entries on record of duty status. 177.814—1 count. 177.804 and 395.8(e)—13 counts.	$ 3,900.00
GARTON OIL (Carrier)	Using an unqualified driver. 177.804 and 391.11(b)—3 counts.	$ 1,500.00
HELLEN TRANSPORTATION CO., INC. (Carrier)	Failing to make and submit to the U.S. Department of Transportation a written report of an incident involving hazardous materials. Failing to retain on file drivers' record of duty status. 171.16—9 counts. 395.8 and 177.804—7 counts.	$ 6,500.00
VICTOR HENRY d/b/a VICTORY HENRY OIL CO.) (Carrier)	Failing to maintain driver qualification file for each driver. Failing to have driver transporting hazardous materials make record of duty status. Failing to maintain cargo tank certificate or manufacturer's data report at carrier's principal place of business. Failing to visually inspect cargo tank at least once every 2-year period. Operating a motor vehicle without having in effect required minimum levels of financial responsibility. 177.804 and 391.51(a)—1 count. 177.804 and 395.8(a)—1 count. 177.814—1 count. 177.824(b)—1 count. 387.7(a)—3 counts.	$ 2,000.00
E. L. HOLLINGSWORTH and CO. (Carrier)	Operating motor vehicle without required minimum levels of financial responsibility. Failing to maintain proof of required financial responsibility at motor carrier's principal place of business. Using driver not medically examined and certified as physically qualified to drive motor vehicle. Using driver not medically examined and certified every 24 months as physically qualified to drive. 387.7(b)—1 count. 387.7(c)—1 count. 177.804 and 391.45(a) — 1 count. 177.804 and 391.45(b)—2 counts.	$ 5,000.00
JACOBS FUEL OIL SERVICE, INC. (Carrier)	Failing to maintain complete driver qualification file for each driver used to transport hazardous materials. Operating MC-306 cargo tank used to transport hazardous materials not marked with metal identification place as required. Failing to maintain cargo tank certificate or manufacturer's data report at carrier's principal place of business. Failing to visually inspect cargo tank at least once in every 2-year period. 177.804 and 391.51(c)—5 counts. 173.33(b), 177.802 and 178.340(10(b)—3 counts. 177.814(a)—1 count. 173.33, 177.802 and 177.824(b)—1 count.	$ 5,000.00
JONES CHEMICALS, INC. (Carrier)	Failing to file a detailed hazardous materials incident report on DOT Forms 5800.1 within 15 days. 171.16—1 count.	$ 2,000.00
JONES CHEMICALS, INC. (Carrier)	Offering or accepting a hazardous material for transportation not properly packaged. 171.2(a)—1 count.	$ 3,000.00
KENTUCKY OIL & REFINING CO., INC. (Carrier)	Failing to maintain complete driver qualification file for driver used to transport hazardous materials. Failing to require driver used to transport hazardous materials to prepare vehicle inspection report. Failing to transport hazardous materials in authorized cargo tank. Failing to visually inspect cargo tank at least once in every 2-year period. 177.804 and 391.51—1 count. 177.804 and 396.11(a) 1 count. 177.802 and 173.33—2 counts. 177.824—1 count.	$ 6,000.00

K&K OIL CO., INC. (Carrier)	Transporting shipment of hazardous material in unauthorized cargo tank. Operating MC-306 cargo tank used to transport hazardous materials with an inoperative heat actuated means to close the product discharge valve. Failing to retain copy of required cargo tank 2-year visual inspection in carrier's files. 177.802 and 173.33—1 count; 177.802, 173.33 and 178.341-5 —1 count and 177.824—3 counts.	$ 5,000.00
LEE'S TRUCKING, INC. (Carrier)	Operating a motor vehicle without required minimum level of financial responsibility. Failing to report accident. Requiring or permitting driver to make false entries on record of duty status. Failing to maintain cargo tank certificate or manufacturer's data report at carrier's principal office or other approved location. 387.7(a)—1 count. 177.804 and 394.9(a)—1 count. 177.804 and 395.8(a) and (e)—12 counts. 814(a)—8 counts.	$ 7,500.00
LE MARS TRANSPORT INC. (Carrier)	Failing to maintain driver qualification file for driver used to transport hazardous materials. Failing to make written report of a hazardous materials incident within 15 days. Failing to maintain cargo tank certificate or manufacturer's data report at carrier's principal place of business. Requiring or permitting repair of a cargo tank with a flame before it is made gas-free. 177.804 and 391.51—3 counts. 171.16—1 count. 177.814(a) —2 counts. 177.854(h)—1 count.	$ 8,000.00
LITTLEFIELD OIL CO. (Carrier)	Operating cargo tank with inadequate closures and allowing flammable liquid to escape through a defect in the cargo tank shell. Operating MC-306 cargo tank used to transport hazardous materials with inoperable heat actuated control device. Operating MC-306 cargo tank used to transport hazardous materials without secure closures of the manhole openings (fusible vents). Failing to maintain cargo tank certificate or manufacturer's data report at carrier's principal office or other approved location. Requiring/permitting driver to drive tank motor vehicle containing flammable liquid without all valves and other closures closed and free of leaks. Operating cargo tank motor vehicle with inoperative heat actuated control device on each product discharge valve. Requiring/permitting driver to drive tank motor vehicle containing flammable liquid without all manhole closures on cargo tank closed and secured. 173.24, 173.117, 117.801 and 177.834(e)(2)—1 count. 177.802, 173.33 and 178.341-5—2 counts. 173.24, 173.29, 173.117 and 178.341-3—1 count. 177.837(e)(1)—1 count. 177.837(e)(2)—2 counts. 177.802, 173.24 173.117 and 178.341-3—1 count.	$ 12,500.00
L.S. CHEMICAL CORPORATION (Carrier)	Material improperly labeled for shipment. Hazardous material in nonspecification container. 171.2 and 172.203(c)(2)—4 counts. 173.32(c) and 178.270-14—2 counts.	$ 2,500.00
JOHN W. MCCRARY, II) (Driver)	Operating motor vehicle after having been declared out of service. Operating motor vehicle declared out of service before repairs were made. 177.804 and 395.13(d)—1 count. 177.804 and 396.9(c)(2)—1 count.	$ 1,500.00
METRO LIQUID CARRIERS, LTD. (Carrier)	Failing to maintain complete driver qualification files. Failing to require a driver to make and submit a record of duty status. Failing to maintain cargo tank certificate or manufacturer's data report at carrier's principal office. 177.804 and 391.51—2 counts. 177.804 and 395.8—4 counts. 177.814(a)(b)—2 counts.	$ 1,200.00
FOREST E. MILLER TRUCKING, INC. (Carrier)	Operating motor vehicle without having in effect required minimum levels of financial responsibility. Transporting shipment of hazardous materials not accompanied by a shipping paper. Failing to placard motor vehicle used to transport hazardous materials. 387.1—1 count. 177.817—1 count. 177.823 —1 count.	$ 9,000.00
MONTGOMERY OIL, CO., INC. (Carrier)	Failing to require a driver to be physically reexamined each 24 months. Failing to maintain a driver qualification file on each driver. Failing to maintain a manufacturer's data sheet or certificate on the cargo tanks at the carrier's principal place of business. Failing to have a cargo tank visually inspected at least once every 2 years. 177.804 and 391.45(b)— 2 counts. 177.804 and 391.51—1 count. 177.814(a)—2 counts. 177.824(b) —2 counts.	$ 3,000.00

M & Q TRUCKING CORP. (Carrier)	Failing to maintain a complete driver qualification file for each driver used to transport hazardous materials. Failing to report an accident involving hazardous materials. Failing to maintain a cargo tank certificate or manufacturer's data report at the carrier's principal office or other approved location. 177.804 and 391.51(b)—1 count. 171.16—1 count. 177.814(a)—4 counts.	$ 3,000.00
NATIONAL TRANSFER COMPANY (Carrier)	The shipping papers were not properly prepared 177.817(a)—1 count.	$ 900.00
OAK HARBOUR FREIGHT LINES, INC. (Carrier)	Transporting shipment of hazardous materials not accompanied by properly prepared shipping paper. 177.817(a)—5 counts.	$ 3,000.00
PARADEE OIL CO INC.) (Carrier)	Transporting hazardous materials in unauthorized cargo tank. Failing to maintain cargo tank certificate or manufacturer's data report at principal place of business. 177.802 and 173.33—2 counts. 177.814(a)—5 counts.	$ 4,900.00
RADIATOR SPECIALTY COMPANY (Carrier)	Transporting hazardous materials without properly prepared shipping papers. 177.817—2 counts.	$ 5,000.00
REDWING CARRIERS, INC. (Carrier)	Transporting hazardous materials in unauthorized cargo tank. 177.802 and 173.33(a)—6 counts.	$ 6,000.00
RELIANCE CARIBBEAN INC. (Carrier)	Transporting a hazardous material not accompanied by a properly prepared shipping paper. Operating a commercial motor vehicle without having in effect the required minimum levels of financial responsibility. 177.817(a) —4 counts. 387.7(a)—1 count.	$ 2,000.00
ROADWAY EXPRESS, INC.) (Carrier)	Transporting poisons with foodstuffs. 177.841(e)—	$ 3,500.00
ROMAN RESEARCH, INC.) (Carrier)	Transporting a shipment of hazardous materials or corrosive liquids. 177.81 7—2 counts. 177.848(b)—2 counts.	$ 3,000.00
AL SAFFER & CO., INC.) (Carrier)	Operating a motor vehicle without having in effect the required minimum levels of financial responsibility. Transporting a hazardous material not accompanied by a properly prepared shipping paper. 387.7(a)— 1 count. 177.817(a)and 172.202—4 counts.	$ 3,000.00
SHOCK'S OIL & GAS (Carrier)	Failing to enter on the shipping paper the proper description, hazard class, and identification number of a hazardous material. 172.202(a)—2 counts.	$ 2,500.00
SAVINGS OIL CO., INC. (Carrier)	Failing to maintain complete driver qualification file for each driver. Failing to require driver to prepare driver vehicle inspection report at completion of each day's work on each vehicle operated. Failing to maintain cargo tank certificate or manufacturer's data report at carrier's principal place of business. Failing to visually inspect cargo tank at least once in every 2-year period. 177.804 and 391.51(c)—3 counts. 177.804 and 396.11(a) and (c)(2)—3 counts. 177.814(a)—4 counts. 177.824(b)-4 counts.	$ 5,000.00
SASKATCHEWAN MINING DEVELOPMENT CORP. (Carrier)	Offering a hazardous material for transportation not properly described on the shipping papers. 172.200(a), 172.202(a)(1) and (2), 172.203(d)(iii) and 172.204—6 counts.	$ 6,000.00

SENTER TRANSPORTATION CO., INC. (Carrier)	Requiring/permitting driver to drive after having been on duty more than 60 hours in 7 consecutive days. Failing to require driver to prepare vehicle inspection report in writing at completion of each day's work, of the operating condition of vehicle used. 177.804 and 395.3(b)-6 counts. 177.804 and 396.11—4 counts.	$ 2,500.00
SOFCO, INC. (Carrier)	Transporting a shipment of hazardous materials not accompanied by a properly prepared shipping paper. Using a driver without medical examiner's certificate. Using a driver not physically re-examined each 24 months. 177.817(a)—9 counts. 177.804 and 391.45(a)—2 counts. 177.804 and 391.45(b) —4 counts.	$ 4,000.00
TECHEM, INC. (Carrier)	Transporting a shipment of hazardous materials not accompanied by a properly prepared shipping paper. Operating a commercial motor vehicle without having in effect the required minimum levels of financial responsibility. Failing to maintain driver qualification files on drivers in your use and employ. 177.817(a)—3 counts. 387.7(a)—3 counts. 177.804 and 391.51—2 counts.	$ 5,600.00
TEX-OIL, INC. (Carrier)	Transporting hazardous materials in an unauthorized cargo tank. Failing to visually inspect a cargo tank at least once in a 2-year period. Moving a transport vehicle containing a hazardous material without placarding the vehicle on each end and each side. 177.802 and 177.33—2 counts. 177.824 —1 count. 172.504(a) and 177.823(a)—1 count.	$ 4,500.00
TRICOM SHIPPING (Carrier)	The shipping papers did not properly describe the hazardous material. 172.202(a)—1 count.	$ 1,900.00
THATCHER CHEMICAL COMPANY (Carrier)	Operating an MC-307 cargo tank to transport hazardous materials without having safety relief devices (vents) in each cargo tank compartment. 177.802, 177.33, and 178.342-4—1 count.	$ 1,500.00
CLIFTON THORSON (Driver)	Refilling a specification DOT 106A500 cylinder which was past due for retest. 173.31(d)(1) and 171.2(c)—4 counts.	$ 300.00
TUPCO FLOORING EAST, INC. (Carrier)	Transporting hazardous materials without properly prepared shipping papers. 177.817—2 counts	$ 3,500.00
N. YANKE TRANSFER, LTD. (Carriers)	Failing to maintain driver qualification files on each driver. Failing to require driver to forward, within 13 days, the original of the record of duty status. Transporting hazardous materials not accompanied by properly prepared shipping papers. 391.51(a) and 177.804—4 counts. 395.8(i) and 177.804 —5 counts. 177.817(a)—3 counts. Concluded 2/19/87	$ 11,400.00
URANERZ EXPLORATION & MINING, LTD. (Carrier)	Offering a hazardous material for transportation not properly described on the shipping papers. 172.200(a), 172.202(a)(1) and 2, 172.203 (d) (iii),and 172.204—4 counts.	$ 4,000.00
U.S. ECOLOGY, INC. (Carrier)	Requiring/permitting vehicle containing radioactive materials to be parked within 5 ft. of travelled portion of public street. Failing to require driver to attend vehicle containing radioactive material located on the shoulder of a public street. 177.804 and 397.7(b)— 1 count. 177.804 and 397.5(c)—1 count.	$ 2,000.00
WIL-SAV OIL CO. (Carrier)	Failing to mark a cargo tank with month and year of the last test or visual inspection. Operating an MC-305 cargo tank used to transport hazardous materials without having oil valves in the liquid discharge system closed. Operating an MC-305 cargo tank used to transport hazardous materials with an inoperative remote emergency discharge control valve. 177.824(h)—1 count. 177.837(e)—1 count. 177.802, 173.33 and 178.341-5—1 count.	$ 1,500.00
	TOTAL	$292,300.00

AMERICAN CYANAMID (Shipper)	Offered for transportation a placarded tank car containing nitric acid without determining that the tank safety appurtenances and fittings were in proper condition for transportation and without the car's closures being properly secured. [173.31(b)(1) and (3)] 1 Count. Case No. ZACY 85-1.	$ 3,000.00
AIRCO INDUSTRIAL GASES (Shipper)	Offered for transportation a placarded car containing carbon dioxide refrigerated liquid with the safety valve retest overdue. [173.31(b)(1)(c)(1) and (6)] 1 Count. Case No. ZAIR-85-1.	$ 5,000.00
BALTIMORE AND OHIO RR (Carrier)	Transported empty tank cars previously containing alcohol without an "Empty" placard and without properly securing each manhole cover. Failed to report a hazardous materials incident in writing to the Department of Transportation; entrained an empty placarded car last containing flammable gas next to occupied caboose; improperly placarded trailer-on flat-car containing corrosive liquid and resin solution and failed to properly inform crew of the hazardous materials cargo; entrained tank car containing flammable liquid next to occupied caboose with open flame device in operation. [171.16(a); 174.9(b), 174.26(c), 174.92(a)(3)(7), 174.9(3)(7)] 9 Counts. Case No. BO-84-4.	$ 14,950.00
BALTIMORE AND OHIO RR (Carrier)	Cut off while in motion placarded flat car containing an oxidizer and permitting two cars moving under their own momentum to strike said flat car. [174.84(a)(b)] 2 Counts. Case No. BO-85-3.	$ 12,400.00
BALTIMORE AND OHIO RR (Carrier)	Improperly entrained placarded cars containing various hazardous materials in various locations in the consist of the train. Transported placarded tank cars last containing flammable gas, liquid caustic soda, flammable liquid without providing crew with proper shipping papers, placard notation or placard endorsement. Cut off in motion. Flat car carrying empty placarded trailer and permitting flat car to be struck by another flat car. [174.91, 174.26(c), 174.84(b), 174.92(a)(7)] 16 Counts. Case No. BO 85-17.	$ 38,425.00
BALTIMORE AND OHIO RR (Carrier)	Improperly entrained loaded placarded tank cars containing various hazardous materials in various locations in the consist including car containing corrosive liquid next to open top car loaded with scrap iron protruding beyond car ends. Transported empty placarded car with unsecured manhole cover. [174.9(b), 174.91, 174.92(a)(6)] 5 Counts. Case No. BO 85-22.	$ 9,025.00
BALTIMORE AND OHIO RR (Carrier)	Transported leaking tank car without markings to indicate its condition. Entrained placarded cars as the third car from the engine and next to loaded flat car without bulk heads. Failed to provide train crew with proper shipping papers or correct train profile information. Failed to provide interchange company with billing for interchange car. [174.10(c), 174.26(b)(c), 174-50(d), 174.91, 92(a)(5); 172.202, 203] 7 Counts. Case No. BO-85-26.	$ 21,450.00
BALTIMORE AND OHIO (Carrier)	Entrained 4 loaded tank cars containing flammable gas as the second, third, fourth, and fifth cars from the engine . [174.91] 4 Count. Case No. BO-85-27.	$ 8,000.00
BALTIMORE AND OHIO RR (Carrier)	Transported empty placarded tank cars last containing chlorine and denatured alcohol without providing train crew with copies of shipping papers. [174.26(c)] 3 Counts. Case No. BO-85-33.	$ 11,700.00
BALTIMORE AND OHIO RR (Carrier)	Entrained loaded tank car containing alkaline liquid next to open-top car with lading protruding beyond car ends. [174.92(a)(6)] 1 Counts. Case No. BOCT-84-1.	$ 2,850.00
CHESAPEAKE AND OHIO RAILWAY CO. (Carrier)	Entrained two tank cars loaded with flammable gas and flammable liquid and one empty car previously containing flammable gas, as the first and third cars behind the engine and the fifth car from the occupied caboose. Failed to provide crew with copies of shipping papers or papers indicating position of car containing explosives. Transported empty car without marking and placarding and without ensuring that manhole covers were secure. Described cleaned and purged tank car as containing hazardous material. [174.26(c), 174.59, 174.91, 93; 172.202(e)] 17 Counts. Case No. CO-84-3.	$ 42,750.00
CHESAPEAKE AND OHIO ROADWAY CO. (Carrier)	Failed to inspect cars containing oxidizer and nonflammable gas to determine whether car was leaking or that all covers, valves and plugs were securely fastened. Entrained car containing flammable liquid as third car from the engine. [174.9, 174.91] 3 Counts. Case No. CO-85-3.	$ 3,250.00

CHESAPEAKE AND OHIO RAILWAY CO. (Carrier)	Failed to file a hazardous materials incident report within 15 days of the incident. [171.16(a) 1 Count. Case No. CO-85-20.	$ 1,500.00
COLUMBIA HYDROCARBONS CORP. (Shipper)	Failed to properly secure closures on tank car containing carbon dioxide. [173.31(b)(3)] 4 Counts. Case No. ZCOL-85-1.	$ 16,000.00
CONSOLIDATED RAIL CORP. (Carrier)	Improperly placed loaded placarded tank car containing various hazardous materials on various locations in the consist. Failed to provide train crew with copy of shipping papers or document indicating position of placarded car in the train. Failed to properly secure manway covers in empty placarded car. [174.9(b), 174.24(a), 174.25(a), 174.26(b)(c), 174.91, 174.92(a)(5)(6)(7); 172.202, 203] 10 Counts. Case No. CR-85-11.	$ 25,100.00
CONSOLIDATED RAIL CORP. (Carrier)	Failed to provide crew with shipping papers for placarded tank cars or documentation indicating position of car containing hazardous materials in the train. Incorrect information on way bill. Failed to inspect placarded tank car received in interchange. [174.9(a), 174.25(a), 174.26(b)(c)] 7 Counts. Case No. CR-85-37.	$ 19,650.00
CONSOLIDATED RAIL CORP. (Carrier)	Transported cars containing hazardous materials lacking coupler vertical restraint systems. Stored car containing flammable liquid on carrier track for 4 months. Failed to provide train crew with shipping papers or documents indicating position in the train of cars carrying hazardous materials. Placed cars containing corrosive material five cars from the engine, entrained next to the engine and entrained next to car with automatic refrigeration apparatus in operation. Failed to inspect interchange loaded placarded cars to determine that they were not leaking and were in proper condition for service. Failed to place cars containing corrosive material and flammable gas near the middle of the train. [173.31(a)(7); 174.3, 174.8(b), 174.9(a), 174.14(a), 174.26(b)(c), 174.91, 174.92(a)(7)] 22 Counts. Case No. CR-85-55.	$ 61,050.00
CONSOLIDATED RAIL CORP. (Carrier)	Improperly placed cars containing various hazardous materials or previously containing hazardous materials in various locations in the consist. Missing and incomplete way bills. Failed to provide train crew with documents indicating position in train of loaded placarded cars. [174.25(a), 174.26(b)(c), 174.91, 174.92(a)(5)(6)(7), 174.93] 23 Counts. Case No. CR-85-58.	$ 73,750.00
CONSOLIDATED RAIL CORP. (Carrier)	Cut off while in motion loaded cars containing flammable gas allowing one car to couple with another with such force as to derail and damage both cars. Failed to instruct employees in the requirements of the hazardous materials regulations. [174.7, 174.83(b)(1)(2)(3)] 7 Counts. Case No. CR-86-3.	$ 39,950.00
CONSOLIDATED RAIL CORP. (Carrier)	Cut off while in motion placarded cars containing flammable gas allowing cars to strike and couple under their own momentum and with more force than necessary. [174.83(b)(2)(3)] 1 Count. Case No. CR-86-4.	$ 6,000.00
ILLINOIS CENTRAL GULF RAILROAD (Carrier)	Positioned placarded cars containing corrosives next to gondola loaded with steel tubing above car ends, as the second through fifth cars behind the engine, and positioning car containing nonflammable gas next to occupied caboose. Required placards missing or faded; crew lacking shipping papers or documents indicating position of placarded car in the train. [174.25(a)(b)(c), 174.26(b)(c), 174.91, 174.93] 33 Counts. Case No. ICG-84-1.	$ 30,750.00
ILLINOIS CENTRAL GULF RAILROAD (Carrier)	Improperly prepared or missing way bills. Entrained cars containing corrosive immediately behind the engine and next to gondola loaded above the car ends with poles. [174.25(a)(2), 174.26(c), 174.91, 174.92(a)(6)] 4 Counts. Case No. ICG-84-2.	$ 7,500.00
ILLINOIS CENTRAL GULF (Carrier)	Transported placarded loaded tank cars without way bills and with missing placards. Trailer containing adhesives and paint not prepared for transportation in accordance with the Hazardous Materials Regulations. [174.3, 174.26(c), 174.59] 3 Counts. Case No. ICG-85-6.	$ 3,700.00
MEAD CORP. (Shipper)	Offered for transportation placarded car previously containing corrosive liquid without manway covers being properly secured. Unloaded tank car containing corrosive without posting caution signs. [174.67(a)(3)(k)] 4 Counts. Case No. ZMC-84-1.	$ 6,200.00

MISSOURI-KANSAS-TEXAS RAILROAD COMPANY (Carrier)	Transported an empty tank car previously containing a nonflammable gas entrained next to the caboose and without proper papers. [172.203(e); 174.25(c), 174.93] 2 Counts. Case No. MKT-85-6.	$ 2,400.00
PVS CHEMICALS INC. (Shipper)	Unloaded placarded tank car containing a corrosive material without blocking wheels and without placing caution signs. [174.67(a)(2)(3)] 2 Counts. Case No. ZPVS-84-1.	$ 3,500.00
RAILHEAD CARTAGE (Freight Forwarder)	Improperly prepared shipping papers. [172.201(a)(2); 173.22(a)] 1 Count. Case No. ZRC1-84-1.	$ 2,000.00
SEABOARD SYSTEM RR (Carrier)	Improperly entrained loaded placarded cars in various positions in the train. Train crew not in possession of shipping papers. Unsecured vacuum relief valve on placarded tank car containing corrosive material. [174.3, 174.26(c), 174.91] 21 Counts. Case No. SBD-84-1.	$ 41,800.00
SEABOARD SYSTEM RAILROAD (Carrier)	Transported cargo tank containing phosphoric acid without prior approval of the Federal Railroad Administrator. [174.61(c)] 1 Count. Case No. SBD-84-3.	$ 3,200.00
SEABOARD SYSTEM RAILROAD (Carrier)	Improperly entrained loaded placarded tank cars containing various hazardous materials in various positions in the train. Failed to provide train crews with documents indicating location of each car containing hazardous materials. Incomplete shipping papers and improperly placarded cars. [172.504, 172,525; 174.24(a), 174.26(c), 174.59, 174.91, 174.92(a)(5)(6)] 20 Counts. Case No. SBD-84-4.	$ 31,100.00
SEABOARD SYSTEM RAILROAD (Carrier)	Transported placarded tank cars containing explosives, flammable liquid, nonflammable gas and corrosives, without shipping papers or documents indicating their position in the train in the possession of the crew. Entrained car containing corrosives as the fourth car from the engine. [174.26(a)(c), 174.91] 22 Counts. Case No. SBD-84-5.	$ 51,400.00
SEABOARD SYSTEM RAILROAD (Carrier)	Transported cars containing various hazardous materials in various positions in the train in violation of the regulations. Shipping papers lacking proper endorsements. [174.25(a)(2), 174.91] 27 Counts. Case No. SBD-84-6.	$ 12,500.00
SOUTH POINT ETHANOL (Shipper)	Failed to secure all closures on car containing flammable liquid. [173.1, 173.31(b)(3)] 1 Count. Case No. ZSPE-84-1.	$ 2,500.00
STAUFFER CHEMICAL CO. (Shipper)	Offered for transportation in trailer on flat car DOT spec MC 312 S.S. cargo tank containing corrosive material without having received an exemption to make such a shipment. Certified the shipment although it did not comply with the regulations. [172.204, 174.61(c)] 2 Counts. Case No. ZSCO-84-1.	$ 2,500.00
STONE CONTAINER CORP. (Shipper)	Offered for transportation placarded tank cars containing corrosive material with unsecured top unloading valve, no stuffing applied to stuffing box and manhole gasket not properly applied. [173.31(b)(3)] 3 Counts. Case No. ZSTO-84-1.	$ 6,000.00
UNION PACIFIC RAILROAD (Carrier)	Entrained empty placarded car last containing flammable solid and poison next to locomotive. Failed to include "Dangerous" placard endorsement on waybill. [174.25(a)(2), 174.93] 2 Counts. Case No. UP-85-24.	$ 2,000.00
UNITED STATES STEEL CORP. (Shipper)	Failed to properly close all openings on cars last containing flammable liquid, offered for transportation. [173.29(c)(1), 174.67(k)] 4 Counts. Case No. ZUSS-85-1.	$ 5,500.00
W. R. GRACE AND CO. (Shipper)	Failed to secure all openings in empty car, last containing corrosive material, offered for transportation. [173.29(c)(1); 174.67(k)] 1 Count. Case No. ZWRG-85-1.	$ 500.00
WESTERN PACIFIC RAILROAD COMPANY (Carrier)	Entrained cars containing flammable gas as second through fifth cars ahead of the caboose. Failed to provide crew with shipping papers for shipments of flammable gas. [174.26(c), 174.91] 9 Counts. Case No. WP-84-2.	$ 12,500.00
WESTERN PACIFIC (Carrier)	Placed tank car containing flammable gas as second car from locomotive. [174.91] 1 Count. Case No. WP-84-2.	$ 1,400.00
WHITAKER OIL CO. (Shipper)	Offered for transportation empty placarded car last containing flammable liquid without reapplying manhole cover after tank was unloaded. [174.67(K) 1 Count. Case No. ZWOC-84-1.	$ 1,500.00
WRIGHT CHEMICAL CO. (Shipper)	Offered for transportation empty tank car last containing flammable liquid without properly securing all car openings. [173.29(C)(1)(2)] 1 Count. Case No. ZWCC-85-1.	$ 500.00
	TOTAL	**$646,750.00**

ADVANCED MEDICAL SYSTEMS (Shipper)	Offered special form radioactive material without IAEA Certificate of Competent Authority for that material prior to first export shipment; used incorrect UN numbers on shipping papers. [172.202(a)(3), 173.476(b)].	$ 2,000.00
AMCHEM PRODUCTS, INC. (Shipper)	Offered sulfuric acid in nonspecification fiberboard boxes; offered chromic acid in fiberboard boxes which exceeded the authorized gross weight limitation [173.164(a)(5)]. [173.272(c)].	$ 3,500.00
AUTOMATIC BRAZING COMPANY (Cylinder Manufacturer)	Manufactured and marked DOT 4B and 4B240ET cylinders without performing hydrostatic testing on accurate equipment; Manufactured and marked DOT 4B240ET cylinders without performing hydrostatic test on one cylinder from each lot of 200 or less, or performing a pressure test on each cylinder at two times service pressure; manufacturing and marking DOT 4B and 4B240ET cylinders without properly determining the yield strength on test specimen; manufactured DOT 4B240ET cylinders which were not properly marked on shoulder, top head, neck, or valve protection collar. [178.50-14(a), 178.55-14(a); 178.55(14(d)(1) and (d)(2); 178.50-16(c), 178.55-16(c); 178.55-10(a)].	$ 8,000.00
BERGEN BARREL & DRUM CO. (Plastic Drum Manufacturer)	Failed to conduct periodic cold drop testing and hydrostatic pressure testing for DOT 34 drums; failed to retain records of tests. [178.19-7(a)(2)(d)].	$ 9,500.00
BLANCHARD ASSOCIATES, INC. (Cylinder Retester)	Altered the specification markings on an ICC 3 cylinder by placing retest marking (date and symbol) over specification marking; performed hydrostatic testing on inaccurate equipment; failed to record date of reinspection and retest on inspection report. [173.34(c)(3),(e)(3)(5)].	$ 2,500.00
CONTICO CONTAINER (Plastic Drum And Pail Manufacturer)	Failed to conduct periodic cold drop testing for DOT 34 drums and DOT E-9245 pails [178.19-7(a)(2), Para. 7(c) - E-9245].	$ 5,000.00
FEDERAL EXPRESS CORPORATION (Carrier/Exemption Holder)	Failed to ensure that all personnel operating under terms of DOT E-7060 were wearing personal dosimetry devices; failed to submit quarterly reports. [Paras. 7CH and 9C of E-7060].	$ 4,000.00
FLORIDA DRUM COMPANY, INC. (Steel Drum Manufacturer)	Failed to conduct periodic drop and hydrostatic testing for DOT 5B, 6B, 17C, 17E, and 17H containers; failed to conduct drop testing for DOT 37A containers. [178.82-13, 98-11, 115-12, 116-12, 118-121, 131-11(a)].	$ 13,125.00
GEARHART INDUSTRIES, INC. (Shipper)	Offered special form radioactive materials for export without valid Competent Authority Certificate; offered a Type B package without being registered with DOT as a user of the package. [173.471(d), 476(b)].	$ 1,500.00
HASMAN & BAXT, INC. (Freight Forwarder)	Certified shipment as being in compliance when cylinders shipped were out of test; improperly described hazardous materials on a shipping paper. [172.202(a), 204].	$ 3,500.00
MANION STEEL BARREL COMPANY (Steel Drum Manufacturer)	Failed to conduct periodic drop and hydrostatic testing for DOT 17E drums. (178.116-12(a)(1))(2)].	$ 7,000.00
ORCO WELDING SUPPLY COMPANY (Cylinder Retester)	Failed to obtain a current retester's identification number. [17.34(e)(1)(i)].	$ 1,500.00
PTL - INSPECTORATE, INC. (Independent Inspection Agency)	Failure to inspect the inside of each DOT 3AA cylinder before closing both ends; failure to obtain samples from DOT 3AA cylinders for the physical and flattening tests; failure to verify DOT 3AA cylinders with all requirements, including requirement that pressure gauge on hydrostatic equipment must permit readings with an accuracy of one percent; failure to witness leakage tests on DOT 3AA cylinders. [178.37-4(c) 14(a),17,18].	$ 20,000.00
PLASTICAN, INC. (Plastic Pail Manufacturer)	Manufactured, marked, and sold combination DOT 35/E-7803 containers without conducting periodic cold drop or hydrostatic testing [178.19-7(a)(2)(3), Para. 7C, E-7803].	$ 5,000.00

PROSPECT INDUSTRIES CORP. (Steel Pail Manufacturer)	Failed to conduct periodic hydrostatic testing on DOT 17C and 17E pails; manufactured six-gallon DOT 17E pails with 24-gauge steel. [178.115-12(a)(2), 116-6, 12(a)(2)].	$ 3,500.00
RELIANCE-UNIVERSAL, INC. (Shipper)	Failed to retest DOT 57 portable tanks as required; offered hazardous materials in those tanks; failed to properly mark shipping name and UN identification number on portable tanks. [172.326(a)(1)(2), 173.32(e)(1)(ii), 128(a)(3)].	$ 10,000.00
REUTER-STOKES, INC. (Shipper)	Offered compressed gas for transportation by air with no hazardous materials description on the shipping papers (172.200(a)].	$ 6,000.00
R. J. REYNOLDS TOBACCO CO. (Shipper)	Offered sulfuric acid in nonspecification wooden boxes which were marked to indicate they met the DOT 12B fiberboard box specification [173.272].	$ 2,000.00
RUGGIERI-USA,INC. (Importer)	Failed to notify foreign shipper of the requirements of 49 CFR that would apply to a shipment of Class B explosives in the United States [171.12(a)].	$ 2,500.00
SCOTT-GROSS, INC. (Cylinder Retester)	Failed to retest certain DOT cylinders at correct minimum test pressure; conducted hydrostatic retesting with inaccurate equipment; charged and shipped cylinders which were out of test. [173.34(e)(3), 301(c)].	$ 4,000.00
SOMMERFELD WELDERS SUPPLY (Cylinder Retester)	Conducted hydrostatic retesting with inaccurate equipment; failed to enter information about visual inspections. [173.34(e)(3)(5)].	$ 2,000.00
TEXAS NUCLEAR CORPORATION (Shipper)	Offered compressed gas in nonspecification container under the terms of an exemption which had expired. [173.302, 306(a)(2)].	$ 4,000.00
WESTERN COMPANY OF NORTH AMERICA (Shipper)	Failed to equip bottom discharge valves on MC-312 tanks with a remote valve closure that was no less than 10 feet away, by continuing to operate under the terms of an exemption which had expired [178.343-5(b)(2)(ii)].	$ 1,500.00
ZAMBELLI INTERNATIONALE (Importer)	Failed to notify foreign shipper and U.S. forwarding agent about the requirements of 49 CFR that would apply to a shipment of Class B explosives in the United States [171.12(a)].	$ 5,000.00
	TOTAL	**$126,625.00**

UNITED STATES COAST GUARD

AAA TRUCKING CO. (Carrier)	Hazardous materials offered for shipment when the hazardous material was not properly described, marked or labeled. §172.202(a)(1)(2) and (3), 172.203(i)(2), 172.204(a), 172.302(a) and 308(a)] 8 Counts. Case Number 05PS-067-86.	$ 500.00
ALEXANDER & ALEXANDER (Shipper)	Improper stowage of Dilauroyl Peroxide. [172.102(1)(a)]. Case Number MV86004736/W.	$ 1,000.00
APOLLO MARINE CO., LTD. (Shipper)	Various required entries missing from Dangerous Cargo Manifest; freight containers containing hazardous materials not placarded. [176.30, 176.76(f)] 5 Counts. Case Number MV85002356.	$ 1,550.00
ATLANTIC CONTAINER LINES (Shipper)	Vessel carrying packaged "Certain Dangerous Cargo" (highway route controlled quantity of radioactive material) failed to provide COTP with 24-hour advance notice of arrival. [33 CFR 160.211]. Case Number MV86003088.	$ 1,000.00
ATLANTIC TRADING COMPANY (Shipper)	Shipper offered a hazardous material for transportation that was not properly classed, described, labeled and in condition for shipment. [171.2(a)] 2 counts. Case Number 07-V-40096.	$ 1,000.00
AUSTRALIAN NATIONAL LINE (Carrier)	Vessel did not have approved combination fire nozzle for fire station in vicinity of flammable liquid; carrier failed to remove placards from containers with no hazardous materials; Dangerous Cargo Manifest missing required entries. [176.30(c); 172.502(a); 176.315(b)]. Case Number MV86000119.	$ 2,700.00
BADISHCHE CORP. (Shipper)	Improper cargo package restraint. [176.76(a)(2)]. Case Number 07-V-60166.	$ 500.00
BELCAN N.V. (Shipper)	Vessel carrier used improper shipping names on Dangerous Cargo Manifest. [176.30(a)(3)]. Case Number MV86000143.	$ 600.00

BELL FUELS (Waterfront Facility)	Improperly installed wiring and improper warning signs on a designated waterfront facility while hazardous materials were on board. 33 CFR [126.15(h)&(o)]. Case Number 09-005/86.	$ 3,000.00
BLUE STAR MANAGEMENT (Shipper)	Improper shipping name for a Class A Explosive on the Dangerous Cargo Manifest. [176.30(a)(3)]. Case Number MV86001764.	$ 750.00
CERES CORPORATION (Waterfront Facility)	Waterfront facility with hazardous materials on board had electrical equipment not maintained in safe condition; fire extinguishers not accessible; non-approved fork lift being used; debris and rubbish piled around and on top of spec. 51 portable tank containing hazardous materials; smoking observed in non-smoking areas near hazardous materials; minimum required aisles not maintained. [33 CFR 126.15] 8 Counts. Case Number MV87001523.	$ 3,500.00
CFL TRANSPORTATION, INC. (Carrier)	Corrosive materials stowed on board a vessel in unauthorized location; Dangerous Cargo Manifest contained improper shipping names. [172.101(i); 176.30(a)(3)]. Case Number MV86003582.	$ 3,500.00
COLONIAL NAVIGATION (Carrier)	Vessel's Dangerous Cargo Manifest contained improper shipping name for Class C Explosives; failure to list corrosive materials and flammable liquids on Dangerous Cargo Manifest; failure to affix master's signature on Dangerous Cargo Manifest. [176.30] 3 Counts. Case Number MV86004733.	$ 900.00
DELTA CHEMICALS CORP. (Shipper)	Hazardous materials offered for shipment when not properly described, marked and labeled (5 transport vehicles with 15 separate shipping paper violations). [171.2(a)]. Case Number 05PS-063-86.	$ 1,000.00
DIAMOND SHAMROCK CHEMICAL CO. (Shipper)	Shipper did not adequately dunnage cargo of caustic soda. [176.76(a)]. Case Number MV86004839/W.	$ 500.00
E. I. DuPONT de NEMOURS 7 CO., INC. (Shipper)	Shipper failed to mark proper shipping names on six portable tanks. [172.300(a)] 6 Counts. Case Number 05PS-024-87.	$ 1,000.00
ELMA (Carrier)	Improper segregation of hazardous materials on board a vessel. [176.83(b)] 2 Counts. Case Number MV86005248/W.	$ 600.00
EMBIRICOS SHIPPING AGENCY, LTD. (Carrier)	No Dangerous Cargo Manifest on board a vessel carrying sulphur, a flammable solid. [176.30(a)(3)]. Case Number MV86001465.	$ 300.00
FEDERAL COMMERCE AND NAVIGATION (Shipper)	Dangerous Cargo Manifest contained improper shipping names. [176.30(a)]. Case Number MV86000667.	$ 1,000.00
FEDERAL COMMERCE AND NAVIGATION (Shipper)	Improper shipping names on Dangerous Cargo Manifest (recurring violation). [176.30]. Case Number MV86000146.	$ 10,000.00
FEDERAL PACIFIC LIBERIA, LTD. (Carrier)	Required information was missing from a vessel carrier's Dangerous Cargo Manifest. [176.30(a)(1)]. Case Number MV86000010.	$ 1,000.00
FLOVAL OIL CORP. (Shipper)	Mobile oil transfer facility failed to display warning signs during hazardous materials transfer. [33 CFR 126]. Case Number 07-V-10126.	$ 2,000.00
HARPER ROBINSON & COMPANY (Freight Forwarder)	Hazardous materials offered for shipment when the hazardous materials was not properly described, marked, or labeled [172.202(a)(3),(b), 172.203(i)(1)(i) and (ii); 172.2(a)] 4 Counts. Case Number 05PS-209-86.	$ 700.00
JOSEPH E. SEAGRAMS & SONS (Shipper)	Shipper failed to mark proper shipping names on packages; transport vehicle not loaded in accordance with the HMR packages did not meet the requirements of the HMR. [172.300(a); 173.30, 173.22(a)(2); 176.76(a)(2-6); 173 and 178]. Case Number 05PS-027-87.	$ 3,000.00
JUGOSLAVENSKA OCEANSKA PLOVID (Carrier)	No Dangerous Cargo Manifest on board a vessel carrying hazardous materials. [176.30(a)]. Case Number MV85002092.	$ 1,000.00
KIMES CORP. (Shipper)	Improper name on shipping paper. Proper shipping name not marked on packages; Labels were not on drums of flammable liquid. [172.202(a)(1), 172.301(a), 172.400(a); 171.2(a)]. Case Number 05PS-159-86.	$ 800.00

KOREA SHIPPING CO., LTD. (Shipper)	Vessel's Dangerous Cargo Manifest missing required information. [176.30(a)(c)] 2 Counts. Case Number MV86006500.	$ 700.00
675 LEASING COMPANY (Shipper)	Improperly prepared Dangerous Cargo Manifest. [176.30]. Case Numle. MV85001507.	$ 500.00
MAERSK CONTAINER SERVICE INC. (Facility Operator)	Failure to fulfill the requirements for designation of Designated Waterfront Facility (6 Counts) [33 CFR 126.15(e)(h)(k)(m)(1,3,4); 126.13(a)]. Case Number 05PS-137-86.	$ 3,000.00
MAGNESIUM ELEKTRON, INC. (Shipper)	Hazardous material packaging did not meet the requirements as specified in the HMR for a non-exclusive use radioactive material shipment; Improper shipping name and ID number on packages. [172.301(a), 172.2(a), 172.300, 173.425(a)]. Case Number 05PS-220-86.	$ 1,500.00
NEPTUNE ORIENT LINES, LTD. (Carrier)	Drums of corrosive liquids were stowed under deck rather than on deck, as required. [172.102]. Case Number MV86000460.	$ 1,000.00
NEW DAWN SHIPPING CO. (Carrier)	Vessel unloading Class A Explosives without required permit from Captain of the Port; container of Class A Explosives not properly placarded. [176.100; 172.504]. Case Number MV86004295/W.	$ 1,500.00
NORTH ATLANTIC LINE (Carrier)	Shipment of Class A and B Explosives missing labels and placards; required information was missing from Dangerous Cargo Manifest. [172.400(a) 5 Counts, 172.500 (2 counts); 176.30(a)]. Case Number MV86002141.	$ 1,800.00
PETRASCO SERVICES, LTD. (Shipper)	Missing labels and placards on shipment of explosives. [172.400(a), 172.500]. Case Number MV86002145.	$ 600.00
P.I.E. NATIONWIDE INC. (Carrier)	Hazardous materials offered for shipment when the hazardous material was not properly described, marked, or labeled. One transport vehicle with 5 separate shipping paper violations). [171.2(a)]. Case Number 05PS-065-86.	$ 750.00
POWELL DUFFRYN TERMINALS, INC. (Waterfront Facility)	Designated waterfront facility handled hazardous materials with inadequate number of fire extinguishers, uninsulated heater, fire extinguisher locations not marked, and unsatisfactory means of communications. 33 CFR [126.15(i)(j)(k)&(o)]. Case Number 09-006-86.	$ 1,000.00
PRESTON NVOCC SERVICES (Carrier)	Hazardous material offered for shipment when the hazardous material was not properly loaded, described, marked or labeled. (3 Counts) [172.202(a)(1), 172.204(d)(1); 176.76(a)(2); 171.2(a); 173.30]. Case Number 05PS-208-86.	$ 900.00
PRESTON NVOCC SERVICES (NVOCC)	Carrier cited for 11 separate shipping paper violations in 6 transport vehicles. [171.2(a); 17]. Case Number 05PS-062-86.	$ 600.00
PUERTO RICO MARINE MANAGEMENT (Shipper)	Incorrect proper shipping names on shipping papers; No shipper's certification on shipping papers. [172.202(a)(1), 172.204(d)(1)]. Case Number 05PS-160-86.	$ 2,600.00
PUERTO RICO MARINE MANAGEMENT (Shipper)	Information on Dangerous Cargo Manifest not taken verbatim from shipping papers; no shipper's certification on shipping papers; Dangerous Cargo Manifest missing required information; freight container with flammable liquid not placarded; prohibited smoking occurred near container with flammable liquids. [176.24; 176.27; 176.30 (5 counts); 176.325 (2 counts)]. Case Number MV86002172.	$ 2,600.00
PUERTO RICO MARINE TRANSPORT (Shipper)	Vessel carrier cited for 34 separate shipping paper violations in 13 transport vehicles. [171.2(a)]. Case Number 05PS-061-86/OSPS-160-86.	$ 4,000.00
REILLY TAR & CHEMICAL CORP. (Shipper)	Shipper failed to mark proper shipping names on portable tank; hydrostatic test not conducted within last 5 years. [172.300; 173.21b(a)(1)]. Case Number 05PS-025-87.	$ 1,500.00
SAGVENAY SHIPPING LTD. (Carrier)	Vessel carrier's Dangerous Cargo Manifest had improper shipping names and missing ID numbers. [176.30(a)(3)]. Case Number MV86000416.	$ 1,000.00

SEED F OCEANIC STEVEDORING CO. (Waterfront Facility)	Waterfront facility handled hazardous materials under circumstances not covered by the general permit granted in 33 CFR 126.27. [126.33]. Case Number 07-V-10645.	$ 500.00
TOCI MARINE COMPANY (Carrier)	Vessel did not have shower and eyewash fountain operable at ambient temperature (eyewash fountain frozen); vessel's hose connections not marked with cargo piping system working pressure; cargo hose not inspected, tested and marked. [33 CFR 153.216(a), 153.294(b), 153.940(b), 153.940(e)]. Case Number MV86004949.	$ 1,100.00
UNITED STATES LINES, INC. (Carrier)	Improper shipping name and hazard class on Dangerous Cargo Manifest. [176.30(a)] (2 Counts). Case Number MV87000848.	$ 1,000.00
UNITED STATES LINES, INC. (Carrier)	Improper shipping names and incorrect ID numbers on Dangerous Cargo Manifest. [176.30(a)(3)] 14 Counts. Case Numbers MV86000681.	$ 1,400.00
VELCO ENTERPRISES, LTD. (Exporter)	Hazardous materials intended for export from U.S. not properly marked and labeled in accordance with IMDG Code. [171.12(b)] 2 Counts). Case Number MV87001516.	$ 1,200.00
WELLMAN DYNAMICS CORP. (Shipper)	Packages of hazardous materials incorrectly marked (2 counts); Packages of hazardous materials incorrectly labeled (2 counts); Hazardous material not loaded in accordance with the HMR. [172.300, 172.400; 173.30; 176.76(a)]. Case Number 05PS-214-86.	$ 2,000.00
WESTINGHOUSE ELECTRIC CORP. (Shipper)	Hazardous materials offered for shipment when the hazardous material was not properly described, marked, or labeled. (2 Counts); Hazardous material not loaded in accordance with the HMR. [171.2(a); 173.30; 176.76(a)(2)]. Case Number 05PS-066-86.	$ 3,000.00
WESTWOOD SHIPPING LINES (Carrier)	Improper shipping names included on Dangerous Cargo Manifest. [176.30(a)(3)]. Case Number MV86002740.	$ 2,000.00
WHITESTONE LOGGING INC. (Waterfront Facility)	Failure of waterfront facility to record dates and results of required hazardous materials transfer piping tests. [33 CFR 126.15(o)(7)(vii)]. Case Number 17(mps)2-86.	$ 1,000.00
YAMASHITA SHINNIHON STEAMSHIP (Carrier)	Hot work performed on vessel carrying hazardous materials without permission of Captain of the Port. [176.54(a)]. Case Number MV86006421.	$ 1,000.00
	TOTAL	$ 83,150.00
	GRAND TOTAL	$1,454,725.00

APPENDIX D

Listed below in numerical sequence, are the exemptions that were issued, renewed or amended during the year 1987. The reason for each issuance is given by a number in the right-hand column which is coded to the reasons shown below:

1. to develop information and gain experience concerning innovative forms of packagings, shipping conditions, or carrier operations;

2. to authorize packaging of similar nature and integrity equivalent to DOT specification containers;

3. to permit one or a limited number of shipments of a material for which an amendment of the regulations would be impractical;

4. to permit emergency movement of materials in order to prevent risk to life or property; and

5. to permit emergency movement of a material in order to prevent serious economic loss.

APPENDIX C

NUMBER	PURPOSE	REASON
1479	Authorizes use of non-DOT specification cargo tanks, for transportation of liquefied fluorine and mixture of liquefied fluorine and liquefied oxygen.	1
1862	Authorizes shipment of nitrogen in hydraulic accumulators.	1
2000	Authorizes use of a non-DOT specification portable tank or a DOT Specification 4L cylinder, for shipment of flammable liquefied compressed gases.	2
2462	Authorizes shipment of certain lead azide in glass bottles overpacked in non-DOT specification wooden box.	2
2582	Authorizes shipment of certain hazardous materials in cylinders made in compliance with DOT Specification 3E1800, with certain exceptions.	1
2709	Authorizes use of DOT Specification 6J/2S or 6D/2S metal drum/polyethylene containers or non-DOT specification drums, for shipment of Class A and B explosive liquids.	1
2913	Authorizes use of non-DOT specification metal cylinders, for transportation of certain nonflammable and flammable nonliquefied compressed gases.	2
3004	Authorizes use of a non-DOT specification cylinder, for transportation of certain flammable, and non-flammable compressed gases.	2
3095	Authorizes use of a non-DOT specification cargo tank, for shipment of corrosive and flammable liquids.	2
3109	Authorizes use of non-DOT specification pressure vessels, for shipment of a nonflammable, nonliquefied compressed gas.	3
3121	Authorizes use of non-DOT specification cargo tanks, for transportation of a certain Class A poisonous liquid.	2

NUMBER	PURPOSE	REASON
3128	Authorizes use of a non-DOT specification cylinder, for transportation of a Class C explosive and a liquefied nonflammable gas.	2
3353	Authorizes shipment of certain oxidizing materials, in a non-DOT specification steel or aluminum portable tank.	2
3415	Authorizes transport of rocket motors, containing certain Class A or Class B explosives, without overpacking.	3
3498	Authorizes transport of open top vehicles, military combat & tactical vehicles loaded w/their combat supply of accessory ammunition up to 6000 lbs. & not to exceed 18% of net weight of vehicle.	1
3569	Authorizes use of non-DOT specification nonrefillable cylinders, for transportation of a liquid oxidizer.	2
3600	Authorizes shipment of Lance rocket engines in specific configurations which contain Class B and Class C explosives.	3
3630	Authorizes use of a DOT Specification 33A polystyrene case to contain four 5-pint glass bottles of nitric acid.	2
3768	Authorizes use of DOT Specification MC-304, MC-307 and MC-312 cargo tanks, for transportation of certain flammable and corrosive liquids.	2
4177	Authorizes use of a non-DOT specification pressure vessel containing a nonflammable, nonliquefied gas.	3
4242	Authorizes use of a non-DOT specification pressure vessel, for transportation of certain pyroforic mixture.	2
4262	Authorizes shipment of charged oil well jet perforating guns with initiators attached.	2
4291	Authorizes use of a non-DOT specification aluminum portable tank, for transportation of a certain oxidizer.	2

NUMBER	PURPOSE	REASON
4338	Authorizes use of DOT Specification 3AA2015 cylinders and DOT Specification 51 portable tanks, for shipment of certain corrosive liquids and a flammable liquid.	2
4354	Authorizes shipment of chloroformates, in DOT Specification 6D or 37M cylindrical steel overpack with an inside DOT Specification 2S, 2SL or 2T polyethylene container.	1
4453	Authorizes use of a non-DOT specification bulk, hopper-type tank, for transportation of blasting agent, n.o.s. or ammonium nitrate-fuel oil mixtures.	2
4459	Authorizes manufacture, marking and sale of non-DOT specification cylinders, for shipment of flammable, nonflammable gases, Class A and B poisons and mixtures thereof.	2
4661	Authorizes transport of butyl lithium in petroleum solvent in DOT Specification 4BA240 cylinders with alternative retest procedures.	2
4698	Authorizes use of a non-DOT specification hydraulic accumulator, for shipment of a certain nonflammable compressed gas.	2
4719	Authorizes shipment of certain compressed gases not listed in 49 CFR 173.314 and 173.315, in DOT Specification MC-330 and MC-331 cargo tanks or 105A300W, 112A340W, 114A340, 106A500, 106A500X and 110A500W tank car tanks.	2
4726	Authorizes transport of certain liquid metal fluorides, in non-DOT specification seamless monel cylinders, overpacked in a strong wooden box with cushioning material.	2
4734	Authorizes use of modified DOT Specification MC-331 cargo tanks, for transportation of certain flammable liquids and corrosive materials.	2
4803	Authorizes use of a non-DOT specification cargo tank, for shipment of certain corrosive liquids.	1

NUMBER	PURPOSE	REASON
4850	Authorizes shipment of flexible linear shaped charges, metal clad, in 100' lengths, containing not more than 50 grams per linear foot of a high explosive.	1
4884	Authorizes shipment of liquefied and nonliquefied compressed gases and a flammable liquid in stainless steel cylinders, complying with DOT Specification 4BS with certain exceptions.	2
4932	Authorizes shipment of tear gas devices in a telescopic type, cylindrical, wound-kraft container fitted with metal ends overpacked in DOT Specification 12B fiberboard box.	2
4990	Authorizes use of AAR Specification 206W tank cars, for transportaton of certain flammable liquids.	2
5022	Authorizes shipment of certain Class A and Class B explosives in temperature controlled equipment.	1
5038	Authorizes shipment of dimethyldichlorosilane, trichlorosilane, other specifically identified flammable liquids and silicon tetrachloride in non-DOT specification type 304 stainless steel cylinders.	2
5112	Authorizes use of a specially designed kettle drum type aluminum containers, for transportation of a Class A explosives	1
5206	Authorizes privately operated bulk hopper-type units, for transportation of blasting agents.	1
5243	Authorizes modified DOT specification packaging for transportation of Class C or Class A explosives.	1
5248	Authorizes shipment of a certain quantity of polonium-210 in any DOT Specification approved outer Type A packaging.	2
5403	Authorizes use of non-DOT specification cargo tanks, meeting the requirements of DOT MC-312 with certain exceptions, in support of oil well acidizing and industrial cleaning operations.	1

NUMBER	PURPOSE	REASON
5557	Authorizes use of non-DOT specification containers, for shipment of certain explosives, with the gross weight exceeding prescribed limits.	1
5600	Authorizes transport of flammable or nonflammable compressed gases, flammable or corrosive liquids or oxidizers presently authorized to be shipped in a non-DOT specification cylinder made to DOT 3A Specification except monel metal may be used rather than steel.	1
5749	Authorizes use of an insulated nickel steel DOT-MC-331 cargo tank, for transportation of a certain flammable gas.	2
5895	Authorizes use of non-DOT specification inner container overpacked in a DOT-12H fiberboard box, or a wooden box for shipment class C explosives.	1
5923	Authorizes transport of certain flammable and nonflammable gases, in DOT-106A500X and 110A500W multi-unit tank cars.	1
5948	Authorizes shipment of radioactive waste materials in ATMX 500 or 600 rail cars.	2
5951	Authorizes transport of liquefied nonflammable compressed gases, in DOT Specification 106 type tanks.	2
5967	Authorizes use of a non-DOT specification cylinder, for transportation of nonflammable gases.	1
6016	Authorizes shipment of liquid oxygen, nitrogen, and argon in non-DOT specification portable tanks.	1
6045	Authorizes use of DOT Specification MC-312 cargo tanks, for transportation of a flammable liquid.	1
6071	Authorizes use of non-DOT specification pressure vessels, for transportation of nonflammable compressed gases.	2
6122	Authorizes use of a full telescope half slotted fiberborad box meeting the requirements of DOT Specification 12B fiberboard box, for shipment of certain dry organic peroxides.	2

NUMBER	PURPOSE	REASON
6126	Authorizes shipment or chloracetyl chloride in DOT Specification 6D/2S or 2SL composite packaging.	1
6232	Authorizes shipment of nonflammable and flammable gases, and a flammable solid in the same outside packages.	2
6267	Authorizes use of DOT and non-DOT specification fiberboard boxes, for shipment of certain oxidizing materials.	2
6293	Authorizes shipment of specific corrosive materials, in DOT Specification MC-311 or MC-312 tank motor vehicles.	2
6296	Authorizes additional bag packagings, for transportation of certain Class B poisons in DOT Specification 44D multi-wall paper bags.	2
6325	Authorizes transport of oxidizers, in non-DOT specification cargo tanks or DOT Specification MC-306, MC-307, or MC-312 cargo tanks.	2
6349	Authorizes use of non-DOT specification portable tanks, for shipment of certain flammable and nonflammable gases.	1
6418	Authorizes use of DOT Specification MC-303, MC-304, MC-306, MC-307, MC-310, or MC-312 steel cargo tanks, for transportation of Class B poisonous liquids.	1
6434	Authorizes use of non-DOT specification paper bags, for transportation of a poisonous B solid material.	2
6443	Authorizes use of DOT Specification MC-331 insulated cargo tanks not presently authorized, for tranportation of a flammable gas.	1
6452	Authorizes shipment of certain organic peroxides in one pound bags, overpacked in a DOT Specification 12B65 fiberboard box.	2
6472	Authorizes use of non-DOT specification polystyrene containers, for transportation of certain Class B explosives.	2

NUMBER	PURPOSE	REASON
6501	Authorizes transport of liquid high explosives in DOT Specification 6D steel drums overpacked with a DOT Specification 2SL liner.	2
6530	Authorizes shipment of hydrogen and mixtures of hydrogen with helium, argon or nitrogen in DOT Specification 3A, 3AA, 3AX or 3AAX steel cylinders.	2
6531	Authorizes use of a non-DOT specification pressure vessel for shipment of a nonflammable compressed gas.	2
6543	Authorizes shipment of certain corrosives and flammable liquids in non-DOT specification 16 gauge, Type 304 stainless steel cylinders and/or 14 gauge Type 316 stainless steel cylinders.	2
6557	Authorizes deviation from the requirements of the inspector's report for DOT Specification 3A, 3AA, and 4B cylinders, for shipment of certain nonflammable compressed gases.	1
6583	Authorizes shipment of a corrosive material in a DOT Specification 51 portable tank.	1
6614	Authorizes use of non-DOT specification polyethylene bottles, packed inside a high density polyethylene box, for transportation of certain corrosive liquids.	1
6626	Authorizes use of DOT Specification 3A or 3AA cylinders and cylinders marked ICC-3, 3A or 3AA, for shipment of certain compressed gases.	1
6657	Authorizes use of DOT Specification 3A or 3AA cylinders having an age over 35 years for transportation of certain non-liquefied compressed gases.	1
6658	Authorizes use of a non-DOT specification open-head steel drum, for transportation of a certain Class A explosive.	4
6672	Authorizes manufacture, marking and sale of welded or seamless, nonrefillable non-DOT specification steel cylinders, for transportation of certain nonliquefied compressed gases.	2

NUMBER	PURPOSE	REASON
6686	Authorizes use of a modified DOT Specification 39 steel cylinder, for transportation of a certain flammable gas.	1
6691	Authorizes use of DOT Specification 3A or 3AA cylinders over 35 years old which can be retested every 10 years, for transportation of certain flammable and nonflammable gases.	1
6712	Authorizes shipment of certain flammable and nonflammable gases in DOT Specification 3A or 3AA cylinders or ICC-3, 3A or 3AA cylinders.	2
6752	Authorizes use of DOT Specification 3A, 3AAX and 3T cylinders forming part of a tube trailer or tube bank, for transportation of a liquefied flammable compressed gas.	1
6759	Authorizes transport of Class A or B explosives in an IME 22 container or compartment on the same vehicle with non-mass detonating blasting caps.	1
6762	Authorizes transport of chemical kits in plastic inside bottles, packed in plastic boxes overpacked in fiberboard boxes.	1
6765	Authorizes use of non-DOT specification portable tanks, for transportation of a flammable and a nonflammable gas.	1
6769	Authorizes transport of trifluoromethane in DOT Specification tank cars and cargo tanks.	2
6773	Authorizes shipment of a flammable compressed gas, in a DOT Specification 105A600W tank car.	1
6774	Authorizes use of non-DOT specification cylinders complying with DOT Specification 3HT, with certain exceptions, for shipment of a nonflammable gas.	2
6800	Authorizes manufacture, marking and sale of non-DOT specification 50- and 55-gallon polyethylene containers similar to DOT Specification 34, for shipment of certain flammable liquids, corrosive materials, poison B liquids and hydrogen peroxide classed as an oxidizer.	2

NUMBER	PURPOSE	REASON
6816	Authorizes shipment of completely assembled liquid and solid fueled missiles in packaging prescribed in 173.57(a).	1
6824	Authorizes packagings not provided for in the Hazardous Materials Regulations, for shipment of certain oxidizing materials.	2
6861	Authorizes use of DOT Specification 21P fiber drums with DOT Specification 2SL or 2U polyethylene liners, for transportation of certain Class A explosives.	2
6874	Authorizes transport of sodium and potassium cyanides in non-DOT specification wooden boxes.	1
6902	Authorizes shipment of a liquefied nonflammable compressed gas, in a modified DOT Specification 110A800W multi-unit tank car tank.	1
6922	Authorizes use of a DOT Specification 106A500-X multi-unit tank car tank, for shipment of certain compressed gases.	1
6961	Authorizes shipment of certain flammable solids in a DOT Specification 37A 20-gauge steel drum.	2
6971	Authorizes transport of small quantities of reagent chemicals in inside glass bottles packed in metal boxes, overpacked in a strong wooden or fiberboard box.	1
6974	Authorizes use of non-DOT specification cylinders, for transportation of certain nonliquefied compressed gases.	2
7007	Authorizes shipment of chlorine in non-DOT specification multi-unit tank car tanks patterned after DOT Specification 110A500W.	1
7023	Authorizes use of non-DOT specification steel portable tanks, for shipment of an oxidizer or corrosive material.	2
7026	Authorizes manufacture, marking and sale of a non-DOT specification welded steel pressure vessel, for transportation of a compressed gas.	2

NUMBER	PURPOSE	REASON
7035	Authorizes manufacture, marking and sale of non-DOT specification reusable, molded polyethylene containers, for transportation of corrosive liquids and solids, oxidizers, flammable liquids, and Class B poisonous liquids.	1
7046	Authorizes use of modified DOT Specification MC-312 glass lined cargo tanks, for transportation of certain corrosive liquids and a certain oxidizer.	2
7051	Authorizes use of non-DOT specification Teflon bottles overpacked with either a DOT Specification 12A or 12B fiberboard box, for transportation of a corrosive liquid.	1
7052	Authorizes shipment of batteries containing lithium and other materials, classed as flammable solids.	1
7056	Authorizes one-time reuse of DOT Specification 37A steel drums, for transportation of a certain flammable solid.	1
7060	Authorizes carriage of radioactive materials aboard cargo aircraft only when the combined transport index exceeds 50.0 and/or the separation criteria cannot be met.	1
7063	Authorizes use of a removable-head non-DOT specification polyethylene pail, for transportation of corrosive materials.	1
7071	Authorizes polyethylene packagings in a quantity not provided for in the regulations, for transporation of a certain corrosive liquid.	1
7072	Authorizes manufacture, marking and sale of non-DOT specification 34 type containers, for transportation of certain liquid organic peroxides, oxidizers and corrosive materials, flammable liquids and poison B liquids.	1
7073	Authorizes use of non-DOT specification portable tanks for transportation of a Class B poisonous liquid.	2

NUMBER	PURPOSE	REASON
7087	Authorizes shipment of small quantities of certain hazardous materials in non-DOT specification glass, polyethylene, or other plastic containers.	2
7205	Authorizes certain stowage deviations in the transportation of military explosives by vessel.	1
7235	Authorizes manufacture, marking and sale of non-DOT specification fiber reinforced plastic hoop wrapped cylinders, for transportation of certain nonflammable compressed gases.	2
7252	Authorizes transport of Fourvex and Tovex Extra in DOT Specification 17H metal drums.	2
7269	Authorizes use of sift-proof paper or plastic bags overpacked in DOT Specification 21C fiber drums, for transportation of certain Class A explosives.	2
7274	Authorizes use of non-DOT specification portable tanks, for shipment of certain nonflammable gases.	1
7280	Authorizes fuel tanks to be 3/4 full instead of 1/4 full and vehicles to be transported with battery cables connected if the holds or compartments of a vessel in which vehicles are loaded are mechanically ventilated.	1
7282	Authorizes use of non-DOT specification steel portable tanks, for shipment of certain mixtures of nonpoisonous, nonflammable compressed gases.	2
7286	Authorizes shipment of certain nonliquefied compressed gases in DOT Specification 3A or 3AA cylinders and cylinders marked ICC-3, 3A or 3AA.	2
7413	Authorizes transport of carbon dioxide or nitrogen, in a non-DOT specification brazed steel cylinder.	2
7440	Authorizes transport of a nonflammable gas, in non-DOT specification one-piece, impact-extruded, cylindrical, aluminum container.	2
7451	Authorizes use of non-DOT specification pressure vessels, for transportation of a nonflammble gas.	1

NUMBER	PURPOSE	REASON
7454	Authorizes blasting agent to be stowed in proximity to certain explosives without a bulkhead separating these materials.	1
7455	Authorizes handling and stowage of explosive material in an anchored and unmanned barge.	3
7458	Authorizes manufacture, marking and sale of non-DOT specification seamless cylinders, for transportation of nonflammable gases.	2
7476	Authorizes manufacture, marking and sale of certain non-DOT specification cargo tanks, for transportation of certain flammable and corrosive liquids and poison waste materials.	2
7489	Authorizes shipment of a corrosive liquid in specified non-DOT specification metal container having a capacity of 1 quart or less, in a DOT Specification 37A metal drum.	1
7495	Authorizes manufacture, marking and sale of non-DOT specification portable steel tanks, for transportation of chlorine or sulfur dioxide.	1
7505	Authorizes use of DOT Specification 17C drums previously used for shipment of Class B poisons and reconditioned (decontaminated).	2
7526	Authorizes shipment of a pyrophoric liquid in non-DOT specification portable tanks.	2
7536	Authorizes an increase to the maximum allowable draft weights for five and ten ton rated booms for shipment of military explosives.	1
7542	Authorizes manufacture, marking and sale of non-DOT specification steel cylinders, for transportation of certain flammable gases.	2
7544	Authorizes transport of solutions of sodium hydroxide and certain other liquid corrosives, or other liquid corrosive materials in a DOT Specification 2U polyethylene inside container, overpacked in a non-DOT specification fiberboard box.	2

NUMBER	PURPOSE	REASON
7546	Authorizes use of a heat pipe radiator assembly for shipment of certain flammable liquids and nonflammable and flammable compressed gases.	3
7549	Authorizes use of a non-DOT specification 316L stainless steel portable tank, for shipment of a certain corrosive material.	1
7555	Authorizes use of a cargo tank made from non-metallic materials for transportation of certain corrosive materials.	1
7594	Authorizes transport of certain poison B liquids in DOT Specification MC-312 cargo tanks.	2
7595	Authorizes transport of certain poison B liquids in DOT Specification MC-312 cargo tanks.	1
7601	Authorizes shipment of desensitized nitroglycerin in non-DOT specification inside containers.	3
7605	Authorizes transport of certain explosives contained in a partially dis-assembled aircraft or canopy assembly.	1
7607	Authorizes shipment of hydrogen in certain non-DOT specification seamless stainless steel cylinders.	1
7616	Authorizes carrier to certify the shipping paper on behalf of the shipper when transporting hazardous materials by rail.	1
7625	Authorizes transport of certain corrosive liquids, in DOT Specification 56 portable tanks.	2
7628	Authorizes use of DOT Specification 111A100W-5 tank cars equipped with a safety relief valve instead of a vent for shipment of certain corrosive liquids.	5
7638	Authorizes manufacture, marking and sale of DOT Specification 4L cylinders, for transportation of certain nonflammable compressed gases.	4
7641	Authorizes carriage of motor vehicles aboard cargo vessels with battery cables connected.	5

NUMBER	PURPOSE	REASON
7648	Authorizes carriage of aerial illuminating flares for testing purposes in cargo aircraft only.	3
7657	Authorizes manufacture, marking and sale of non-DOT specification cylinders, for transportation of certain compressed gases.	2
7694	Authorizes use of non-DOT specification welded, or seamless, nonrefillable cylinders containing non-liquefied compressed gases.	2
7716	Authorizes transport of ammonium nitrate in inside polyethylene bottles or foil pouches, each containing less than 3 pounds or less, overpacked in DOT Specification 12H-65 fiberboard boxes with a plastic liner bag containing not more than 36 pounds net weight.	2
7721	Authorizes manufacture, marking, and sale of non-DOT specification steel cylinders, for transportaion of certain nonflammable, nonliquefied compressed gases.	1
7730	Authorizes use of a DOT Specification MC-312 cargo tank, for transportation of certain corrosive materials.	3
7731	Authorizes manufacture, marking, and sale of non-DOT specification super-insulated portable tanks for shipment of pressurized liquid helium.	2
7735	Authorizes manufacture, marking and sale of DOT specification 34 containers, for shipment of certain flammable liquids and corrosive materials.	1
7753	Authorizes shipment of yellow phosphorous in a tight-head 55 gallon DOT Specification 17C drum.	2
7765	Authorizes use of nonrefillable, non-DOT specification cylinders, for transportation of a nonflammable gas.	2
7767	Authorizes manufacture, marking and sale of non-DOT specification welded steel cylinders, for transportation of nonflammable compressed gases.	1

NUMBER	PURPOSE	REASON
7769	Authorizes manufacture, marking and sale of non-DOT specification fiber reinforced plastic full composite cylinder, for transportation of certain nonflammable compressed gas.	1
7770	Authorizes transport of anhydrous hydrogen fluoride or anhydrous methylchloromethyl ether in certain non-DOT specification portable tanks.	2
7774	Authorizes shipment of bromine trifluoride in non-DOT specification cylinders.	2
7808	Authorizes shipment of insecticides in DOT Specification 39 cylinders equipped with a pressure relief device.	1
7822	Authorizes shipment of liquid helium in specifically insulated non-DOT specification portable tanks.	2
7834	Authorizes transport of nonliquefied sulfur hexafluoride in certain X-ray machines, overpacked in strong wooden or fiberboard boxes.	1
7835	Authorizes transport of compressed gas cylinders bearing the flammable gas label, the oxidizer label, or the poison gas label and tank car tanks bearing the poison gas label on the same vehicle.	1
7857	Authorizes use of certain non-DOT specification portable tanks for shipment of certain flammable gases.	2
7862	Authorizes use of non-DOT specification aluminum, single trip, inside container, for transportation of a nonflammable gas.	2
7876	Authorizes use of a shipping description, etching acid, liquid, n.o.s., to be used for products which do not comply with the definition in 49 CFR 173.299(a).	2
7879	Authorizes shipment of bromine trifluoride, in non-DOT specification seamless cylinders.	2
7886	Authorizes shipment of a corrosive liquid, in non-DOT specification metal can/fiberboard box packaging.	2

NUMBER	PURPOSE	REASON
7887	Authorizes shipment of packages of toy propellant devices as an ORM-D material and excepted from labeling requirements.	1
7891	Authorizes transport of packages bearing the DANGEROUS WHEN WET label, in motor vehicles which are not placarded FLAMMABLE SOLID W.	1
7907	Authorizes shipment of wet nitrocellulose, a flammable liquid or flammable solid, in non-DOT specification fiberboard drums.	2
7915	Authorizes transport of certain propellant explosives in water in DOT Specification MC 307 or MC 312 cargo tanks.	1
7943	Authorizes shipment of corrosive liquids in fiberboard boxes complying with DOT Specification 12B except for handholes in top flaps.	2
7946	Authorizes transport of various nonflammable gases in non-DOT specification steel or aluminum pressure vessels contained in a radiation detector.	2
7948	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks for shipment of flammable and corrosive waste materials.	2
7963	Authorizes transport of perchloromethyl mercaptan and thiophene-2-acetyl chloride, in monel tanks constructed in accordance with DOT Specification 51.	2
7972	Authorizes transport of limited quantities of explosives in a special shipping container without placarding the vehicle.	1
7991	Authorizes transport of railway track torpedoes and fusees in flagging kits of specified construction.	1
8006	Authorizes transport of unlabeled packages of toy paper or plastic caps complying with the requirements of 173.100(p) and 173.109, in motor vehicles with placards, when the gross weight of the caps is 1000 pounds or more.	2

NUMBER	PURPOSE	REASON
8008	Authorizes manufacture, marking and sale of non-DOT specification aerosol container consisting of a glass bottle externally coated with plastic, for shipment of compressed gases.	1
8017	Authorizes use of DOT Specification 3AX, 3AAX, or 3T cylinders for transportation of a flammable gas.	2
8051	Authorizes manufacture, marking and sale of DOT Specification reusable, blowmolded, polyethylene containers, for transportation of corrosive materials.	1
8053	Authorizes shipment of monoethylamine in inside glass bottles/metal can, overpacked in DOT Specification 12B fiberboard boxes.	2
8060	Authorizes use of non-DOT specification IMO Type 5 portable tanks, for transportation of certain nonflammable, liquefied gases.	2
8063	Authorizes use of a vacuum insulated DOT Specification 4L welded cylinder, for transportation of certain nonflammable gases.	2
8065	Authorizes shipment of certain Class A and Class B explosives in non-DOT specification plywood boxes.	2
8077	Authorizes use of non-DOT specification steel drums, for shipment of a flammable and corrosive liquid.	4
8080	Authorizes transport of dry chromic acid in a DOT specification 105A300W tank car which has been converted to DOT Specification 111A100W1; or a DOT Specification 103AW tank car converted to DOT Specification 103W.	1
8084	Authorizes transport of Class A explosives containing more than 5% moisture in plastic tubes overpacked in DOT specification wooden or fiberboard boxes.	1
8086	Authorizes transport of a cruise missile containing hazardous materials.	2

NUMBER	PURPOSE	REASON
8096	Authorizes manufacture, marking and sale of non-DOT specification steel cylinders for shipment of certain nonflammable gases.	1
8099	Authorizes use of a non-DOT specification corrugated fiberboard box with an inner heat-sealed bag for the transportation of certain poisonous solids.	2
8115	Authorizes manufacture, marking and sale of non-DOT specification fiber reinforced plastic hoop wrapped cylinder, for transportation of certain nonflammable compressed gases.	1
8126	Authorizes use of non-DOT specification portable tanks, for transportation of certain liquefied petroleum gases and other gases classed as flammable gas and a flammable liquid.	2
8127	Authorizes use of a non-DOT specification fiberboard drum for shipment of wet nitrocellulose.	1
8131	Authorizes use of a non-DOT specification portable tank made of Inconel 718 metal for shipment of a nonflammable gas.	2
8141	Authorizes transport of individual cells and modules consisting of three cells containing lithium metal and thionyl chloride.	1
8151	Authorizes shipment of liquid hazardous materials in five-gallon capacity removable head polyethylene drums.	2
8152	Authorizes shipment of hydrofluoric acid, solution, in an unlined DOT Specification MC-312 cargo tank.	1
8156	Authorizes shipment of flammable gases in DOT Specification 39 cylinders up to 225 cubic inches in volume.	1
8162	Authorizes manufacture, marking and sale of a non-DOT specification cylinder for shipment of certain nonflammable compressed gases.	1

NUMBER	PURPOSE	REASON
8167	Authorizes shipment of a chromic acid solution in composite packaging consisting of a non-DOT specification fiberboard outer box and expanded polystyrene/glass bottle inner packaging.	2
8168	Authorizes manufacture, marking and sale of non-DOT specification fully removable head polyethylene drums, for shipment of certain corrosive solids and solid oxidizers.	1
8175	Authorizes shipment of benzoyl peroxide, wet, in a plastic lined DOT Specification 21C fiber drum, without an inside polyethylene container.	2
8178	Authorizes use of a non-DOT specification composite cylinder for a compressed nonliquefied gas.	1
8180	Authorizes use of a non-DOT specification steel drum for shipment of a specifid corrosive material and a flammable liquid.	1
8184	Authorizes shipment of trinitrotoluene in a non-DOT specification multi-wall paper polyethylene jute composite bag with net weight not exceeding 100 pounds.	1
8194	Authorizes use of a fiberboard box complying with DOT Specification 12B (except for closure method and its one-piece, die cut design) for shipment of liquid organic peroxides.	2
8195	Authorizes use of non-DOT specification metal drums as outside containers in lieu of prescribed DOT specification fiberboard or wood containers.	2
8196	Authorizes use of a non-DOT specification portable tank for the transportation of certain compressed gases.	1
8207	Authorizes shipment of certain corrosive liquids, n.o.s., in a one-quart tin can, placed in a molded polyethylene liner, overpacked in a modified 28 gauge DOT Specification 37A 2-gallon drum.	2
8208	Authorizes shipment of liquid propellant samples, frozen, in non-DOT specification plywood boxes.	5

NUMBER	PURPOSE	REASON
8209	Authorizes carriage of Class A, B, and C explosives not permitted for air shipment or in quantities greater than those prescribed for air shipment.	1
8213	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying generally with DOT Specification MC-307/MC-312 except for bottom outlet valve variations, for transportation of flammable or corrosive waste liquids or semi-solids.	2
8214	Authorizes transport of inflators and modules for passive restraint systems for use in automobiles.	1
8215	Authorizes shipment of certain identified Class A, B, and C explosives in non-DOT specification containers.	3
8220	Authorizes use of non-DOT specification small, high pressure cylinders of welded construction for aircraft use in the transportation of nonflammable compressed gases.	1
8221	Authorizes use of non-DOT specification high pressure cylinders of welded construction for military missile systems use only.	3
8225	Authorizes use of a non-DOT specification rotationally molded, cross-linked polyethylene portable tank for the shipment of corrosive liquids and an oxidizer.	2
8228	Authorizes transport of packages containing not in excess of 35 grams of one type of explosive material or one explosive device, not exceeding 35 grams, in any one package.	4
8230	Authorizes shipment of certain oxidizers in non-DOT specification containers.	1
8232	Authorizes use of a non-DOT specification portable tank for the transportation of certain compressed gases.	2
8236	Authorizes shipment of a passive restraint system, and the inflator therefore, containing a Class B explosive as a flammable solid.	1

NUMBER	PURPOSE	REASON
8238	Authorizes shipment of arsenical flue dust in non-DOT specification packaging.	2
8239	Authorizes use of non-DOT specification containers for the shipment of nonflammable gases.	1
8244	Authorizes shipment of various flammable, combustible, and corrosive materials in lined marine portable tanks.	1
8248	Authorizes shipment of various corrosive liquids in a modified DOT Specification 15C wooden box, compartmented to accommodate four (4) inner glass bottles, each secured in an aluminum canister.	2
8249	Authorizes hazardous materials, which are required to bear the POISON label, to be transported without the label when shipped in prescribed packaging.	1
8255	Authorizes use of a non-DOT specification cylinder for shipment of certain nonflammable gases.	2
8256	Authorizes shipment of stabilized sulfur trioxide in DOT Specification 105A100W and 111A100W2 tank cars equipped with standpipe electrical heaters and a modified safety relief device.	1
8264	Authorizes shipment of certain solid propellant explosives (Class B) and smokeless powders for small arms (flammable solids) in non-DOT specification fiber cans or tubes packed in fiberboard boxes.	1
8265	Authorizes transport of certain solid propellant explosives in non-DOT specification fiber tubes packed in telescoping DOT Specification 12B fiberboard boxes, and certain smokeless powders for small arms, in DOT Specification 21C fiber drums packed in fiberboard boxes.	1
8273	Authorizes transport of a passive restraint module, and the inflator therefore, containing a Class B explosive as a flammable solid.	1
8278	Authorizes use of a non-DOT specification container for specified flammable gases and liquids.	1

NUMBER	PURPOSE	REASON
8287	Authorizes shipment of a corrosive liquid in a DOT Specification 6D/2SL composite container or a DOT Specification 34 drum equipped with a bung vent.	2
8301	Authorizes use of a 30-gallon capacity DOT Specification 34 container for the transportation of certain flammable, corrosive, and Poison B liquids, and liquid organic peroxides.	2
8307	Authorizes shipment of non-pyrotechnic mixture of certain corrosive materials, gas and an explosive charge in a non-DOT specification container.	2
8348	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying generally with DOT Specification MC-312 except for bottom outlet valve variation, for transportation of flammable or corrosive waste, liquids or semi-solids.	2
8354	Authorizes use of a non-DOT specification portable tank for the transportation of certain flammable liquids and flammable gases.	2
8362	Authorizes shipment of batteries containing lithium metal and thionyl chloride in fiberboard boxes overpacked in wooden boxes.	1
8363	Authorizes shipment of certain identified solid propellant explosives.	1
8377	Authorizes transport of devices described as detonating fuzes, Class C explosives, in fiberboard boxes inside wooden boxes.	2
8388	Authorizes shipment of liquid hazardous materials in a five-gallon capacity removable head polyethylene drum.	2
8390	Authorizes shipment of 95%-98% sulfuric acid in DOT Specification 2E polyethylene bottles overpacked in DOT Specification 12A80 fiberboard boxes.	2
8396	Authorizes transport of a flammable liquid which is also an organic peroxide in DOT Specification MC-307 and MC-312 cargo tanks.	2

NUMBER	PURPOSE	REASON
8407	Authorizes transport within plant over public highway via fork-lift trucks, waste residues, without shipping papers, contained in non-DOT specification portable tanks.	1
8426	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying with DOT Specification MC-307/312 with certain exception for transport of liquid and semi-solid waste materials.	2
8439	Authorizes manufacture, marking and sale of non-DOT specification cylinders complying with DOT Specification 4DS, with certain exceptions, for shipment of various nonflammable compressed gases.	2
8445	Authorizes shipment of various hazardous substances and wastes packed in inside plastic, glass, earthenware or metal containers, overpacked in a DOT Specification removable head steel, fiber or polyethylene drum, only for the purposes of disposal, repackaging or reprocessing.	5
8451	Authorizes transport of not more than 25 grams of high explosives and pyrotechnic materials in a special shipping container.	1
8453	Authorizes use of non-DOT specification cargo tanks and DOT Specification MC-306, MC-307, or MC-312 stainless steel cargo tanks to transport blasting agent.	2
8465	Authorizes manufacture, marking and sale of non-DOT specification plastic bag (comparable to a DOT Specification 44P), for shipment of ammonium nitrate fertilizer.	2
8478	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying with DOT specification MC-307/312 with certain exceptions, for transportation of liquid and semi-solid waste.	2
8487	Authorizes manufacture, marking and sale of non-DOT specification fiber reinforced plastic aluminum lined full composite cylinders, for shipment of certain nonflammable compressed gases.	2

NUMBER	PURPOSE	REASON
8494	Authorizes use of DOT Specification MC 307 cargo tanks equipped with sight glass gauges.	2
8495	Authorizes manufacture, marking and sale of non-DOT specification spherical containers similar to DOT Specification 4DS for shipment of bromotrifluoromethane pressurized with nitrogen.	2
8498	Authorizes use of a non-DOT specification 55 gallon polyethylene Specification 34 type packaging.	2
8510	Authorizes shipment of salt coated magnesium granules in a non-DOT specification container.	2
8516	Authorizes shipment of ammonium nitrate-fertilizer, classed as an oxidizer and ammonium nitrate-fuel oil, classed as a blasting agent to be stowed in the same hold or compartment aboard ship.	2
8518	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying generally with DOT Specification MC-307/312 except for bottom outlet valve variations, for transportation of flammable or corrosive waste liquids or semi-solids.	2
8519	Authorizes stowage of motor vehicles containing gasoline, classed as a flammable liquid in same cargo compartment with other hazardous materials or specially equipped roll-on-roll-off cargo vessel.	2
8520	Authorizes "fire test" in lieu of "fire test" for blasting agents that will be packaged in drum size containers not to exceed 55 gallons.	1
8522	Authorizes manufacture, marking and sale of non-reusable molded expanded polystyrene cases similar to DOT-33A except they will incorporate 6 cavities to contain a total of six 5-pint bottles.	2
8523	Authorizes shipment of various flammable and non-flammable compressed gases in non DOT specification IMCO Type 5 portable tanks.	2

NUMBER	PURPOSE	REASON
8526	Authorizes shipment of flammable liquids and/or flammable gases in temperature controlled equipment.	2
8536	Authorizes an increased weight limitation for a 12B carton from 65 pounds to 80 pounds with the dry weight of material not to exceed 50 pounds for shipment of benzoyl peroxide.	2
8539	Authorizes carriage of certain Class A, B and C explosives that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
8540	Authorizes shipment of oxygen candles packaged in specially designed metal containers.	5
8547	Authorizes shipment of phosphorous oxychloride in prescribed tank cars constructed of Type 316 stainless steel.	2
8549	Authorizes manufacture, marking and sale of certain non-DOT specification cargo tanks complying with DOT Specification MC-307/MC-312 except for bottom outlet valve variations, for transportation of liquid and semi-solid waste materials.	2
8551	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying generally with DOT Specification MC-307/312 except for bottom outlet valve variations and certain other features, for transportation of flammable, corrosive, or poisonous waste liquids or semi-solids.	2
8552	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying generally with DOT Specification MC-307/MC-312 except for bottom outlet valve variations, for transportation of flammable or corrosive waste liquids or semi-solids.	2
8554	Authorizes transport of propellant explosives and blasting agents, in DOT Specification MC-306, MC-307, and MC-312 cargo tanks.	1

NUMBER	PURPOSE	REASON
8555	Authorizes shipment of a large rocket motor segment on a special highway vehicle.	1
8556	Authorizes use of non-DOT specification portable tanks for shipment of liquefied hydrogen.	2
8558	Authorizes transport of a pharmaceutical described as an initiating explosive in a non-DOT specification polyethylene pail, overpacked in a 15-gallon DOT Specification 37A steel drum.	4
8561	Authorizes manufacture, marking and sale of non-DOT specification stainless steel cylinders similar to a DOT Specification 3HT, for shipment of oxygen.	2
8569	Authorizes shipment of 6.6 gallons of hydrazine, aqueous solution in non-DOT specification F-16 emergency fuel tanks.	1
8570	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tank, for shipment of corrosive liquids and an oxidizer.	2
8571	Authorizes shipment of various flammable liquids packaged in a DOT Specification 12A80 corrugated fiberboard box with two inside metal containers not over 10-liter capacity each.	2
8573	Authorizes manufacture, marking and sale of non-DOT specification polyethylene bottles for shipment of certain oxidizers, overpacked in a DOT Specification 12B fiberboard box.	2
8577	Authorizes shipment of certain alkaline corrosive liquids n.o.s., in a two quart polyethylene bottle, placed in a molded polyethylene liner, overpacked in a DOT Specification 37C steel drum.	2
8579	Authorizes shipment of ammonium nitrate fertilizer in strapped or stretch wrapped palletized loaded bags aboard cargo vessel exempt from spacing criteria for bags and location.	2
8582	Authorizes transport of railway track torpedoes and fusees packed in metal kits, in motor vehicles by railroad maintenance crews as non-regulated rail carrier equipment.	1

NUMBER	PURPOSE	REASON
8602	Authorizes manufacture, marking and sale of non-DOT specification vaccum insulated portable tanks for shipment of argon, nitrogen and oxygen.	2
8606	Authorizes shipment of monomethylamine anhydrous, classed as a flammable gas in non-DOT specification IMCO Type V portable tanks.	2
8609	Authorizes manufacture, marking and sale of non-DOT specification removable head steel drums complying with DOT Specification 17H, for shipment of Poison B material in the same vehicle with foodstuff.	2
8614	Authorizes carriage of certain Class A, B and C explosives that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
8620	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying generally with DOT Specification MC-307/MC-312 except for bottom outlet valve variations, for transportation of flammable or corrosive waste liquids or semi-solids.	2
8621	Authorizes loading of ammonium nitrate mixtures containing more than 60% ammonium nitrate with no organic coating contained in combustible packagings on a break-bulk basis at a non-isolated facility.	5
8645	Authorizes shipment of a viscous oxidizing material in DOT Specification MC-307/311 insulated tank motor vehicles at ambient temperature.	2
8650	Authorizes use of a non-DOT specification steel portable tank for shipment of motor fuel antiknock compound.	2
8651	Authorizes transport of nitrogen tetroxide and monomethylhydrazine in separate tanks mounted on a motor vehicle chassis.	2
8667	Authorizes transport of steel encapsulated sources containing Type B quantities of Cesium 137, contained in calibrated radiological instruments which do not meet all current testing requirements.	2

NUMBER	PURPOSE	REASON
8673	Authorizes limited shipments of inhibited hydrochloric acid solution in a DOT Specification 60 rubber lined portable tank.	5
8678	Authorizes use of non-DOT specification IMCO Type V portable tank, for shipment of flammable and nonflammable gases.	2
8684	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks constructed in accordance with DOT Specification MC 331 with certain exceptions, for the shipment of nonflammable gases.	2
8689	Authorizes manufacture, marking and sale of a non-DOT specification oil well sampling device for the shipment of various compressed gases, n.o.s.	2
8691	Authorizes shipment of aluminum chloride contaminated with phosgene, in packages presently authorized under Section 173.245b(a)(1), (4), (8), (9), (10).	2
8692	Authorizes shipment of sodium persulfate in collapsible polyethylene-lined, woven polypropylene bags having a capacity of approximately 2,200 pounds each.	2
8693	Authorizes shipment of sodium, metal dispersion in organic solvent in DOT Specification 4BW240 cylinders.	2
8698	Authorizes manufacture, marking and sale of non-DOT specification portable tanks for shipment of non-pressurized liquid nitrogen.	2
8706	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying generally with DOT Specification MC-307/MC-312 except for bottom outlet valve variations, for transportation of flammable or corrosive waste liquids or semi-solids.	2
8708	Authorizes use of non-DOT specification steel drums (overpacked, palletized and containerized) for shipment of a Class B poison.	4

NUMBER	PURPOSE	REASON
8710	Authorizes shipment of an organic peroxide classed as a flammable liquid, in a DOT Specification MC-307/312 cargo tank equipped with temperature and pressure sensing devices.	2
8716	Authorizes multi-trip use of DOT Specification 17C steel drums for shipment of lithium metal, ingots, immersed in oil.	3
8718	Authorizes manufacture, marking and sale of non-DOT specification, limited cycle life, fiberglass reinforced plastic cylinders, for shipment of various non-flammable compressed gases.	2
8720	Authorizes manufacture, marking and sale of non-DOT specification non-reusable welded steel cylinders similar to DOT Specification 39, for shipment of various non-flammable gases.	2
8723	Authorizes use of non-DOT specification motor vehicles for bulk shipment of certain blasting agents.	5
8725	Authorizes manufacture, marking and sale of non-DOT Specification fiber reinforced plastic hoop wrapped cylinders, for shipment of certain compressed gases.	2
8732	Authorizes shipment of monoethanolamine, classed as a corrosive material in DOT Specification MC-306 cargo tanks constructed of steel and aluminum.	2
8735	Authorizes manufacture, marking and sale of non-DOT specification removable head polyethylene drums for shipment of corrosive liquids.	2
8742	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying generally with DOT Specification MC-307/MC-312 except for bottom outlet valve variations, for transportation of flammable or corrosive waste liquids or semi-solids.	2
8748	Authorizes shipment of boron trifluoride, classed as a nonflammable gas in non-DOT specification containers when shipped as a component of a radiation detector.	2

NUMBER	PURPOSE	REASON
8750	Authorizes manufacture, marking and sale of non-DOT specification girth welded steel cylinders, for shipment of certain nonflammable gases.	2
8751	Authorizes shipment of various corrosive waste liquids or semi-solids in non-DOT specification cargo tanks similar to DOT Specification MC-312 except for bottom outlet valve variations.	2
8757	Authorizes manufacture, marking and sale of non-DOT specification stainless steel cylinders, for shipment of compressed gases.	2
8758	Authorizes manufacture, marking and sale non-DOT specification portable tanks, for shipment of certain nonflammable gases.	2
8760	Authorizes display of FLAMMABLE placards, showing identification number (1993), on Barton Solvents, Inc. cargo tanks specified for the materials and having six or more compartments when transporting one or more hazardous material.	5
8763	Authorizes shipment of liquid hydrogen in non-DOT specification cargo tank.	2
8767	Authorizes manufacture, marking and sale non-DOT specification cylinders complying with DOT Specification 39 with certain exceptions, for shipment of helium, classed as nonflammable gas.	2
8772	Authorizes increased quantity, not exceeding 5 gallon capacity, in packages of certain corrosive liquids and flammable liquids that are corrosive, when shipped via cargo aircraft only.	3
8802	Authorizes use of non-DOT specification IMO Type 5 portable tanks, for transportation of liquefied compressed gases.	2
8812	Authorizes manufacture, marking and sale of non-DOT specification five gallon metal containers comparable to DOT Specification 5L, for shipment of gasoline, and gasohol, classed as flammable liquids.	2

NUMBER	PURPOSE	REASON
8814	Authorizes manufacture, marking and sale of non-DOT specification fiber reinforced plastic full composite cylinders, for transportation of certain flammable and nonflammable compressed gases.	2
8815	Authorizes transport of certain blasting agents in a cement mixer motor vehicle.	2
8837	Authorizes manufacture, marking and sale of non-DOT specification portable steel tanks with a polyethylene liner for shipment of a corrosive liquid, n.o.s.	2
8839	Authorizes manufacture, marking and sale of non-DOT specification rationally molded, cross-linked polyethylene portable tank, for shipment of corrosive liquids and an oxidizer.	2
8844	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks designed and constructed in full compliance with DOT Specification MC-307 or MC-312 with certain exceptions, for transportation of certain hazardous materials.	2
8845	Authorizes transportation of charged oil well jet perforating guns equipped with detonator and arrest device, classed as explosive A and C.	2
8862	Authorizes shipment of propylene oxide, classed as a flammable liquid in DOT Specification 5P metal drums.	2
8864	Authorizes transport of a corrosive liquid, n.o.s. in existing non-DOT specification cargo tanks comparable to DOT Specification MC-312 except for remote release valve and overturn protection.	2
8865	Authorizes shipment of helium, classed as a nonflammable gas in a manifolded pressure vessel system including a steel cylinder similar to DOT Specification 39.	2
8877	Authorizes shipment of certain materials described as flammable liquids, corrosive, n.o.s. (corrosive to skin only) and corrosive liquids, n.o.s., in DOT-12B65 fiberboard boxes with inside glass bottles having a capacity not to exceed one-gallon.	2

NUMBER	PURPOSE	REASON
8888	Authorizes shipment of approximately 5,500 gallons of compound cleaning, liquid in DOT Specification 37M steel drums with 2SL polyethylene inside container having a capacity exceeding the net quantity limitations for cargo only aircraft.	1
8901	Authorizes shipment of chloropicrin, in polyethylene bottles overpacked in non-DOT specification triple-wall, corrugated fiberboard boxes.	2
8904	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying generally with DOT Specification MC-307/312 except for bottom outlet valve variation and certain other features, for transportation of falmmable, corrosive or poisonous waste liquids or semi-solids.	2
8906	Authorizes shipment of used, essentially empty containers with residual amounts of carbofuran, packed in a non-DOT specification double wall BC flute corrugated fiberboard box.	2
8908	Authorizes shipment of dry chromic acid, in non-DOT specification collapsible polyethylene-lined, woven polypropylene bags.	2
8910	Authorizes use of non-DOT specification rotationally molded, linear low density polyethylene portable tank enclosed in a steel cage, for shipment of corrosive liquids.	2
8917	Authorizes transport ammonium nitrate prills in large, lined steel container.	2
8921	Authorizes manufacture, marking and sale of nonreusable non-DOT Specification steel jacketed polyethylene portable tanks, for transportation of corrosive liquids.	2
8923	Authorizes transport of a flammable liquid which is also corrosive in DOT Specification 51 portable tanks.	2
8924	Authorizes manufacture, marking and sale of non-DOT specification 55-gallon drums complying with DOT-17H except for marking and the top head is manufactured of 18 gauge steel with only one corrugation for shipment of paint classed as flammable liquid.	2

NUMBER	PURPOSE	REASON
8930	Authorizes carriage of certain Class A, B and C explosives that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
8931	Authorizes shipment of sulfuric acid, classed as a corroisve material in DOT Specification 111A100W2 tank cars equipped with bottom outlets.	2
8932	Authorizes use of cargo tanks complying with DOT Specification MC-307 and MC-312, for transportation of organic peroxide solution.	2
8936	Authorizes shipment of a mixture containing 57% chloropicrin and 43% 1,3-dichloropropene, 1,2-dichloropropane and related hydrocarbons, respectively, by weight, in non-authorized DOT Specification 5B metal drums.	2
8937	Authorizes shipment of coated magnesium granules in non-DOT specification collapsible flexible bag, disposable bulk container.	2
8938	Authorizes manufacture, marking and sale of DOT Specification 4L welded cylinders, for transportation of nonflammable gases.	2
8942	Authorizes manufacture, marking and sale of steel jacketed non-DOT specification rotationally molded, cross-linked polyethylene portable tanks, for shipment of corrosive liquids and an oxidizer.	2
8955	Authorizes transport of charged oil well guns with detonators attached.	2
8958	Authorizes transport of limited quantities of black powder, classed as a flammable solid, in DOT Specification 12H fiberboard boxes.	3
8960	Authorizes carriage of certain Class A, B and C explosives that are not permitted for air shipment or are in quantities greater than those prescribed for shipment by air.	1
8962	Authorizes manufacture, marking and sale of non-DOT specification girth welded stainless steel cylinders, for transportation of a compressed gas.	2

NUMBER	PURPOSE	REASON
8965	Authorizes manufacture, marking and sale of non-DOT specification fiber reinforced plastic hoop wrapped cylinders, for shipment of certain compressed gases.	1
8966	Authorizes shipment of sodium hypochlorite solution in four one-gallon polyethylene bottles enclosed in a bag of polyethylene film, packed in a corrugated fiberboard box complying with DOT Specification 12B except for hand holes authorized in side panels of box.	2
8967	Authorizes shipment of a solid propellant explosive, in a non-DOT specification fiberboard tube, overpacked in a non-DOT specification palletized metal case.	2
8968	Authorizes use of a non-DOT specification IMO Type 1 portable tank, for transportation of a flammable solid.	2
8969	Authorizes shipment of certain rocket motors with igniter installed.	3
8971	Authorizes use of non-DOT specification steel cylinders of equal or greater integrity than those currently authorized, for transportation of a liquid oxidizer.	2
8977	Authorizes use of a non-DOT specification IMO-Type 5 portable tank, for transportation of liquefied compressed gases.	2
8978	Authorizes transport of lithium cells containing more than 12, but not more than 50, grams of lithium metal, in non-DOT specification, non-reusable, open head, steel drums.	2
8986	Authorizes transport of slurry blasting agent in non-DOT specification stainless steel cargo tanks.	2
8988	Authorizes transport of charged oil well guns as Class C explosive when the net weight of explosive material in the vehicle or vessel does not exceed 200 pounds.	2

NUMBER	PURPOSE	REASON
8990	Authorizes manufacture, marking and sale of non-DOT specification nonrefillable steel inside cylinders, for transportation of nonflammable compressed gases.	2
8991	Authorizes transport of packages bearing the DANGEROUS WHEN WET label, in motor vehicles which are not placarded FLAMMABLE SOLID W.	2
8992	Authorizes transport of certain explosives not permitted for air shipment or in quantities greater than those prescribed for air shipment.	1
8995	Authorizes use of non-DOT specification steel portable tanks, for transportation of certain nonpoisonous, nonflammable compressed gases.	2
8998	Authorizes shipment of nitrogen in hydraulic accumulators.	2
8999	Authorizes transport of emergency oxygen generators without marking, labeling, shipping papers or specification packaging.	2
9001	Authorizes manufacture, marking and sale of non-DOT specification steel cylinders complying in part with DOT Specification 3T cylinders, for transportation of certain nonflammable and flammable gases.	2
9004	Authorizes manufacture, marking and sale of non-DOT specification containers, for transportation of flammable liquids and flammable gases.	2
9010	Authorizes shipment of rocket motors, Class B explosive in a specially designed container to be shipped in a propulsive state.	2
9011	Authorizes certain DOT Specification 5, 6 and 17 series drums constructed of stainless steel, nickel or monel to be exempt from certain steel drum test requirements, for shipment of those commodities presently authorized for each drum.	2
9014	Authorizes manufacture, marking and sale of non-DOT specification reusable, high density, blowmolded, polyethylene containers, for transportation of certain corrosive liquids and oxidizers.	2

NUMBER	PURPOSE	REASON
9015	Authorizes shipment of dry trichloro-s-triazinetrione containing 90% available chlorine in collapsible, polyethylene-lined, woven polypropylene bags having a capacity of not more than 2000 pounds each.	1
9016	Authorizes manufacture, marking and sale of a non-DOT specification fiber drum not to exceed 110 liter capacity, for shipment of certain flammable liquids and flammable solids.	2
9017	Authorizes shipment of hydrogen fluoride anhydrous in non-DOT specification IMO Type portable tank comparable to DOT Specification 51.	2
9019	Authorizes use of a marine portable tank, for transportation of flammable, corrosive and combustible liquids.	5
9023	Authorizes shipment of various refrigerant gases in non-DOT specification IMO Type 5 portable tanks.	2
9024	Authorizes shipment of various refrigerant gases in non-DOT specification IMO Type 5 portable tanks.	2
9026	Authorizes manufacture, marking and sale of non-DOT specification fiber drums of not over 75-gallon capacity, similar to DOT Specification 21C except that the top head is of molded polyethylene and secured to the sidewall by a lever locking ring.	2
9027	Authorizes a one-time reuse of DOT Specification 37A containers for shipment of chromic acid, solid and chromic acid mixture, classed as an oxidizer.	3
9030	Authorizes use of non-DOT specification, metal, single trip, inside container, for shipment of a nonflammable gas.	2
9034	Authorizes shipment of insecticide, liquefied gas (containing no poison A or B material) insecticide, liquefied gas (containing poison A and B material), compressed gas, n.o.s., disilane and disilane mixture in DOT Specification 3AL cylinders.	2

NUMBER	PURPOSE	REASON
9036	Authorizes manufacture, marking and sale of cylinders complying with Specification 3AA except for inspection of certain billets after parting, for shipment of those gases presently authorized in DOT Specification 3AA cylinders.	2
9040	Authorizes manufacture, marking and sale of non-DOT specification fiber drums of not over 55-gallon capacity, lined or coated on the inside with a plastic material, and having modified non-removable top heads of steel or plastic, for transportation of certain corrosive liquids.	2
9041	Authorizes shipment of devices, in specially designed packagings, containing small amounts of explosive described as detonating fuze, Class C.	2
9047	Authorizes use of copper-bearing (brass) valves in DOT Specification cylinders and DOT Specification 5P drums containing ethylene oxide.	2
9048	Authorizes manufacture, marking and sale of non-DOT specification containers, for transportation of flammable liquids and gases.	2
9052	Authorizes manufacture, marking and sale of non-DOT specification 225 gallon rotationally molded polyethylene portable tanks, for shipment of those corrosive liquids and hydrogen peroxide presently authorized in DOT Specification 34 and certain flammable liquids.	2
9054	Authorizes manufacture, marking and sale of non-DOT specification 55-gallon polyethylene containers, for shipment of certain corrosive liquids, including those presently authorized in DOT Specification 34; hydrogen peroxides; classed as an oxidizer, and ethyl and methyl alcohol, classed as flammable	2
9059	Authorizes shipment of a fluorine - Helium mixture contained in appropriate DOT Specification cylinders, to be described as fluorine mixture classed as nonflammable gas.	2
9061	Authorizes shipment of small quantity of a flammable solid labeled Flammable Solid and Dangerous When Wet but without a Flammable Solid W placard on the vehicle.	2

NUMBER	PURPOSE	REASON
9062	Authorizes use of DOT Specification 57 carbon steel portable tanks, for transportation of a corrosive liquid.	2
9063	Authorizes use of non-DOT specification IMO Type 5 portable tanks, for transportation of non-flammable compressed gases.	2
9064	Authorizes shipment of corrosive materials, in a glass container placed in a cushioned cylindrical steel overpack, which is then packed in a cushioned plywood box, of which no more than four can be overpacked in a compartmented wooden outer box.	2
9066	Authorizes transport of an airbag gas generator as flammable solid, in a box constructed of single wall corrugated fiberboard with an inside styrofoam container insert for shock absorption.	1
9072	Authorizes shipment of rocket motors, class B explosive in specially designed outside packagings.	2
9074	Authorizes use of non-DOT specification metal, single trip, inside containers, for transportation of a nonflammable gas.	2
9078	Authorizes use of DOT Specification 57 stainless steel portable tanks, for transportation of a waste formic acid/phenol mixture.	2
9079	Authorizes use of carbon steel DOT Specification 51 portable tanks, for transportation of a liquefied compressed gas.	2
9082	Authorizes shipment of carbamate pesticide, solid, n.o.s., Class B poison, in non-DOT specification woven polypropylene bags not to exceed 2,200 pounds each.	2
9095	Authorizes shipment of a nonliquefied flammable gas, in a DOT Specification 4E240 aluminum cylinder.	2
9101	Authorizes shipment of several rocket motors having gross weight in excess of 172.102 by cargo aircraft only.	2

NUMBER	PURPOSE	REASON
9108	Authorizes transport of an initiating explosive in a plastic bag, packed in a DOT Specification 12H fiberboard box.	2
9110	Authorizes shipment of sodium chlorate, in non-DOT specification collapsible polyethylene-lined, woven polypropylene bags.	2
9114	Authorizes transport of electron tubes containing small amounts of radioactive material (Radium 226 or Krypton 85) without specific determination of total activity or Transport Index for the package.	2
9116	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tank enclosed within a protective steel frame, for shipment of corrosive liquids, flammable liquids or an oxidizer.	2
9120	Authorizes use of a non-DOT specification pressure vessel, for transportation of certain flammable gases.	2
9129	Authorizes repairing, rebuilding, retesting, marking and sale of any DOT Specification 4B, 4BA and 4BW low pressure steel cylinders.	2
9130	Authorizes shipment of an oxidizer, n.o.s., in polyethylene containers of not over 10 pounds capacity each, overpacked in a non-DOT specification corrugated fiberboard box as prescribed in 49 CFR 173.217(c).	2
9138	Authorizes shipment of nitrogen in a fiber reinforced plastic full composite cylinder without a safety relief device.	2
9140	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tanks, for shipment of corrosive liquids, flammable liquids or an oxidizer.	2
9141	Authorizes shipment of certain hand signal devices, as a flammable solid instead of a class C explosive.	2

NUMBER	PURPOSE	REASON
9142	Authorizes use of a non-DOT Specification IMO Type 5 portable tank, for transportation of liquefied compressed gases.	2
9143	Authorizes manufacture, marking and sale of non-DOT specification cargo tanks complying in general with DOT Specification MC-307/312 except for bottom outlet valve variations for shipment of waste flammable, corrosive or poison B liquids or semi-solids.	2
9144	Authorizes manufacture, marking and sale of large, non-DOt specification collapsible polyethylene-lined woven polypropylene bulk bags, having a capacity of approximately 2,000 pounds each, for shipment of oxidizers and corrosive solids.	2
9149	Authorizes use of non-DOT specification IMO Type 1 portable tanks, for transportation of motor fuel antiknock compound.	2
9150	Authorizes manufacture, marking and sales of non-DOT specification rotationally molded, cross-linked polyethylene portable tanks with bottom outlet, for shipment of corrosive and flammable liquids or an oxidizer.	2
9158	Authorizes shipment of solid waste materials contaminated with beryllium oxide, in a non-DOT specification roll-on, roll-off, bulk container.	3
9164	Authorizes manufacture, marking and sale of a non-DOT specification steel portable tank of 345 gallon capacity, with removable head, for shipment of waste paint and waste paint sludge.	2
9168	Authorizes manufacture, marking and sale of specially designed composite type packaging, for shipment of small quantities of various flammable, corrosive, and poison B liquids and solids shipped without labels.	1
9169	Authorizes transport of a water reactive material in vented freight shipping containers.	5

NUMBER	PURPOSE	REASON
9174	Authorizes use of non-DOT specification cylindrical and spherical pressure vessels, for transportation of helium and nitrogen.	2
9176	Authorizes manufacture, marking and sale of DOT Specification 4L cylinders, for transportation of certain nonflammable gases.	2
9181	Authorizes transport of lithium metal and a thionyl chloride solution in the same non-DOT specification stainless steel vessel.	2
9192	Authorizes shipment of various liquefied compressed gases classed as flammable gas in DOT Specification 4L-112 cylinders.	2
9198	Authorizes DOI, and other government agencies under contract to DOI, to use aircraft which are under exclusive direction and control of DOI for periods of less than 90 days.	1
9220	Authorizes manufacture, marking and sale of non-DOT specification collapsible flexible bag, disposable bulk container, for transportation of corrosive solids and oxidizers.	2
9222	Authorizes use of non-DOT specification metal tanks, for transportation of a flammable liquid or flammable solid.	5
9235	Authorizes manufacture, marking and sale of non-DOT specification steel drums of 24-gauge thickness and six-gallon capacity, to be used in place of 24 gauge, five-gallon capacity, DOT Specification 17E steel drums, for transportation of various hazardous materials.	2
9239	Authorizes manufacture, marking and sale of non-DOT specification steel drums of 30-gallon capacity complying with DOT Specification 17H, except for 178.118-6, for shipment of traffic paint classed as flammable liquid.	2
9254	Authorizes shipment of insecticides and liquefied gas mixtures in inside nonrefillable aluminum containers comparable to DOT Specification 2Q, with integral pressure relief system.	2

NUMBER	PURPOSE	REASON
9256	Authorizes shipment of new explosives under a tentative hazard classification to test facilities without marking them as laboratory samples and without being accompanied by a qualified explosives handler.	4
9262	Authorizes transport of oil well cartridges containing not more than 500 grains of high explosive.	1
9265	Authorizes carriage of certain Class A, B and C explosives that are not permitted for shipment by air.	1
9271	Authorizes deviation from car separation requirements, for transportation of Class A and B explosives.	1
9275	To broaden the exceptions to specification packaging, marking and labeling requirements for certain ethyl alcohol formulations.	2
9277	Authorizes shipment of organic phosphate compound mixture, dry, Class B poison, in non-DOT specification five-ply kraft multiwall, laminated bags of 50 pounds capacity having a minimum total basis weight of 250 pounds.	2
9280	Authorizes use of DOT Specification MC-330 and MC-331 cargo tanks, for transportation of flammable liquids which are also corrosive materials.	2
9281	Authorizes transport of cylindrical pellets of densensitized RDX, in DOT Specification 12B65 fiberboard boxes.	2
9282	Authorizes shipment of trifluoroethylene, classed as compressed gas, in DOT Specification 110A800W tanks.	2
9289	Authorizes shipment of certain herbicides in metal or polyethylene portable tanks considered to be an implement of husbandry, without shipping papers.	1
9295	Authorizes manufacture, marking and sale of non-DOT specification toroidal pressure vessel equivalent to a DOT Specification 39 cylinder, for transportation of nonflammable, nonliquefied gases.	2

NUMBER	PURPOSE	REASON
9302	Authorizes air transport of radioactive material without transport index and separation distance controls provided operations are in accordance with safety instructions provided by DOE or DOE contractor radiological safety personnel.'	1
9308	Authorizes shipment of a corrosive liquid, n.o.s., in DOT Specification 2E polyethylene bottles equipped with vented closures to be overpacked in DOT Specification 12B fiberboard box.	2
9312	Authorizes shipment of Space Shuttle Orbiters which contain small quantities of explosives, flammable liquids and poisons, and nonflammable gases in non-DOT specification pressure vessels.	2
9317	Authorizes use of non-DOT specification skid mounted portable tanks to be transported on public highway within company property.	2
9319	Authorizes DOT Specification 57 steel portable tanks, for water treatment compounds or boiler compounds, liquid that are not alkaline.	5
9327	Authorizes manufacture, marking and sale of mechanical displacement meter provers mounted on a truck chassis or trailer, for shipment of flammable liquids and gases.	2
9329	Authorizes transport of charged well casing jet perforating guns, classed as explosive A or explosive C.	5
9330	Authorizes use of non-DOT specification portable tank of 1,000 to 2,000 gallon capacity, for transportation of nitrogen refrigerated liquid.	5
9331	Authorizes shipment of sodium chlorite solutions, in DOT Specification MC-306 and MC-307 cargo tanks.	2
9332	Authorizes transport of a solid explosive dissolved in an ammonia solution as a flammable solid, in DOT Specification 34 polyethylene containers or DOT Specification 3E polyethylene bottles, packed in DOT Specification 15A wooden boxes.	2

NUMBER	PURPOSE	REASON
9338	Authorizes use of DOT Specification 106A500X and 110A500W multi-unit tank car tanks without a gas tight valve protection housing, for transportation of a corrosive material.	2
9340	Authorizes manufacture, marking and sale of polyethylene/fiberglass removable head salvage drum of 90-gallon capacity for overpacking damaged or leaking packages of hazardous materials, for repackaging or disposal.	2
9343	Authorizes transport of lithium metal in stainless steel DOT Specification portable tanks.	2
9344	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, linear medium-density polyethylene portable tanks, for shipment of corrosive liquids.	2
9346	Authorizes setting of the brakes and blocking the wheels of the first and last tank cars on up to a twelve tank car assembly, instead of each individual car, when engaged in unloading crude oil and petroleum.	2
9347	Authorizes manufacture, marking and sale of non-DOT specification stainless steel cylinders, for shipment of flammable and nonflammable gases used for sampling purposes.	2
9348	Authorizes transport of a limited number of certain lithium batteries on passenger carrying aircraft.	3
9350	Authorizes use of a non-DOT specification seamless molded biphenolic epoxy cylinder, for shipment of a nonflammable gas.	2
9351	Authorizes manufacture, marking and sale of non-DOT specification steel spheres, made in compliance with DOT Specification 3E with certain exceptions, for transportation of certain nonliquefied, nonflammable compressed gases.	2
9352	Authorizes manufacture, marking and sale of non-DOT specification container described as mechanical displacement meter provers mounted on a truck chassis or trailer, for transportation of flammable liquids and flammable gases.	2

NUMBER	PURPOSE	REASON
9354	Authorizes transport of alcohol-wet nitrocellulose in non-DOT specification fiber drums.	2
9355	Authorizes transport of a limited number of certain lithium batteries on passenger carrying aircraft.	3
9357	Authorizes use of non-DOT specification IMO Type 5 portable tanks, for transportation of liquefied compressed gases.	2
9363	Authorizes use of non-DOT specification cylinders manufactured from monel to DOT Specification 3A with certain exceptions, for transportation of certain flammable and nonflammable gases.	2
9364	Authorizes shipment of a parathion mixture, liquid, in a DOT Specification 12P corrugated fiberboard box containing two inside DOT Specification 2U polyethylene containers of 2-1/2 gallon capacity.	2
9367	Authorizes manufacture, marking and sale of large non-DOT specification collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of approximately 2000 pounds each, and top and bottom outlets, for shipment of corrosive solids and nitrates.	2
9371	Authorizes carriage of Class A, B and C explosives that are not permitted for shipment by air, or are in quantities greater than those prescribed for shipment by air.	2
9374	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tank enclosed within a protective steel frame, for shipment of corrosive liquids, flammable liquids or an oxidizer.	2
9377	Authorizes transport of high explosives containing more than 5% moisture in packagings without inner plastic bags or other linings.	2
9380	Authorizes use of a non-DOT specification container described as a mechnical displacement meter prover mounted on a truck chassis, for transportation of hydrocarbon products.	2

NUMBER	PURPOSE	REASON
9381	Authorizes transportation of a water reactive solid, which evolves hydrogen slowly when wet, in open packagings such as drums, hopper trucks and gondola cars.	2
9386	Authorizes manufacture, marking and sale of non-DOT specification pressure vessel comparable to DOT Specification 3HT cylinder with certain exceptions, for transportation of compressed gases.	2
9387	Authorizes transport of an organic phosphate compound pressurized, with a nonflammable compressed gas, in concentrations and quantities greater than now authorized in the regulations, in DOT Specification 3B cylinders.	2
9388	Authorizes use of DOT specification tank cars which have had the amount of liquefied gas loaded into the tank measured by a metering device.	2
9393	Authorizes manufacture, marking and sale of non-DOT specification steel cylinders in compliance with DOT Specification 39, with certain exceptions, for transportation of nonflammable gases.	2
9400	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, spherical polyethylene portable tank enclosed in a steel skid unit, for shipment of corrosive liquids, flammable liquids or an oxidizer.	2
9401	Authorizes use of non-DOT specification IMO Type 5 portable tanks, for transportation of flammable and nonflammable liquefied compressed gaes.	2
9402	Authorizes use of non-DOT specification IMO Type 5 portable tanks, for transportation of flammable and nonflammable liquefied compressed gases.	2
9405	Authorizes manufacture, marking and sale of non-DOT specification fiber reinforced plastics (FRP) cargo tank having from one to five compartments and a design pressure of 3 psig, for transportation of flammable liquids.	2

NUMBER	PURPOSE	REASON
9408	Authorizes transport of silicon tetrafluoride in DOT Specification 3AAX cylinders.	2
9413	Authorizes transport of a chemical kit which contains small amounts of hydrochloric acid and zinc powder.	2
9414	Authorizes shipment of tetrafluoromethane in DOT Specification 3AL aluminum cylinders.	2
9415	Authorizes manufacture, marking and sale of a polyethylene drum of 30-gallon capacity conforming with DOT Specification 34 except for having a single opening of four-inch diameter, for shipment of those hazardous materials authorized in DOT Specification 34 and DOT Specification 21 drums.	2
9416	Authorizes shipment of organophosphorous pesticide, liquid, in a DOT Specification 12P fiberboard box containing two inside DOT Specification 2U polyethylene containers of 2-1/2 gallons capacity.	2
9418	Authorizes manufacture, marking and sale of non-DOT specification portable tank assemblies manifolded together withing a frame and securely mounted on a truck chassis, for transportation of flammable and corrosive liquids.	2
9425	Authorizes transport of certain alkaline corrosive solutions in the same vehicle with gold and silver cyanide solutions.	2
9426	Authorizes manufacture, marking and sale of five-gallon and six-gallon capacity removable head molded polyethylene drums for transportation of corrosive liquids and flammable liquids.	2
9428	Authorizes use of a DOT Specification 105A500W tank car tank with a modified insulation system, for transportation of a nonflammable gas.	2
9430	Authorizes manufacture, marking and sale of a polyethylene/fiberglass removable head salvage drum of 90-gallon capacity for overpacking damaged or leaking packages of hazardous materials, for repackaging or disposal.	2

NUMBER	PURPOSE	REASON
9431	Authorizes several types of explosives in the same package, in quantities greater than authorized by 49 CFR 173.87.	2
9433	Authorizes transport of flammable gases at atmospheric pressure in glass bulbs not exceeding one liter capacity, packed in DOT Specification 12A/12B fiberboard boxes.	2
9436	Authorizes manufacture, marking and sale of non-DOT specification portable tanks for transportation of nonflammable refrigerated liquid.	2
9440	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tanks enclosed with a protective steel frame, for shipment of corrosive liquids, flammable liquids or an oxidizer.	2
9443	Authorizes shipment of class B rocket motors with igniters installed.	2
9446	Authorizes stowage of flammable liquids with flash points below 73 degrees Fahrenheit in holds or compartments that are fitted with a gooseneck type of vent head.	2
9449	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, cross-linked polyethylene portable tanks enclosed with a protective steel frame, for shipment of corrosive liquids, flammable liquids or an oxidizer.	2
9450	Authorizes manufacture, marking and sale of non-DOT specification cylinders made in compliance with DOT Specification 4B240ET with certain exceptions, for transportation of flammable and nonflammable gaes.	2
9456	Authorizes use of DOT Specification MC-330 and MC-331 cargo tanks, for transportation of certain corrosive materials.	2

NUMBER	PURPOSE	REASON
9460	Authorizes transport of a Class A type 4 explosive in sealed velostat bag containing not more than one pounds of powder or pellets, packed in DOT Specification 17C or 17H metal drums.	2
9462	Authorizes manufacture, marking and sale of non-DOT specification portable tanks manifolded together within a frame and securely mounted on a truck chassis, for transportation of flammable and corrosive liquids.	2
9464	Authorizes transport of a pest control device which has dimensions exceeding those authorized in 49 CFR, in a fiberbord card and placed in a heat sealed plastic bag.	2
9466	Authorizes shipment of carbamate pesticide, solid, n.o.s., classed as a poison B in paper bags similar to DOT Specification 2D, overpacked in DOT Specification 12C fibierboard box.	2
9467	Authorizes shipment of certain flammable solids, oxidizers and corrosive materials to be excepted from the access to mixed lading requirements of 49 CFR 1`177.834(k).	2
9478	Authorizes manufacture, marking and sale of non-DOT specification cylinders conforming with DOT Specification 3AL for shape and certain tests for shipment of nonflammable gases.	2
9480	Authorizes transport of tetrafluoromethane in DOT Specification 3AL cylinders.	2
9481	Authorizes transport of PETN wet with 25% water in plastic bags packed in fibreboard boxes instead of metal drums.	2
9485	Authorizes transport of an insecticide, liquefied gas mixture in DOT Specification 4BA260 cylinders.	2
9486	Authorizes use of a non-DOT specification cargo tank designed and constructed in full compliance with DOT Specification MC-307/312, with exceptions, for transportation of a liquid and semi-solid waste material.	5

NUMBER	PURPOSE	REASON
9488	Authorizes use of specially sealed specification 2R containers in concrete filled steel drums, for one-time transport for disposal of not more than 500 milicuries of radium-226 in normal or special form without each shipper keeping a package test performance certification file.	2
9490	Authorizes ue of non-DOT specification IMO Type 5 portable tanks, for shipment of flammable and nonflammable liquefied compressed gases.	2
9491	Authorizes transport of hexafluoroethane and trifluoromethane in DOT Specification 3AL cylinders.	2
9498	Authorizes shipment of potassium cyanide, solid, and sodium cyanide, solid, in collapsible, water-tight, polyethylene-lined, woven polypropylene bag, each having a capacity not exceeding 2,205 pounds each.	2
9499	Authorizes manufacture, marking and sale of 3-1/2, 5, 5-1/2, and 6-gallon capacity DOT Specification 35 removable head polyethylene drums, for shipment of corrosive and flammable liquids.	2
9505	Authorizes transport of wet benzoyl peroxide in polyethylene containers, packed in DOT Specification 12B fiberboard boxes.	2
9506	Authorizes transport of flammable liquids and corrosive liquids in the same outside packagings when the corrosive liquids are not in metal cans, packed in DOT Specification 12B fiberboard boxes.	2
9507	Authorizes use of a non-DOT specification full removable head salvage cylinder of 45 gallon capacity for overpacking damaged or leaking packages of pressurized and non-pressurized hazardous materials.	1
9512	Authorizes use of non-DOT specification cargo tanks complying with DOT Specification MC-307/312 except bottom outlet and each bottom inlet must be equipped with an additional shut-off valve, blank flange or a sealing cap, for shipment of liquid and semi-solid waste material.	2

NUMBER	PURPOSE	REASON
9513	Authorizes transport of an organic phosphate formulation in a bulk motor vehicle.	2
9515	Authorizes shipment of gasoline in a non-DOT specification cargo tank equipped with external self-closing shut off valves.	1
9524	Authorizes manufacture, marking and sale of non-DOT specification steel drums, similar to DOT-17E drums except for reduced diameter top and bottom heads of 0.0330-inch minimum thickness (20 gauge) and with chimes of seven ply construction, to be used for certain hazardous materials.	2
9528	Authorizes transport of nonself propelled Aerospace Ground Equipment with gasoline or aviation fuel in the tanks.	2
9529	Authorizes shipment of carbon disulfide in DOT Specification MC-312 cargo tanks.	2
9530	Authorizes use of non-DOT specification IMO Type 5 portable tanks, for transportation of nonflammable liquefied compressed gases.	2
9533	Authorizes manufacture, marking and sale of large, collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of approximately 2200 pounds each, and top and bottom outlets, for shipmet of corrosive solids and oxidizers (solids only).	2
9536	Authorizes manufacture, marking and sale of non-DOT specification cargo tank, patterned after the MC-307 or MC-312 specifications with certain exceptions, for transportation of certain hazardous materials.	2
9548	Authorizes use of a non-DOT specification IMO Type 1 portable tank, for shipment of motor fuel antiknock compound.	1
9549	Authorizes transport of oil well cartridges containing more than 350 grains, but not more than 600 grains of Class A, type 3 explosive, as Class C explosive, in DOT Specification 12H fiberboard box.	2

NUMBER	PURPOSE	REASON
9552	Authorizes testing of DOT Specification 23G cylindrical fiberboard box once a year instead of one every six months.	2
9554	Authorizes manufactue, marking and sale of non-DOT specification polyethylene/fiberglass reinforced plastic (FRP) dual laminate composite drum, fully conforming with DOT Specification 34 with exceptions.	2
9555	Authorizes use of DOT Specification MC-330 and MC-331 cargo tanks for shipment of a poison B liquid.	2
9571	Authorizes transport of not more than 5 grams of an approved or unapproved explosive in a special packaging essentially without regulation.	1
9573	Authorizes use of a surface binding material on uranium ore in open top rail cars as a means to prevent loss of particulates from the rail cars instead of the normally required use of closed transport vehicles.	1
9577	Authorizes shipment of reserve-activated lithium/thionyl chloride IRSS battery modules packaged in DOT Specification 19A wooden boxes.	2
9579	Authorizes use of a non-DOT specification motor vehicle for bulk shipment of oxidizers.	1
9590	Authorizes shipment of a liquid mixture containing 67.7% Chloropicrin, a Class B poison, in DOT Specification 5B steel drums, not exceeding 33-gallon capacity.	1
9593	Authorizes transport of ammunition for cannon Class A explosives, and certain non-hazardous materials aboard cargo aircraft.	5
9596	Authorizes use of non-DOT specification insulated portable tank for transportation of nonflammable gases.	1
9599	Authorizes manufacture, marking and sale of non-DOT specification portable tanks constructed of 304 stainless steel with a carbon steel jacket, approximately 4,000 gallon capacity, for shipment of argon, refrigerated liquid, classed as nonflammable gas.	2

NUMBER	PURPOSE	REASON
9601	Authorizes shipment of liquid, 100% chloropicrin, a Class B poison, in non-DOT specification zinc-plated steel drums, not exceeding 26-gallon capacity.	1
9603	Authorizes use of a non-DOT specification tank car which conforms to DOT Specification 111A100W1 except for a thinner shell thickness in certain areas and for deviations in length of welds used in attaching bar pads.	5
9610	Authorizes transport of DOT Specification 21C fiber drums which contain not more than 5 grams of smokeless powder essentially without regulation.	2
9617	Authorizes transport of a specially defined detonating cord on the same motor vehicle with Class A and Class C detonators.	2
9623	Authorizes transport of blasting agent or an oxidizer in a DOT Specification MC-306 or MC-307 cargo tank with a storage box containing Class A explosives mounted directly behind the tractor cab.	2
9626	Authorizes transport of welding machines containing batteries in non-accessible places on a motor vehicle.	2
9632	Authorizes use of non-DOT Specification IMO Type 5 portable tanks, for transportation of flammable and nonflammable liquefied compressed gases.	2
9633	Authorizes transport by cargo aircraft of a propellant explosive and igniter, rocket motor, which are forbidden for transportation by air and non-regulated weapon components.	5
9642	Authorizes use of DOT Specification 106A500X and 110A500W multi-unit tank car tanks for a waste liquid mixture that is corrosive to skin only.	2
9643	Authorizes transport of certain hazardous materials over 0.3 miles of public highway exempted from DOT requirements for package marking, labeling, specification packaging and segregation.	2

NUMBER	PURPOSE	REASON
9644	Authorizes manufacture, marking and sale of a DOT Specification 23G cylindrical fiberboard box tested once a year instead of every six months, for shipment of certain Class A explosives.	2
9645	Authorizes manufacture, marking and sale of non-DOT rotationally molded, cross-linked polyethylene or linear low density polyethylene portable tanks, enclosed within either a protective steel frame or a foam-filled steel reinforced outer case.	2
9648	Authorizes transport of a rocket motor with igniter installed in a non-DOT specification wooden box.	1
9652	Authorizes transport of specially packaged detonators in DOT Specification 12B fiberboard boxes.	2
9654	Authorizes shipment of hydrogen peroxide solution exceeding 52% concentration, in aluminum drums conforming to DOT Specification 44D except for rolling hoops.	2
9658	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, composite crosslinked or non-crosslinked polyethylene and Teflon PTA plastic portable tank for shipment of corrosive liquids, flammable liquids or oxidizers.	2
9659	Authorizes manufacture, marking and sale of non-DOT specification fiber reinforced plastic (FRP) full composite (FC) cylinder, for transportation of certain flammable and nonflammable compressed gases.	2
9662	Authorizes shipment of agricultural chemicals in 2.5 gallon capacity containers.	1
9663	Authorizes manufacture, marking and sale of cylindrical steel, overpacks similar to DOT-37M except wall thickness is 23 gage instead of 24 gage and inner polyethylene drum meets DOT-2SL except for marking, for shipment of those hazardous materials authorized in DOT-37M/2SL.	1

NUMBER	PURPOSE	REASON
9664	Authorizes transport of a laser device containing a small quantity of methane in a passenger's carry-on or checked baggage.	4
9666	Authorizes approximately 150 DOT Specifications 4BA240 and 4BW240 cylinders to be hydrostatically retested every ten years, rather than every 5 years, when used solely for the shipment of non-corrosive, metal alkyl solutions, for transportation of a flammable liquid.	5
9671	Authorizes transport of nonliquefied ethylene in DOT Specification 4BA240 cylinders.	2
9672	Authorizes shipment of metal alkyl solutions in a DOT Specification MC-330 ro MC-331 cargo tank with a filling/discharge opening that does not have a remote self-closing internal valve.	2
9673	Authorizes manufacture, marking and sale of fiber drums not to exceed 250 liter capacity, comparable to DOT-21C except for the top and bottom heads which are made of 0.48 mm steel sstead of 0.53 mm (24 gauge) steel, for shipment of those hazardous materials, authorized in DOT-21C fiber drums.	2
9674	Authorizes battery plates containing lead peroxide to be shipped when packaged in a pallet-shrink wrap configuration.	1
9675	To authorize shipment of approximately 100,000, five gallon capacity DOT Specification 34 drums containing hyprochlorite solution, classed as a corrosive material which are inadvertenly marked NA 1791 rather than the required UN 1791.	1
9676	Authorizes shipment of certain flammable liquids contained in four inside glass bottles or PVC coated glass bottles of one gallon capacity each, overpacked in a corrugated fiberboard box conforming to DOT Specification 12B65 except for handholes in the same side panels of the box.	1
9677	Authorizes shipment of hydrochloric acid in non-DOT specification bottles of one-gallon capacity, overpacked no more than 60 to a specially-designed, heavy-wall cart, molded of high density polyethylene.	1

NUMBER	PURPOSE	REASON
9678	Authorizes use of dry bulk tank semi-trailers for shipment of magnesium and calcium salt mixtures.	5
9679	Authorizes shipment of ammonium hydroxide, classed as a corrosive material, in a six gallon capacity, DOT Specification 2U polyethylene containers, overpacked in a DOT Specification 12P fiberboard box.	5
9681	Authorizes limited quantities of Class A, Type 4 explosives, to be placed in special packaging not prescribed in 49 CFR.	4
9683	Authorizes manufacture, marking and sale of non-DOT specification containers, for transportation of flammable liquids and gases.	5
9685	Authorizes manufacture, marking and sale of non-DOT specification roll on/roll off cylindrical tank containers for transportation of certain solidfied mixtures of waste flammable liquids and/or corrosive materials.	2
9686	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded Teflon PFA container of 20 liter capacity with filament-wound fiberglass reinforcement, for shipment of those flammable or corrosive liquids autorized in DOT-34 and DOT-6D/2S or 2SL composite packagings.	1
9688	Authorizes shipment of thionyl chloride, classed as a corrosive material in non-DOT specification bottles of 'Teflon' PFA, ranging in size from 10 to 16 ounces capacity, overpacked in DOT Specification 17H stainless steel drums, not to exceed 54 bottles per drum.	2
9689	Authorizes drums containing dense of heavy materials such as toluene diisocyanate, and other hazardous materials not exceeding 12.09 pounds per gallon, to be secured against movement in a transport vehicle by the use of a fabric restraint dunnage system when shipped by cargo vessel.	1
9690	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded crosslinked or non-crosslinked polyethylene portable tank, for the shipment of corrosive liquids, flammable liquids or an oxidizer.	2

NUMBER	PURPOSE	REASON
9691	Authorizes manufacture, marking and sale of 15 gallon steel overpacks similar to DOt-37M except for slight reduction in wall thickness with polyethylene liner meeting DOT-2SL except for specification markings, for shipment of those hazardous materials authorized in DOT-37M/2SL.	1
9692	Authorize use of DOT Specification 57 portable tanks for shipment of a dual hazard (flammable liquid/corrosive to skin only) material.	1
9694	Authorizes use of MC-331 cargo tank equipped with angle valves and pressure relief valves not presently authorized in the regulations.	2
9695	Authorizes transport of an ammonia solution in DOT Specification 4AA480 cylinders which were charged after the required retest date.	3
9696	Authorizes manufacture, marking and sale of non-DOT rotationally molded Teflon PFA container of 100 liter capacity with filament-wound fiberglass reinforcement and a high density polyethylene overpack, for shipment of those liquids authorized in DOT-34 and DOT-6D/2S or 2SL composite packagings.	1
9697	Authorizes use of DOT Specification 105A300W and 105A400W tank car tank with the tank overdue for retesting, for a one-time shipment of a waste corrosive liquid.	3
9700	Authorizes use of a DOT Specification 51 portable tank having pressure relief devices with a start-to-discharge pressure of 75 psig, for transportation of flammable, poisonous liquid.	1
9701	Authorizes manufacture, marking and sale of large, collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of no more than 2500 pounds each, and top and/or bottom outlets, for shipment of flammable and corrosive solids and oxidizer (solids only)..	2
9702	Authorizes manufacture, marking and sale of a non-DOT specification multi-wall kraft paper pinch/seal bag of 25-pound and 50 pound net construction, for shipment of calcium nitrite, and oxidizer, n.o.s.	2

NUMBER	PURPOSE	REASON
9703	Authorizes transport of a limited number of certain lithium batteries on passenger-carrying aircraft.	3
9704	Authorizes transport of small arms primers in DOT Specification 23F fiberboard boxes.	1
9705	To authorize shipment of propyleneimine, inhibited, classed as a flammable liquid in DOT Specification 51 portable tank.	1
9707	Authorizes transport of certain flammable liquids in DOT Specification packaging without labeling.	1
9708	Authorizes shipment of magnesium metal pellets, classed as a flammable solid, in DOT Specification 44C multiwall paper bags lined with plastic film.	1
9709	Authorizes manufacture, marking and sale of a polyethylene, removable head salvage drum of 85-gallon capacity for overpacking of damaged or leaking packages of hazardous materials or for packing hazardous materialss that have spilled or leaked for repackaging or disposal.	2
9710	Authorizes abbreviated marking of the one-way travel time on the tank and on shipping papers.	3
9711	Authorizes shipment of a corrosive liquid in a nylon-reinforced polyethylene bag of 5-liter (1.22 gallon) capacity which is placed in an inside corrugated fiberboard carton with not more than two cartons overpacked in a DOT Specification 12B30 corrugated fiberboard box.	1
9712	Authorizes transport of butadiene in a DOT Specification 105J400W tank car with a thermal protection system not authorized in accordance with 49 CFR.	2
9713	Authorizes manufacture, marking and sale of large, collapsible polyethylene-linked woven polypropylene bulk bags having a capacity of approximately 2000 pounds each, and top and bottom outlets, for shipment of corrosive solids and oxidizers (solid only).	2

NUMBER	PURPOSE	REASON
9714	Authorizes shipment of Bidrin® 8 Insecticide, Classed as a Poison B liquid, in non-DOT Specification high density polyethylene containers.	1
9715	Authorizes shipment of dicumyl peroxide, dry, or organic peroxide, solid, insider polyethylene polyethylene bags in quantities of up to 40 pounds, overpacked in a DOT Specification 12B65 corrugated fiberboard box.	1
9716	Authorize manufacture, marking and sale of non-DOT specification fiber reinforced plastic full composite cylinder, for shipment of certain falmmable and nonflammable compressed gases.	2
9717	Authorizes shipment of certain flammable liquids in inside containers of up to 1 gallon capacity, overpacked in a DOT Specification 21C fiber drum.	1
9718	Authorizes shipment of flammable and nonflammable gases in a non-DOT specification portable tank comparable to DOT Specification 51 portable tanks.	1
9719	Authorize carriage of certain Class A, B and C explosives that are not permitted for shipment by air, or in quantities greater than those prescribed for shipment by air.	1
9721	Authorize one-time shipment of special fireworks, Class B explosive, in non-DOT specification fiberboard boxes without the proper markings.	5
9723	Authorizes shipment of 'lab-packs' containing cyanides and cyanide mixture with 'lab-packs' containing acids and corrosive liquids in the same transport vehicle.	1
9725	Authorizes one-time shipment of DOT Specification 105A300W tank car to the nearest cleaning or retrofit facility.	3
9727	Authorizes shipment of of an alkaline corrosive liquid, n.o.s. in new or reconditioned DOT Specification 17H steel drums.	1

NUMBER	PURPOSE	REASON
9728	Authorizes manufacture, marking and sale of non-DOT specification containers described as mechanical displacement meter provers mounted on a truck chassis or trailer.	2
9729	Authorizes shipment of corrosive materials in stainless steel cylinders complying with all requirements of DOT Specification 4BW except for being fabricated from Type 304L stainless steel.	2
9730	Authorizes use of super-insulated DOT Specification MC-338 cargo tank for transportation of flammable cryogenic liquid.	2
9731	Authorizes manufacture, marking and sale of DOT Specification MC-338 cargo tanks for shipment of liquid hydrogen with holding time tests performed in a manner other than as prescribed in the regulations.	2
9732	Authorizes certain detergent which are classed as flammable liquids for transport as combustible liquids in DOT Specification MC-307 cargo tanks.	2
9733	Authorizes manufacture, marking and sale of DOT Specification 35 polyethylene drums of six-gallon capacity for the shipment of chromic acid mixture, dry, or chromic acid, solid, classed as oxidizers.	2
9735	Authorizes the Dangerous Cargo Manifest on cargo vessels owned and operated by Hapag-Lloyd AG to be retained in a location other than on or near the bridge of the vessel while the vessel is in port.	1
9737	Authorizes transport of cargo aircraft of certain Class A explosives which are forbidden for shipment by air and certain Class C explosives.	5
9738	Authorizes shipment by cargo aircraft of acrolein, inhibited, in DOT Specification 51 portable tanks of 250 gallon capacity which exceeds the quantity limitation of 49 CFR 172.101 table, column 6.	5
9741	Authorizes shipment of batteries palletized and shipped as a unit without means of protection from any superimposed weight.	1

NUMBER	PURPOSE	REASON
9742	Authorizes shipment of methyl bromide liquid in a non-DOT specification portable tank meeting all the requirements of a DOT Specification 51, with exceptions.	1
9744	Authorizes shipment of benzoyl peroxide, wet with at least 30% water, classed as an organic peroxide, in a DOT Specification 12B65 fiberboard box containing a bag with 31.5 pounds of material (dry weight).	1
9746	Authorizes use of DOT Specification 3BN cylinders for transportation of hydrogen fluoride, anhydrous.	1
9748	Authorizes manufacture, marking and sale of non-DOT specification fiber drum of not over 75-gallon capacity, similar to DOT-21C except that the top head is of molded polyethylene or polypropylene and secured to the side wall by a level locking ring, for transportation of various hazardous materials.	2
9749	Authorizes shipment of a material containing a hazardous substance without listing the name of the hazardous substance on the shipping paper and on the package when transported by private or contract carriers.	1
9750	Authorizes transport of ammonium nitrate solution containing not less than 13% water in DOT Specification MC-307 insulated cargo tank or a DOT Specification MC-311 insulated cargo tank.	2
9751	Authorizes transport of a Class A explosive device in limited quantities as a Class C explosive.	3
9752	Authorizes shipment of motor fuel antiknock compound, Class B poison, in a DOT Specification 12B fiberboard box with inside packaging consisting of an inner metal can, surrounded by vermiculite and then hermetically sealed in an outer metal can.	1
9753	Authorizes manufacture, marking and sale of non-DOT specification pressure vessels for shipment of helium, classed as a nonflammable gas, in a missile gas storage system.	2

NUMBER	PURPOSE	REASON
9754	Authorizes manufacture, marking and sale of non-DOT specification reusable, rotationally molded, polyethylene container conforming with DOT Specification 34 with exceptions, for shipment of certain corrosive liquids, flammable liquids, Class B poisonous liquids and an oxidizing.	2
9755	Authorizes transport of packages of Class A explosive which exceed the weight limitation in 49 CFR 173.65(a)(4), in a non-DOT specification wooden box.	1
9756	Authorizes a one-way shipment of corrosive solids, for disposal in four non-DOT specification steel portable tanks.	1
9757	Authorizes shipment of non-DOT specification steel portable tanks containing corrosive solid, n.o.s. to an approved disposal facility.	1
9759	Authorizes a one-time shipment of common fireworks, Class C explosive, in non-DOT specification fiberboard boxes with inner flaps which do not meet and with no fiberboard flap fill-in pieces.	5
9760	Authorizes transport of eight (8) DOT Specification 21C fiberboard drums, each containing a net weight of 75 pounds of a propellant explosives, solid, Class B, aboard cargo aircraft.	5
9761	Authorizes manufacture, marking and sale of non-DOT specification welded stainless steel cylinders patterned after DOT-4DS with exceptions, for transportation of nonflammable gases.	5
9763	Authorizes shipment of certain hazardous materials in DOT Specification 3BN cylinders, a specification cylinder not presently authorized.	1
9765	Authorizes shipment of ethylene oxide, classed as a flammable liquid, contained in aluminum cartridges and cushioned in molded expanded polystyrene trays, overpacked in a DOT Specification 12B15 corrugated fiberboard box.	1

NUMBER	PURPOSE	REASON
9766	Authorizes use of non-DOT specification fiber drums containing not more than 9 TOW M114 Rocket Motors.	1
9769	Authorizes use of lab-packs for transportation by vessel, partially exempts lab-packs from segregation requirements.	1
9770	Authorizes reuse of DOT Specification 17H drums of 55-gallon capacity for multiple shipments of sodium methylate, classed as a flammable solid, without subjecting drums to reconditioning requirements.	1
9772	Authorizes use of a non-DOT specification, toroidal shape pressure vessel for transportation of specific hazardous materials.	1
9775	Authorize manufacture, marking and sale of a polyethylene, removable head salvage drum of 85-gallon for overpacking of damaged or leaking packages of hazardous materials of no greater than 55-gallon, or for packing hazardous materials that have spilled or leaked, for repackaging or disposal.	2
9776	Authorizes a one time shipment of approximately 782 non-DOT specification, 30 gallon capacity, metal drums containing lithium metal.	5
9777	Authorizes shipment of a 15 percent solution of potassium permanganate maintained at 165 degrees Fahrenheit, in a DOT Specification MC-312 cargo tank.	2
9779	Authorizes manufacture, marking and sale of non-DOT specification portable tanks and manifolded together within a frame and securely mounted on a truck chassis.	2
9780	Authorizes shipment of flammable liquids, n.o.s., classed as flammable liquid, in three DOT Specification 2U polyethylene containers of two-gallon capacity each, overpacked in a DOT Specification 12P corrugated fiberboard box.	1

NUMBER	PURPOSE	REASON
9781	Authorizes use of a non-DOT specification full opening head, steel salvage cylinder for overpacking damaged or leaking chlorine cylinders.	1
9782	Authorizes shipment of potassium metal in non-DOT specification container.	1
9783	Authorizes manufacture, marking and sale of large collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of approximately 2260 pounds each, and top and bottom outlets, for shipment of flammable solids, oxidizing materials, poison B solids and corrosive solids.	2
9784	Authorizes manufacture, marking and sale of DOT Specification 4BA or 4BW cylinders fitted with rubber footrings attached by welding after heat treatment, for transportation of propane.	2
9790	Authorizes manufacture, marking and sale of non-DOT specification welded cylinders conforming with the DOT Specification 4L except that the container is made of Type 316L stainless steel.	2
9792	Authorizes manufacture, marking and sale of a non-reusable expanded polystyrene case similar to DOT-33A, except it will have six cavities to contain not more than six five-pint or six 20 ounce bottles, for shipment of those commodities authorized by in a DOT-33A packaging.	2
9794	Authorizes transport of rocket ammunition with explosive projectile, Class A explosive in cargo-only aircraft, although it is forbidden for transportation by air.	4
9795	Authorizes carriage of small quantities of a flammable liquid in safety lamps in the passenger cabin of an aircraft.	4
9796	Authorizes a one-time shipment of rocket ammunition with explosive projectile, Class A explosive, Cargo-only aircraft, although it is forbidden for transportation by air.	5
9797	Authorizes one-time shipment of a nonflammable gas, in a nonrefillable, non-DOT specification container.	3

NUMBER	PURPOSE	REASON
9798	Authorizes shipment of rocket ammunition with explosive projectile, Class A explosive, cargo-only aircraft, although it is forbidden for transportation by air.	5
9799	Authorizes shipment of rocket ammunition with explosive projectile, Class A explosive, and rocket ammunition with inert projectile, Class B explosive, which are forbidden for transportation by air.	5
9800	Authorizes a one-time shipment of a limited quantity of Class A, Type 4 explosive, to be placed in special packaging not prescribed in 49 CFR.	3
9801	Authorizes retesting of DOT Specification 111A100W2 tank car tanks, over ten years of age, with sulfuric acid in lieu of water.	5
9802	Authorizes carriage of certain Class A, B and C explosives that are not permitted for shipment by air, or are in quantities greater than those prescribed for shipment by air.	1
9803	Authorizes carriage of certain Class A, B and C explosives that are not permitted for shipment by air, or are in quantities greater than those prescribed for shipment by air.	1
9804	Authorizes manufacture, marking and sale of non-DOT specification rotationally molded, polyethylene portable tank enclosed in a steel frame, for the shipment of corrosive materials, flammable liquids, or an oxidizer.	2
9806	Authorizes manufacture, marking and sale of large, collapsible polyethylene-lined woven polypropylene bulk bags having a capacity of approximately 2200 pounds each, and top and bottom outlets, for shipment of corrosive solids and nitrates.	2
9808	Authorizes shipment of ammonium nitrate-potassium nitrate, identified as ANKN 90/10, classed as an oxidizer, in a moisture resistant, multi-ply paper bag.	1

NUMBER	PURPOSE	REASON
9809	Authorizes use of a non-DOT specification container described as a mechanical displacement meter prover mounted on a truck, for transportation of flammable liquids.	1
9810	Authorizes transport of a laser device containing a small quantity of methane in a non-DOT specification container.	1
9811	Authorizes shipment of non-DOT specification steel portable tanks containing scrap metal pipe that is contaminated with asbestos and poison B materials for disposal.	1
9813	Authorizes packages of tear gas grenades in DOT Specification 32A metal, military type ammunition boxes.	1
9815	Authorizes a one-time shipment of para cresol, classed as a corrosive material in a DOT Specification 111A60W1 tank car (GATX 19808) equipped with an anti-shift bracket welded directly to the tank shell without the required reinforcement pad.	5
9816	Authorizes shipment of hypochlorite solution, more than 7 percent available chlorine by weight, in non-DOT specification cargo tanks.	5
9818	Authorizes use of a DOT Specification 105A500W tank car tank with the tank and safety relief valves overdue for retesting for a one-time shipment of chlorine.	3
9822	Authorizes shipment of poisonous liquid R&D Samples in packaging conforming to 49 CFR 173.331(b)(1).	1
9824	Authorizes use of accumulators which deviate from the required test criteria in 49 CFR 173.306(f) for shipment of compressed gas mixtures.	1
9826	Authorizes shipment of azinphos methyl, mixture, solid, classed as poison B, in water soluble packets (PVA) inside lined chipboard cartons overpacked in DOT Specification 12B65 fiberboard boxes.	1

NUMBER	PURPOSE	REASON
9834	Authorizes a one-time shipment of an insulated stainless steel dewar containing liquid nitrogen to be transported in the cabin of a passenger-carrying aircraft under special conditions.	4
9835	Authorizes a one-time shipment of hazardous materials that are not specifically identified.	4
9844	Authorizes use of a non-DOT specification polyethylene container of 15-gallon capacity, similar to a DOT Specification 34, for shipment of hydrogen peroxide, 60%.	2
9845	Authorizes transport of sulfuric acid; sulfuric acid, spent or oleum in a DOT Specification 111A100W2 or 103AW tank car tank with a modified periodic tank retest interval.	1
9850	Authorizes transport of ammunition for cannon with explosive projectile aboard cargo aircraft.	5
9851	Authorizes a one-time shipment of insulated dewars containing liquid nitrogen to be transorted in the cabin of a passenger-carrying aircraft under special conditions.	4
9853	Authorizes a one-time shipment of five 55-gallon capacity, DOT Specification 34 polyethylene drums containing 50% hydrogen peroxide which is forbidden for transportation by air.	4
9854	Authorizes transport of rocket motors via highway.	5
9855	Authorizes shipment of explosive projectiles, Class A explosives; rocket motor and propellant explosive, solids, Class B explosive, which are forbidden for transportation by air or are in quantities greater than those prescribed for air transportation.	4
9856	Authorizes use of non-specification packaging and patient use of oxygen systems on board a passenger ship.	5
9869	Authorizes use of insulated DOT Specification MC-307 stainless steel cargo tanks, for transportation of certain Class B poison.	5

NUMBER	PURPOSE	REASON
9878	Authorizes shipment of a solid waste, classed as a Class B poison, contained in approximately 300 DOT Specification 55-gallon capacity 17C drums.	5
9879	Authorizes a one-time shipment of sulfur dioxide for disposal in a non-DOT specification steel portable tank.	4
9880	Authorizes manufacture, marking and sale of non-DOT specification containers described as hermetically sealed electron tube devices.	5
9881	Authorizes manufacture, marking and sale of non-DOT specification, metal, single trip, inside containers.	5
9895	Authorizes a one time shipment by motor vehicle of explosive in metal containers, overpacked in a strong wooden box.	4
9896	Authorizes shipment of approximately 100,000 bags marked with the shipping description RQ - Captan, ORM-E, NA 9099 instead of the description RQ - Hazardous Ssubstance, solid, n.o.s., ORM-E, NA 9188 (Captan) which is required being Janury 1, 1988.	5
9897	Authorizes a one-time shipment of hydrogen chloride, refrigerated liquid in a DOT Specification 105A600W tank car tank loaded to less than the minimum required filling density.	4

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APPENDIX E

MEMORANDUM OF UNDERSTANDING

between the

Federal Emergency Management Agency

and the

Department of Transportation

I. Purpose

This Memorandum of Understanding (MOU) establishes a framework of cooperation between the Federal Emergency Management Agency (FEMA) and the Department of Transportation (DOT) to identify emergency preparedness roles and responsibilities involving the transportation of hazardous materials and to establish joint program efforts in planning and training; and information development, dissemination, and exchange. This Memorandum of Understanding is not intended to affect programs, activities and responsibilities of the United States Coast Guard concerning hazardous materials.

II. Background

A. FEMA and DOT are both involved in the development of plans, training programs, and informational materials used by State and local governments and the private sector in preparing for emergencies involving the transportation of hazardous materials. Although the legislative authorities for both FEMA and DOT are well understood, further clarification is considered appropriate to maximize effectiveness.

B. This MOU is a mutual effort on the part of FEMA and DOT to identify:

(a) specific areas of responsibilities for each agency;

(b) areas where special expertise can be extended to each agency to support programs with common goals; and

(c) areas where coordinated and cooperative programs between FEMA and DOT will result in cost savings through the effective and efficient use of human and material resources.

C. The extent to which cooperative and coordinated efforts are implemented is contingent upon the resources available to each agency. Accomplishments under the terms of this agreement will be determined by the ability of the signatories to provide adequate funding for the execution of this instrument.

D. The agreements and the assignments of roles and responsibilities within the context of this instrument are limited to the signatories. No other roles, responsibilities, or agreements are implied for any other department, agency or organization, public or private.

III. Authorities and Responsibilities

A. In developing and implementing plans and programs for hazardous materials emergency preparedness, FEMA operates under the following authorities:

1. The Civil Defense Act of 1950, as amended, (50 App. U.S.C. Section 2251, et seq.), under which FEMA is responsible for the necessary direction, coordination, and guidance regarding the development and execution of, inter alia, emergency response operation plans. The Act authorizes FEMA to provide technical and financial assistance to the States for developing civil defense programs for both wartime and peacetime emergency preparedness activities (including response to natural and man-made disasters).

2. The Fire Prevention and Control Act of 1974 (15 U.S.C. Section 2201, et seq.), under which FEMA is authorized to provide technical assistance to the States for development of emergency preparedness programs, which may include education and training related to fire prevention and control, including fire hazards associated with hazardous materials.

3. The Disaster Relief Act of 1974 (42 U.S.C. Section 5121, et seq.), under which FEMA provides assistance to States to support the development of comprehensive disaster preparedness plans which include hazard reduction, avoidance, and mitigation, as well as training and required exercises, coordination of Federal, State, and local preparedness programs, and other related elements.

4. Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986, popularly known as the Emergency Planning and Community Right to Know Act of 1986, provides authority to FEMA to make grants to the States for training to support programs of State and local governments and university-sponsored programs which are designed to improve emergency planning, preparedness, mitigation, response, and recovery capabilities.

5. Executive Order 12580 (January 23, 1987), which delegates authority to various Federal agencies such as FEMA for implementing the Comprehensive Environmental Response, Compensation and Liability Act, as amended, also sets forth the requirement for developing the National Contingency Plan (NCP). The NCP describes the responsibilities of the member agencies of the National Response Team (NRT), of which FEMA and DOT are members. The NRT members participate in the development and implementation of procedures for the coordination of response actions to releases of hazardous substances.

B. In the prevention and mitigation of hazardous materials emergencies resulting from transportation incidents, the Department of Transportation/RSPA operates under the following authorities:

1. The Hazardous Materials Transportation Act (49 App. U.S.C. Section 1801, et seq.), which provides the Secretary of Transportation with a broad grant of authority to regulate "any safety aspect of the transportation of hazardous materials which [she] deems necessary or appropriate." This grant of authority extends not only to the designation, packaging, and transport of hazardous materials and the enforcement of regulations applicable thereto, but also to emergency preparedness and response for hazardous materials incidents occurring in transportation.

2. 49 App. U.S.C. Section 1808(d)(2) which directs the Secretary to "provide law enforcement and firefighting personnel of communities, and other interested persons and government officers, with technical and other information and advice for meeting emergencies connected with the transportation of hazardous materials."

C. Specifically, FEMA responsibilities related to hazardous materials emergency management preparedness, planning and training are:

1. To deliver training on hazardous materials emergency management, planning, mitigation, and response to State and local personnel.

2. To prepare, develop and disseminate training-related technical assistance materials to State and local governments, and to the private sector.

3. To prepare, develop and disseminate planning and preparedness-related technical assistance materials to State and local governments, and to the private sector.

4. To administer grants for State and local training programs and university-sponsored training programs which are designed to improve emergency planning, preparedness, mitigation, response, and recovery capabilities.

5. To provide a conduit for funding programs designed to improve the capability of State and local governments to effectively plan for the prevention, preparedness, and mitigation of emergencies from hazardous materials incidents.

6. To develop, schedule, and conduct exercises to evaluate the effectiveness of existing emergency management projects and programs to the extent resources are available and to the extent that they are required under existing FEMA programs.

D. Specifically, the responsibilities of the Department of Transportation related to the prevention and mitigation of accidents involving the transportation of hazardous materials are:

1. To develop, promulgate and enforce regulations that are necessary in support of emergency response activities involving the transportation of hazardous materials.

2. To be the focus for State and local involvement in the enforcement of regulations designed to provide for the safe transportation of hazardous materials.

3. To develop transportation-related training materials for enforcement personnel of State and local governments.

4. To provide technical support and develop transportation enforcement components of exercises designed for evaluating the effectiveness of hazardous materials emergency response programs.

5. To develop transportation-related technical assistance materials for use by State and local governments and the private sector in hazardous materials emergency management programs.

6. To serve as a conduit for the delivery of technical assistance to the law enforcement community in meeting their responsibilities as the first on scene at transportation accidents involving hazardous materials.

IV. Areas of Cooperation

The Department of Transportation and the Federal Emergency Management Agency are committed to:

A. Cooperate in the development and implementation of program initiatives, and integrate the planning and preparedness functions of FEMA with the prevention and mitigation functions of DOT related to emergencies involving the transportation of hazardous materials.

B. Develop a two-year plan that encompasses the areas of cooperation, to include joint projects and programs for training and technical assistance.

C. Review the work plan on an annual basis through a FEMA/DOT work group and make appropriate adjustments.

D. Conduct management meetings (through representatives appointed by the Director and the Administrator) on a quarterly basis (or more often) to review the status of joint programs, to discuss and resolve issues, and to consult on major policy issues.

E. Develop hazardous materials training objectives of mutual interest for the two year plan, and include the recommended resources necessary to achieve these objectives.

F. Coordinate the activities of this memorandum with the National Response Team.

G. Promote and support private sector initiatives that are beneficial to the State and local government agencies responsible for preparedness, prevention and mitigation of incidents involving the transportation of hazardous materials.

H. Provide funds to the extent available and practicable to support the respective agency responsibilities under this Memorandum of Understanding.

V. Effect

A. This Memorandum of Understanding does not change, modify or limit in any way the statutory authority or jurisdiction of either Agency.

B. Nothing in this Memorandum of Understanding modifies other existing agreements, or precludes either Agency from entering into separate agreements setting forth procedures for special programs which can be handled more efficiently and expeditiously by such special agreement.

C. This Memorandum of Understanding, when accepted by both Agencies, shall continue in effect unless modified by mutual written consent of both Agencies or terminated by either Agency upon a thirty-day written notice.

D. Any conflict arising out of this Memorandum of Understanding will be resolved by FEMA's Associate Director for State and Local Programs and Support and DOT's Administrator of the Research and Special Programs Administration.

For the Federal Emergency Management Agency

Approved:

Julius W. Becton, Jr.

Director

Date:

For the Department of Transportation

Approved:

Elizabeth Hanford Dole

Secretary

Date: April 23, 1987