

# HM SHIPPER CHECK 2000



F M C S A  
*Federal Motor Carrier Safety Administration*

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## HM SHIPPER CHECK 2000

The Federal Motor Carriers Safety Administration (FMCSA) placed additional emphasis on the safety of shippers (offerors) of hazardous materials for transportation by highway during the week of March 20-24, 2000. This special emphasis project was designated "HM SHIPPER CHECK 2000." The goal of this project was to reduce the risk of HM incidents (spills) by targeting HM shippers responsible of complying with the Hazardous Materials Regulations. A secondary goal of the project focused on additional field testing of the HM Packaging Inspection Program (HMPIP) software for HM shipper data collection. The data collected will help in us in achieving the following goals: 1) improve the shipper prioritization list; 2) determine other ways of identifying high risk shippers; and 3) target high risk shippers in order to conduct Shipper Compliance Reviews.

Shipper Check 2000 consisted of packaging inspections conducted at dockside, less-than truckload facilities, and roadside. Shipper Check 2000 provided an opportunity for FMCSA personnel to work with our "ONE DOT" and State partners. A number of Division Offices elected to conduct shipper compliance

reviews in addition to, or in lieu of the packaging inspections.



*Nevada Division Office and the Nevada Highway Patrol conduct HM inspections. From left to right: Unidentified CF Driver, SI Paula Reynolds NHP Trooper Steve Griswold, SI Mike Schlarmann,, and NHP Trooper John Sherven*

For HM Shipper Check 2000, it was decided to rely on the data export feature of the HMPIP software to generate reports. This feature reduces the reporting activities for the Division Offices and eliminate the need for Division Office/Service Center coordinators. The reports generated from the HMPIP data are contained in Tables 1-3 and Appendix A. A total of 101 state and federal personnel representing five different agencies completed HMPIP inspection forms.

The participants made Shipper Check 2000 a very successful operation resulting in 1722 inspections with 594 violations found. The results indicate that

1 of every three packages checked was in violation of the Federal Hazardous Materials Regulations (FHMR). A 34% violation rate indicates a significant compliance problem on the part of HM shippers.

In addition to the HMPIP inspections, Division Offices performed approximately 118 Compliance Reviews on HM Shippers or Shipper Terminals in this one week compared to the 125 HM shipper CRs conducted during the entire fiscal year 1999. Shipper Check 2000 compliance reviews produced fourteen potential enforcement cases (12%) compared to a 5-6% enforcement rate in 1998 and 1999.

## Investigation Highlights

**Safety Investigator William Moravec** of the **South Dakota Division** Office discovered a shipment of Powder, Smokeless, 1.3C (explosives with fire, blast, and/or projection hazard) which was classified as a Flammable Solid, 4.1. This poses a significant hazard, especially for emergency responders since the emergency response procedures listed in the Emergency Response Guidebook (ERG 2000) are significantly different for flammable solids and explosives. ERG Guide 133 for Flammable Solids instructs to fight a fire while ERG Guide 112 for 1.3 Explosives instructs to evacuate the public for a mile and let the cargo burn. As a result of this discovery, a Shipper compliance review was conducted resulting in a Notice of Claim for \$9,800.



**Safety Investigator Arthur Fleener** of the **Iowa Division Office** discovered a violation that involves over a million packages. Delphi Automotive Systems manufactures automotive batteries and sells them under the brand name of AC DELCO. When shipped from the manufacturer to General Motors the batteries are shipped under the exception found in 49 CFR §173.159. Delphi places Corrosive labels on the packages, since the batteries are re-sold by General Motors and are frequently shipped with other hazardous materials. This subsequent shipment does not qualify for the exception in §173.159 and therefore these shipments of batteries must be in full compliance with the regulations including labeling. Unfortunately the labels applied by Delphi are less than half of the required size and could be misunderstood or mis-read in an emergency situation. Delphi has notified their customers of the requirement to place the proper labels on the shipment of their batteries. Delphi has also agreed to properly label batteries manufactured after 11/01/2000.

## “ONE DOT”

**The Hawaii Division** hosted shipper week with five agencies participating. They included RSPA, FAA-Security-Dangerous Goods, USCG-Marine Safety Office, Hawaii DOT Motor Vehicle Safety Office and the Federal Motor Carrier Safety Administration. Each agency had an opportunity to work with other

agency participants to receive awareness training of their activities and procedures for conducting hazardous material inspections.



*Victor Quiet, RSPA Inspector participated in roadside inspections conducted by HDOT, USCG and FMCSA personnel at the port of Honolulu*

The activities included: one day of roadside inspections at the weigh station located adjacent to Sealand and Matson, one day at the pier of Young Brothers Ltd, and one day at the cargo facilities at the Honolulu International Airport. At these various locations package inspections were conducted using the HMPIP software in conjunction with the appropriate agency's routine inspection activities. As a result of the three days of activity, over 15 HMPIP inspection worksheets, 11 roadside level 3 inspections, and one enforcement case were conducted.

**The Missouri Division** participated in a hazardous material strike force conducted in St. Louis, Mo involving the FAA, RSPA and the FMCSA. There were approximately 35 individuals involved in this activity. An initial meeting was held on the first day of the activity to introduce everyone and make assignments. During the first evening of the shipper

week FMCSA's **Tim Knoll** accompanied several FAA and RSPA individuals on a trip to the St. Louis airport to the Federal Express terminal conducting package inspections. This resulted in the discovery of some HM packages being in violation of 177.848 compatibility requirements. Follow-up to these facilities were made resulting in compliance reviews of shippers and freight forwarders. The week resulted in a total of 64 inspections with 26 enforcement actions.

**FAA Western Pacific Region** Gerald Moore, Hazardous Materials Program Coordinator, FAA Western Pacific Region reported that FAA investigators performed shipper inspections in support of Shipper Check. In addition to Honolulu, shipper checks were performed in Los Angeles, Phoenix, and San Francisco.

## “International”

**The Vermont Division** arranged and participated in a joint interagency, international detail with the Vermont Department of Motor Vehicles (our MCSAP agency), U.S. Customs, the Vermont National Guard, and Transport Canada. This team worked a day at the U.S.- Canada border crossing in Highgate Springs, VT, concentrating on HM shipments entering the U.S. from Canada. Once again, the actual number of loads seen was small, especially since the word quickly spread over the CB that all HM loads were being examined so the flow of vehicles slowed dramatically a couple of hours into the detail. However, some violations were discovered involving Canadian shippers which were referred directly to Transport Canada, which will contact the shippers to get the violations corrected. It was also an excellent opportunity to learn about practical application of the TDG rules and for Transport Canada Inspector Nathalie Boucher to learn about the U.S. rules from the perspectives of the 4 different U.S. agencies involved. One result was an agreement to establish a program in which Transport Canada will periodically send inspectors to work with U.S. Customs and Vermont MCSAP inspectors at the border to become familiar with how Canadian shippers are preparing HM loads for transport into the U.S.

## Findings

The Table 1 below contains a listing of the number of violations discovered per Class/Division of hazardous materials. Of the 594 total violations discovered 208 (35%) involved Class 3 (Flammable/Combustible), 190 (32%) involved Class 8 (Corrosives) and 111 (19%) involved Class 2 (Gases.)

HM Class/Division	Total		
Explosive	4	4.3 Dangerous when wet	3
1.1 Explosive (Class A Explosive)	3	5.1 Oxidizer	21
1.3 Explosive (Class B Explosive)	4	5.2 Organic Peroxide	3
1.4 Explosive (Class C Explosive)	9	6.1 (Poison Liquid)	15
2.1 Flammable Gas	20	6.1 (Poison Solids)	2
2.1 Liquefied Petroleum Gas	68	7 Radioactive Material	2
2.2 Nonflammable Gas	15	8 Corrosive Material	189
2.3 Poison Gas (Zone A)	4	8 Zone A	1
2.3 Poison Gas (Zone B)	1	9 (Hazardous Substance)	2
2.3 Poison Gas (Zone C)	3	9 (Hazardous Waste)	5
3 Combustible Liquid	40	9 Miscellaneous HM	4
3 Flammable Liquid	168	ORM-D(Consumer Commodity)	4
4.1 Flammable Solid	4		
4.2 Spontaneously Combustible	1	<b>Total</b>	<b>594</b>

Table 1

The following table contains a list of the top twenty citations discovered. The top twenty accounted for 441 (74%) out of the total violations discovered. Ten of the top twenty citations concerned shipping paper violations. Eight of the top twenty-five were either acute or critical violations. The acute/critical violations accounted for 196 violations (32% ) of the total violations discovered. Appendix A contains a complete listing of violations cited.

<b>TOP 20 CITATIONS</b>			
<b>CITATION</b>	<b>VIOLATION</b>	<b>ACUTE/ CRITICAL</b>	<b>FREQ.</b>
172.201(a)(1)	Failing to enter HM description on shipping paper in the manner required		67
172.202(a)	Failing to enter proper description of HM	CRITICAL	67
172.301(a)	Failing to mark non-bulk pkg. Of HM with shipping name and ID #	CRITICAL	38
172.204(a)	Failing to make or sign a certification on a HM shipping paper		31
172.400(a)	Failing to properly label HM container or package	CRITICAL	25
173.22(a)	Failing to properly classify and describe HM offered for transportation	ACUTE	25
172.202(a)(4)	Failing to enter proper packing group on HM shipping paper		22
172.202(b)	Failing to enter basic description of HM in proper sequence		17
173.34(c)	Offering a cylinder with markings not maintained	CRITICAL	15
177.834(a)	Failing to secure HM containers against movement in transit		15
173.34(e)	Offering a cylinder not retested/marked as required		13
171.2(a)	Offering or accepting HM for transport not properly prepared		12
172.200(a)	Offering a HM without preparing a shipping paper (none)	ACUTE	11
172.200	Offering a HM without preparing a shipping paper (incomplete)		8
173.25(a)(2)	Failing to mark over-pack with ship name, etc. when required		8
177.817(a)	Transporting HM without a proper shipping paper	CRITICAL	8
172.203(k)	Failing to enter a technical name in association with description		7
172.304(a)	Failing to properly mark HM pkg. Per requirements		7
172.602(a)	Failing to have all required emergency response info		7
172.604(a)(3)	No emergency response phone # on shipping paper as required	CRITICAL	7
177.816(a)	Failing to provide HM training to driver		7

Table 2

Table 3 below contains a list of package types identified in the shipments found in violation. The packages listed below may not have been in violation. Of the 467 packages identified; 93 were fiberboard boxes, 64 were plastic drums, 52 were cylinders, 48 were cargo tanks, and 26 were Intermediate Bulk Containers (IBC).

11A IBC	0	6HA1 COMPOSITE PKG	2
1A2 STEEL DRUM	17	6M	0
1B1 Aluminum drum	0	7A TYPE A	1
1G FIBER DRUM	0	8 CYLINDER	0
1G FIBERBOARD DRUM	10	CYLINDER	0
1H1 PLASTIC DRUM	53	CYLINDERS	1
1H2 PLASTIC DRUM	11	II	0
1N1 METAL DRUM	1	IM 101 PORTABLE TANKS	0
1N2 METAL DRUM	0	IM 102 PORTABLE TANKS	0
2P LINER	0	MC 306	23
2O LINER	2	MC 307	2
31A IBC	26	MC 312	1
31H IBC	4	MC 331	8
3AL CYLINDERS	0	DOT 406	13
3AX CYLINDERS	0	DOT 407	1
3H1 JERRICAN	4	METAL PAILS	0
3H2 JERRICAN	0	MISC COMPOSITE PKG	0
3HT CYLINDER	1	MISC DOT SPEC PKG	30
4A STEEL BOX	3	MISC POP PKG	2
4AA480 CYLINDER	0	NON SPEC PKG	79
4B CYLINDER	0	OTHER	24
4BA CYLINDER	51	PG II	0
4BW CYLINDER	0	PG III	1
4G FIBERBOARD BOX	93	PLASTIC	0
4HI PLASTIC BOX	1	PLASTIC BOTTLES	0
4H2 PLASTIC BOX	0	UNKNOWN	0
4L CYLINDER	2		
51 PORTABLE TANK	0		
5H4 PLASTIC BAG	0		

**Table 3**



## Conclusions

Shipper Check 2000 focused additional attention on HM shippers with the intention of reducing hazardous materials incidents. There are no direct measures which quantify incident reduction due to this activity. However, the violation data generated by inspections using the HMPIP software indicate that there is a significant non-compliance problem with HM shippers. Identification of HM violations and removal of non-compliant shipments from transportation improves safety.

FMCSA will continue to develop and refine the HMPIP software and expand the use of this program. The data collected from these activities will eventually be used in a performance/risk based algorithm to identify problem shippers. FMCSA will increase its compliance and enforcement activities with the goal of increasing the compliance posture of HM shippers and reducing the likelihood of hazardous materials incidents.

## Shipper Check 2000 Results by Citation

107.608(b)	6	172.312(a)(2)	2
107.620(b)	6	172.313(a)	1
171	1	172.324(b)	1
171.2	1	172.326(c)	1
171.2(a)	12	172.328(b)	1
171.2(a)/173.22(a)	1	172.328(c)	1
171.2(f)	2	172.334(b)	1
171.2(f)(2)	6	172.400(a)	25
172	1	172.401(a)(1)	1
172.200	8	172.402	2
172.200(a)	11	172.402(b)	1
172.201(a)(1)	67	172.406(a)	1
172.201(a)(2)	2	172.406(a)(ii)	4
172.201(a)(3)	3	172.406(f)	5
172.201(a)(4)	1	172.407(a)	1
172.202(a)	67	172.416	1
172.202(a)(4)	22	172.502(a)(1)	5
172.202(a)(5)	2	172.504(a)	5
172.202(b)	17	172.516(a)	3
172.202(b)/172.203(b)	2	172.519	1
172.202(b)/172.203(c)(2)	1	172.600(c)(1)	1
172.202(e)	1	172.602(a)	7
172.203	1	172.602(c)(1)	1
172.203(a)	1	172.604(a)	5
172.203(b)	6	172.604(a)(1)	2
172.203(c)(2)	6	172.604(a)(2)	3
172.203(k)	7	172.604(a)(3)	7
172.203(k)(1)	1	172.704(a)	6
172.203(m)	1	172.704(a)(2)	3
172.204(a)	31	172.704(d)	6
172.204(d)	1	173.164(c)(4)	1
172.301(a)	38	173.203	1
172.301(a)(1)	1	173.22(a)(1)	1
172.302(c)	1	173.22(a)(2)	25
172.304(a)	7	173.22(a)(4)	3
172.306(a)	1	173.24(b)(1)	3
172.312(a)(1)	2	173.24(b)(2)	4

## Appendix A

173.24(f)	1	177.817(a)	8
173.24b(d)(2)	1	177.832(a)	1
173.25(a)(2)	8	177.834(a)	15
173.25(a)(4)	3	177.834(g)	1
173.30	1	177.848	2
173.301(i)	2	178.3(a)	1
173.32(e)	2	178.3(a)(3)	2
173.33(a)	1	178.345(c)(1)	1
173.33(a)(3)	1	180	2
173.34(a)	4	180.352	1
173.34(c)	15	180.407(c)	1
173.34(e)	13	180.407(f)	1
177.801(a)	3		
177.816(a)	7		